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The Single Global Currency: Common Cents for the World

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THE SINGLE GLOBAL CURRENCY

Common Cents for the World



Morrison Bonpasse

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LET US SUPPOSE THAT ALL COUNTRIES had the same currency, as in the progress of political improvement they one day will have....

So much of barbarism still remains in the transactions of the most civilized nations that almost all independent countries choose to assert their nationality by having, to their own inconvenience and that of their neighbours, a peculiar currency of their own. —John Stuart Mill, *Principles of Political Economy with Some of Their Applications to Social Philosophy*, 1848

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PREFACE

HOW TO READ THIS BOOK: The book should be complete and useful for everyone who wishes to read it through, without reference to the chapter endnotes. The endnotes are also posted on the Single Global Currency Association website, www.single-globalcurrency.org, along with web links to the referenced information, to assist readers in finding sources. For readers seeking to explore all the endnotes and references, the best way to read the book might be to print the endnotes and references from the Single Global Currency Association website and have them nearby when reading, or have the website available online while reading. Note: Typesetting programs often insert a hyphen in a URL at a line break (as in the example above). Beware. (The correct address is www.singleglobalcurrency.org)

CAPITALIZATION: The terms “Global Central Bank (GCB)” and “Global Monetary Union (GMU)” are capitalized, as are European Central Bank (ECB) and European Monetary Union (EMU). However, while the names of currencies such as the euro, dollar, yen, and yuan are not capitalized, the term “Single Global Currency (SGC)” is capitalized here. It does not yet have a name, such as mundo or eartha, which would not be capitalized, but it IS the subject of the book, and capitalization tends to communicate a sense of importance.

WORK OF THE AUTHOR: This book is published by the Single Global Currency Association which fully supports the key message of this book: that the world needs to plan now for the implementation of a Single Global Currency, managed by a Global Central Bank, within a Global Monetary Union. However, the author, and not the association, is responsible for the accuracy and writing of this book.

HOW IMPORTANT IS THIS BOOK? You may be reading the most important book you have ever read, because the topic will save the world—trillions.

INTRODUCTION

Perhaps the sentiments contained in the following pages, are not yet sufficiently fashionable to procure them general favor; a long habit of not thinking a thing *wrong* gives it a superficial appearance of being *right* and raises at first a formidable outcry in defence of custom. But the tumult soon subsides. Time makes more converts than reason.

—Thomas Paine in *Common Sense*.¹

THE SIZE AND ENDURANCE of the world's multicurrency foreign exchange system gives it the superficial appearance of being "*right*," but it's more obsolete than "*wrong*" and will increasingly be subjected to the "reasons" for replacing it with a Single Global Currency. The major questions are the timing and stability of the implementation.

The wordplay in "Common Cents" in the second part of the title, "Common Cents for the World", arose from an email exchange with Michael Federle, group publisher of *Fortune* magazine. In his response to an email, Mike wrote on 27 April 2005, that a Single Global Currency "makes all the sense in the world." Seeing the opportunity for a pun, I responded, "Indeed it does. Makes all the cents in the world, too." After that, I used the punned form of "cents" a few times and then coined the slogan, "Common Cents." (Of course, as with most ideas, this was

not the first such use of the punned phrase. Google reported 115,000 “results” for “Common Cents” of which only two came from the Single Global Currency Association website: Result #459 and 551.) Thomas Paine, author of the original *Common Sense* perhaps would be pleased with the pun and with the common sense used here, and in the common sense goal of a Single Global Currency—with common cents. It made no sense for the American colonies to be governed by England, and it makes no cents for the world not to have a Single Global Currency—soon.

“Cents” are actually closer to a Single Global Currency as a word, as that is the term which denominates the coins of fifteen currencies, including those of the European Monetary Union, Singapore/Brunei and the United States.² Thus “cents” are already denominated in countries whose GDP totals comprise about 50 percent of the world’s total.

THE 2,500-YEAR SOLUTION

Approximately in the sixth century B.C. people began foreign exchange trading of the increasingly standardized coins of the Western, Indian, and Chinese civilizations. Foreign exchange became the fifth wheel of human transactions, accompanying the first four of labor, raw materials, money and energy. For most of those 2,500 years, the multicurrency foreign exchange system seemed to be more of a solution than a problem, and we became accustomed to it.

Two central problems arose in foreign exchange trading:

- What is the value of one coin/currency compared to another; and
- What makes the value of one currency rise or fall compared to the others?

Over the next two-plus centuries, the value of traditional foreign exchange trading has grown to \$2.5 trillion per day, and

traders and economists continue to struggle with those two basic questions. The answers remain elusive. There are thousands of academic articles, and hundreds of books, written by economists, but none solves either question. None has pulled the sword from the economics Rosetta Stone.³ Through all the analysis, we know a lot more about many aspects and implications of the multicurrency foreign exchange system, but no one consistently knows the values of currencies nor can predict those ups and downs.

Like DDT, the multicurrency foreign exchange trading system was developed to solve a problem—people wanting to trade goods and services which were valued using two different currencies. Like the makers of DDT who responded to the need to kill inconvenient insects, the traders of foreign exchange improved the service so as to efficiently enable the vast increase in convenient trading; but the two questions were never solved. Instead, like DDT, the larger and better foreign exchange trading system has become more hazardous and can bring down large economies as values of currencies go up and down with large, unpredictable variations. The most recent example of such movements is the see-saw relationship of the US dollar and the euro, the currencies of the two largest, most stable economies in the world. After being introduced on 1 January 1999 at the value of \$1.17 (\$1.16692),⁴ the euro descended to its \$.83 low against the dollar in October 2000. Then, it increased in value a full 64 percent to its high of \$1.36 in December 2004. After such volatility, the value of the euro returned to \$1.17 in November, 2005, and has remained in that range ever since.

The multicurrency foreign exchange trading system will never solve the two problems of valuation and value fluctuations and, like DDT, it must be replaced; and the Single Global Currency is the only reasonable solution.

This book is intended for worldwide readership by people who understand that the world uses multiple currencies, and that the valuations of those currencies, and the relationships among them, cause recurring problems. It's for those who have observed recurring currency crises and see the risk of more to come. It's for those who see continuing problems with global imbalances of payments and no reasonable solution in sight. It's for those who would say and ask, like Robert F. Kennedy, "I dream things that never were and say, why not."⁵

This book could have been titled *Single Global Currency for Dummies* to be consistent with the tongue-in-cheek book series which brings simplicity to complex issues. Aside from the potential trademark or copyright violation issues, such a title would have been misleading to many, as this book is for ALL the people of the world, including "dummies," with common cents, and economists, too.⁶ More appropriately, if the title had not already been used by Benjamin Friedman's *The Moral Consequences of Economic Growth*, it might have been titled *The Moral Consequences of the Multicurrency Foreign Exchange System*, because further delay in implementing the Single Global Currency, in the face of evidence of its benefits for the world, becomes a moral issue.

There IS a moral solution to the problems of the multicurrency foreign exchange system, and it's the Single Global Currency. within a Global Monetary Union, and managed by a Global Central Bank (termed henceforth from time to time as the "3-Gs"). This book will enable readers to understand that solution and to learn why it is not yet on the international radar screen with an implementation date; and what it will take to get it there. For some, it hopefully will move their understanding from "Why?" to "Why Not?"

Others will ask, "What does this mean to me?" The short answer is that the life of almost every human being on the earth

will be improved by the implementation of the Single Global Currency, just as those lives are currently diminished by the unpredictable, risky multicurrency foreign exchange system. Interest rates will decline and there will be no currency transaction charges for international purchases and sales, for an annual saving of \$400 billion. The removal of such charges, if passed on to consumers, will lead to a reduction in the price of internationally traded goods and services.

Dwarfing that benefit will be the opportunity to achieve a one-time increase in the value of financial and other assets worldwide of \$36 trillion through the lowering in interest rates and the elimination of worldwide currency risk. That increase of asset values will contribute an additional \$9 trillion in world GDP, which will, in turn, become the foundation for future annual GDP increases. Assuming annual overall increases of 3 percent, that would mean approximately a \$270 billion annual increase. When added to the \$400 billion in transaction cost savings, that brings the annual benefit to \$670 billion, an average of \$100 for every human being, every year. Even with the expectation that those benefits will be spread unequally, they still will benefit everyone on the earth at some level. And even if measurable cash does not flow into everyone's hands, everyone will benefit from the elimination of currency crises and from reduced inflation.

On the other hand, a failure to implement a Single Global Currency may lead to the worst ever currency crisis and the loss of \$ trillions.

The book begins with an explanation of the current multicurrency foreign exchange world and its dangers. Chapter 4 introduces monetary unions and Chapter 5 begins the explanation of the Single Global Currency. There are no economics formulas within and the only graph is a simple comparison of the fluctuating prices of US dollars and euros relative to each other.

Even the two chapters specifically dedicated to the views of economists, Chapter 3 on the existing situation, and Chapter 6 on the Single Global Currency, are written for lay readers.

The superpower race to the moon began with US President John F. Kennedy's September 1962 proclamation at Rice University in Texas that it was to be the goal of the United States to land a human being on the moon before the end of that decade. At the time of the setting of that goal, only seven years and three months away, the United States had launched only two people into orbit around the earth, beginning with John Glenn in January and Scott Carpenter in May, and neither flight lasted longer than five hours.

We are now much further down the trip to the Single Global Currency than humans were to the moon in 1962. We now know how to implement the 3-Gs: a Single Global Currency (SGC) in a Global Monetary Union (GMU), with a Global Central Bank (GCB). We have considerable experience with monetary unions, crowned most recently with the euro, which took nine years, eleven months to implement from the February 1992 signing of the Maastricht Treaty to the 1 January 2002 distribution of the new currency among the people of the European Eurozone.⁸ On the other hand, one could argue that the process took only five years and two months from the 1 November 1993 adoption of the Treaty to the 1 January 1999 implementation of the euro on financial ledgers, but with the new cash not yet in circulation.

The size of the Single Global Currency project should not be daunting, as the Gross Domestic Product or GDP, of the Eurozone economy in 2002 was greater than the GDP of the entire world in the mid-twentieth century, even when adjusted for inflation. The administrative costs of implementation will be far less than those incurred by the United States when sending an astronaut to the moon, estimated to be equivalent to

\$131 billion in 2004 US dollars.⁹

By the time the world reaches the “3-G” goals, the multicurrency foreign exchange trading system will have had a run of 2,500 years and it will have outlived its usefulness. The book will now explore the history, operations and problems of the multicurrency foreign exchange system, and then why and how it must be replaced.

ENDNOTES

(These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. Thomas Paine, *Common Sense, Rights of Man, and other essential writings of Thomas Paine*. New York: New American Library, New York, 2003, Introduction, p. 3.
2. The fifteen currencies belong to: Argentina, Australia, Canada, Eastern Caribbean Monetary Union, Eritrea, European Monetary Union, Gambia, Guyana, Malta, New Zealand, Singapore, South Africa, Sri Lanka, United States and Zimbabwe. Sources: <http://en.wikipedia.org/wiki/Cents> and www.google.com for cents—coins—currency. The legitimacy of Wikipedia as a source is confirmed by Thomas L. Friedman in *The World is Flat* (New York: Farrar Straus and Giroux, 2005), who said at p. 94 that he used this source regularly. On the other hand, this source is not always reliable. The current Wikipedia entry for “Global Currency”, as of 15 February 2006, is an example of how public awareness of the Single Global Currency needs to be changed. The entry reads: “A global currency, in the form of a modern currency produced and supported by a central bank, like euro and dollar, will never be made. There are many fundamental problems that simply cannot be fixed. Both political problems and economy[sic]-theoretical problems.” At http://en.wikipedia.org/wiki/Global_currency As Wikipedia is the peoples’ “free encyclopedia,” which can be edited by its viewers, it will be interesting to see how long it takes for that entry to be improved.
3. The Rosetta Stone was discovered in 1799 in El Rashid (Rosetta), Egypt by soldiers in Napoleon’s army while digging to construct an addition to a fort. Written approximately in 19 B.C., it contains a decree to priests in three languages: Egyptian hieroglyphs, a local script called demotic, and Greek. This discovery enabled the first translations of the heretofore undecipherable hieroglyphs. The Stone was donated to the British

Museum by King George III, whose common sense in this regard would likely have impressed even Thomas Paine. See <http://www.thebritishmuseum.ac.uk/compass/ixbin/goto?id=OBJ67>

4. The value of the euro was established in Spring 1998 as equivalent to a precise quantity of each of the currencies of the twelve participating countries, e.g., equal to 40.3399 Belgian francs. See list of currencies and their values at <http://www.ecb.int/bc/intro/html/index.en.html>. On the first trading day of the euro, Friday, 2 January 1999, those 40.3399 Belgian francs, and 1.95582 German deutschmarks, etc., were all equal to 1.16692 US dollars, hence the value of the euro. From that point forward, all foreign exchange trading with the twelve legacy currencies stopped and trading began with the euro. On Sunday afternoon (GMT), 4 January, with trading beginning in New Zealand on Monday morning local time, 5 January, the euro dropped to 1.1760. See FX Converter at <http://www.oanda.com/convert/classic>

5. The original quote was in George Bernard Shaw's play, *Back to Methusalem*, Act I, *Selected Plays with Prefaces*, Vol. 2, p. 7 (1949). The serpent says to Eve, "You see things; and you say 'Why?' But I dream things that never were; and I say 'Why not?'"

President John F. Kennedy quoted these words in his address to the Irish Parliament, Dublin, 28 June 1963 (*Public Papers of the Presidents of the United States: John F. Kennedy*, 1963, p. 537).

Senator Robert F. Kennedy used a similar quotation as a theme of his 1968 campaign for the presidential nomination: "Some men see things as they are and say, why; I dream things that never were and say, why not." Senator Edward M. Kennedy quoted these words of Robert Kennedy's in his eulogy for his brother in 1968. (*New York Times*, 9 June 1968, p. 56; source: www.bartleby.com *Respectfully Quoted: A Dictionary of Quotations*, 1989.)

6. Astonishingly, the 2005, 362-page, first edition of *Economics for Dummies* does not mention "balance of payments," nor "Bretton Woods" nor the euro, and makes only one mention of "exchange rates" on page 330 with the note that countries can manipulate the exchange rate of their countries to make their exports cheaper, which is true. Sean Masaki Flynn. *Economics for Dummies*. Hoboken, NJ: Wiley Publishing, 2005.

7. The abbreviation "3-G" here will save space and perhaps conjure an image of humankind accelerating into a new economic world, freed of the dynamics previously thought to be as permanent as gravity. Incidentally, three Gs (as in: three times the force of gravity) are within the boundaries of space flight where astronauts endure gravitational pressures of approximately 3 Gs, or the force of gravity, at launch, but face approximately 6 Gs upon re-entry.

8. The term "Eurozone" is used in this book as shorthand for the countries of the European Monetary Union, which includes all of the Euro-

pean Union countries except Denmark, Sweden and the United Kingdom of Britain and Northern Ireland.

9. The estimated cost of the Apollo moon voyages in the 1960s was reportedly \$25.4 billion in 1960s US dollars. See BBC's "Apollo Missions: The Conclusion," at <http://www.bbc.co.uk/dna/h2g2/A830774>. The Economic History Association's website EH.net has an excellent utility to determine the value of US dollars between any two years between 1704 and 2004. Calculations can be made using the Consumer Price Index (CPI) or GDP per capita or other indices. Using the CPI, the \$25.4 billion (arbitrarily using the year 1969), was equivalent to \$131.0 billion in 2004. Using the GDP per capita index, it would have been equivalent to \$208.9 billion. See <http://www.eh.net/hmit/compare/>

Part I

THE PAST TO THE PRESENT

THE EXPENSIVE, COMPLEX, AND HAZARDOUS MULTICURRENCY FOREIGN EXCHANGE WORLD¹

THE WORLD HAS ALMOST 6.5 BILLION PEOPLE. Most of them live in the 191 member nations of the United Nations and exchange their goods and services using the 147 currencies listed at the end of this book.² Most of that commerce is within countries or monetary unions which use the same currency (also called a “currency area”),³ but an increasing amount is international and that requires the translation of value from one currency into another.

By the end of 2005, those transactions added up to the daily exchange of the equivalent of approximately \$2.5 trillion in what is called “traditional” foreign exchange trading,⁴ which works out to \$385 for every human being on the earth on every working day. (These numbers do not include the increasingly popular trading in “non-traditional” or “derivative” instruments which totals another \$230 billion daily.⁵)

Imagine every human trading currency worth \$385 every working day. Note that people with an annual income of \$100,000 make \$385 per working day. For perspective, 40 percent of the world’s population lives on less than \$2.00 a day.⁶

For further perspective, let’s explore the size of a trillion by looking at time. There are 31.5 million seconds in a year, so a

lucky person with a Japanese life expectancy of 79 years might live for 2.5 billion seconds.⁷ There have been only 76 billion seconds since 221 B.C. when China was unified by Qin Shi Huangdi, and converted to one currency. One would have to look back to the year 29,792 B.C., toward the end of the Paleolithic Age, when humans were developing languages, to go back 1 trillion seconds. Thus, a trillion is a large number. A very large number.

The annual gross domestic product of all the 6.5 billion human beings on the earth in 2005 was approximately \$42.2 trillion.⁸ Thus, the dollar equivalent of the world's entire annual gross domestic product is traded as currency, or contracts for currency, every seventeen days.

The currency trading industry calls currency trading the "world's largest market," including all the major centers of trading, such as London, New York, and Singapore and all the non-public exchange trading. By comparison, the New York Stock Exchange's 2005 daily dollar volume through November was \$56 billion,⁹ which means that the worldwide foreign exchange market is equivalent in value to 44.6 New York Stock Exchanges. Even the North American foreign exchange (Canada, Mexico, and the United States) market trades 7.8 times the volume of the NYSE, with its \$440 billion in daily trading in October 2005.¹⁰

Another way to look at these volumes of money is to visualize how much money, in US \$1 bills, might fit into a standard box of photocopier paper and the answer is \$72,000. A stack of single \$1 bills worth \$1 billion would be 101.6 kilometers high, and a stack worth \$2.5 trillion would be 253,000 kilometers high, or more than halfway to the moon.¹¹ If the \$1 bills totaling \$5.0 trillion for two days currency trading could be stacked in two days, the top of the heap would arrive at the moon faster than an Apollo spacecraft, which took three days.¹²

WHAT IS MONEY, ANYWAY?

The standard answer from economists is that money is a medium of exchange, a store of value, and a unit of account.

Medium of Exchange Money moves value from one person to another, unless the other person uses a different currency, in which case the money is essentially bartered in the foreign exchange markets.¹⁵ As the value of money across borders fluctuates, its effectiveness as a medium of exchange is impaired.

Store of Value People should be able to leave foreign money on a bureau and it should retain that value over time. However, such value can be diminished or enhanced by fluctuating exchange rates, or if the money is involved in a currency crisis.

Unit of Account Money enables the value of an object or service to be measured and then perhaps compared with something else. This function, too, is subject to fluctuations by foreign exchange rates.

Thus, in our multicurrency foreign exchange world, money fails in all three of its primary functions due to fluctuations in exchange rates. This book seeks to restore money soundly to its true use and definition.¹⁴

TRADE IN GOODS AND SERVICES

According to the World Trade Organization, total world trade in 2004 was \$9 trillion,¹⁵ or 22 percent of the total value of the world's \$40.8 trillion GDP for that year.¹⁶ That trade consists of buying and selling by individuals, corporations, and governments. In short, by almost everyone.

At the individual level, I drove to Montreal in September 2005 for a presentation at a Currency Conference and purchased gas on the way home. While at the conference, I paid for the parking with Canadian dollars that I had purchased the previ-

ous summer on a vacation trip to Nova Scotia. In October 2005, I purchased the book, *Le Chateau de Sable*, from a Montreal bookseller and paid with a credit card. In November, I purchased a copy of Paul De Grauwe's *Economics of Monetary Union* from Amazon.co.uk in the United Kingdom. Around the world millions of such transactions occur daily, with most of them being far larger. All of these transactions required foreign exchange trading at some point.

CHANGING VALUES OF CURRENCIES

The values of currencies to each other vary, and despite all efforts of thousands of economists and speculators, they vary with unpredictable timing and to an unpredictable degree. The title of Dominick Salvatore's article, "The Euro-Dollar Exchange Rate Defies Prediction," presents the problem.¹⁷ Economists often use the term "puzzle" for such intractable problems.¹⁸

Why do currencies rise and fall in value relative to each other? The short answer is the classic law of economics: Supply and Demand. If the demand for a currency rises, for such reasons as the need to purchase a good or service priced in that currency, its value will rise. The worldwide foreign exchange market is a very special market because of the uniformity of the goods for sale. A euro is a euro is a euro around the world. For an increasing number of buyers and sellers of currency, the concern is whether that currency will rise or fall in value, so sales and purchases can become part of a self-fulfilling prophecy. If the US government continues to run a large fiscal deficit or if its economy loses steam, confidence in the dollar may decline and holders may wish to sell their dollars or contracts for dollars. Another major factor in currency purchases is interest rates, the foundations for which are set by central banks. When interest rates rise for a currency, foreigners are more likely to purchase that currency and earn those higher

interest rates; and the currency value will rise.

Note the contrast with other systems of measurement. If a country's factories receive orders, i.e., demand, for 100,000 meters of wire, and the actual production, i.e., supply, was 125,000, the appropriate response would not be to shorten the length of a kilometer to .8 of its former value, in order to bring supply into equilibrium with demand. Such a change would transform the orders for 100,000 meters (pre-adjustment) into orders for 125,000 meters, simply by changing the value of the measurement. Of course, such adjustments of the metric system would make the system useless.

Similarly, changing the value of a currency as a response to changes in supply and demand or economic conditions is not an appropriate response. To satisfy the definition that money is a measurable unit of account, the value of that money must be stable.

If the price of this book had been stated only as €16, without doing any currency conversions, the purchasers using other currencies would have needed to convert their local currencies into euros at the time of purchase, and might have had to pay more or less due to currency fluctuations than the prices set with exchange rates as of 3 January 2006 and stated on the inside back cover.

For those who send the local currency cash to the Single Global Currency Association by mail, there will be no change in price, and the Association will absorb the loss or gain due to currency fluctuation and also pay the currency conversion transaction costs if converted into US dollars. Or we might wait, and speculate on the future fluctuations of each currency, right up until their conversion to the Single Global Currency.

In some countries, bookstores may decline to carry the book if the stated local currency price on the inside back cover declines sufficiently relative to other currencies to make such

sales unprofitable. Later editions of the book will reveal what happened, and readers can consult their favorite exchange rate information sources, such as www.oanda.com, to see whether they gained or lost by our fixing the local currency price as of 3 January 2006, as compared to having the local currency conversion done at the time of purchase. (Preferably, the calculations will include the reader's actual purchase of this book.) Over time, as subsequent editions of this book are published, its pricing in the remaining currencies will serve as a Big-Mac-like currency fluctuation index, as is discussed in Chapter 3, and an indicator of the progress toward the 3-G world.

PLASTIC MONEY AND THE APPEARANCE OF A GLOBAL CURRENCY

Despite the continued existence of 147 currencies among the 191 U.N. members, it is now possible to travel the world and engage in small-scale trade with plastic money, such as a Visa card, Maestro card, MasterCard, smartcard, or other card. Travelers can either pay for goods and services with their cards or they can go to an automated teller machine (ATM) and withdraw cash in the local currency. It's so easy that it's rarely noticed that there is always a small percentage charge for the foreign exchange transaction—and those charges add up.

The irony is that by making such foreign exchange transactions much easier, the public pressure on the central bankers and governments of the world to move to a Single Global Currency may be decreased. Indeed, as one Visa executive stated, "When Visa was founded twenty-five years ago, the founders saw the world as needing a Single Global Currency for exchange. Everything we've done from a global perspective has been about trying to put one piece in place after another to fulfill that global vision."¹⁹

THE WORLD OF CURRENCY TRADING AND THE TOOLS OF THE TRADE

The \$2.5 trillion daily trading is conducted mostly at the major exchanges of the world, from East to West: Sydney, Tokyo, Hong Kong, Singapore, Frankfurt, Zurich, Paris, London, and New York.

The Foreign Exchange Committee in New York reports that North American average daily foreign exchange trading in October 2005 totaled \$440 Billion, approximately 18 percent of the world's total. North America had 113,400 daily trades with an average currency trade of about \$3.8 million.²⁰ With similar sized trades around the world, that would mean approximately 644,000 trades per day, worldwide.

The size of the average trade varies by type. The average size of spot transactions, was \$2.4 million, while the average foreign exchange swap was for \$36 million.²¹

The British Foreign Exchange Joint Standing Committee, associated with the Bank of England, reports \$789 billion in daily trading of traditional products in London, or 31 percent of the worldwide total.²²

The foreign exchange worldwide extended market opens on Monday mornings in Sydney, Australia, which is actually Sunday evening, Greenwich Mean Time (GMT), until afternoon on Friday, New York time, which is mid evening, GMT. During that period, the market can be said to be open twenty-four hours a day, as trading centers move with the sun from East to West. The sun never sets on the foreign exchange trading empire.

In 1992, there were approximately 200,000 active foreign exchange traders, worldwide.²³

WHAT'S ACTUALLY TRADED

The table below shows the breakdown of the daily \$440 billion

in “traditional foreign exchange” in North America, during October, 2005.

Type	Volume of Trades	Number	Transaction Value Avg.
Spot Transactions	\$211.8 billion	89,629	\$2.44 million
Foreign Exchange			
Swaps	\$155.1 billion	4,259	\$36.4 million
Outright forwards	\$73.2 billion	19,482	\$3.8 million

These products are defined by the New York Foreign Exchange Committee:²⁴

Spot Transactions are single outright transactions that involve the exchange of two currencies at a rate agreed to on the date of the contract for value or delivery within two business days, including US dollar-Canadian dollar (USD-CAD) transactions delivered within one day.

Foreign Exchange Swaps involve the exchange of two currencies on a specific date at a rate agreed to at the time of the conclusion of the contract, and a reverse exchange of the same two currencies at a date further in the future at a rate agreed to at the time of the contract. For measurement purposes, only the long leg of the swap is reported so that each transaction is recorded only once.

Outright Forwards involving the exchange of two currencies at a rate agreed to on the date of the contract for value or delivery at some time in the future (more than one business day for USD-CAD transactions or more than two business days for all other transactions). This category also includes forward foreign exchange agreement transactions (FXA), non-deliverable forwards, and other forward contracts for differences.

Currency Options are over-the-counter contracts that give the right or the obligation—depending upon if the reporter is the

purchaser or the writer—to buy or sell a currency with another currency at a specified exchange rate during a specified time period. This category also includes exotic foreign exchange options such as average rate options and barrier options. Not included in totals of “traditional” foreign exchange trading, these instruments are also called “derivatives,”²⁵ and they were traded at the daily rate in North America of \$36.7 billion per trading day.

Most of the currency trading is with a few “pairs” of international currencies: Euro/US Dollar (EUR/USD), British Pound/US Dollar (GBP/USD), Canadian Dollar/US Dollar (CAD/USD) and Yen/US Dollar (JPY/USD).

THE LANGUAGE OF CURRENCY EXCHANGE

Every discipline has its special words and special meanings. For a glossary of the terms and phrases in the international economics and foreign exchange world, see Alan Deardorff’s online “Glossary of International Economics.”²⁶

A typical headline about foreign currency trading might say, “Dollar Rises Past 120 Yen in Tokyo.”²⁷ However, as this makes US exports more expensive, this “rising” is not good news for the United States and its struggle to conquer its balance of payments problem, but “rises past” sounds positive. In a *New York Times* article, entitled “Yen at 32-Month Low as Japan’s Small Investors Look Abroad,” the second paragraph states:

“In Tokyo, the yen traded as low as 121.39 yen to the dollar, its weakest point since March 2003. It has fallen 16 percent this year, from a high of 101.68 yen to the dollar on Jan. 17. Against the euro, the yen touched a record low of 141.98. In New York, the yen weakened further to lows of 121.40 to the dollar, recovering to settle at 120.79.”²⁸ Thus, the yen drops in value as the number of yen required to purchase a dollar increases.

When quoting currency prices, one has to be careful to state what is quoted as buying what. When the price of the euro goes from \$1.26 to \$1.25, it is said to “drop” or “lose,” but if the same change in values of the two currencies to each other is quoted as a change for the price of a dollar from €.7937 to €.8000 then the price of a dollar is rising.

Such a change would have many effects which are easiest to see with respect to importers and exporters. When a newspaper headline says, “Euro May Gain on Speculation that ECB is Closer to Raising Rates,” it means that the price of the euro relative to other currencies is likely to increase. Where a euro yesterday might cost \$1.200, it might be predicted to cost \$1.212 tomorrow, an increase of 1 percent. If the entire currency price change is passed on to buyers and sellers at every level, then Eurozone exporters would be hurt because their goods would become more expensive to holders of dollars and importers would benefit because they could buy dollar-denominated goods more cheaply.

The linguistic trick for trading a buy/sell currency pair is that when you are buying one currency you are selling the other. For example, in a euro/US Dollar pair (EUR/USD), the euro is the “base” currency and the dollar the “counter” or “quote” currency. This pairing sequence reflects the US dollar’s primary role in the international financial system. If the price of a EUR/USD pair is 1.1815, that means that it costs \$1.1815 to purchase a euro.²⁹ To avoid confusion, the trading of euros and dollars is not quoted in reverse, i.e., a USD/EUR pair. In typical retail pricing, we might say that a cup of coffee costs €1.25 and it’s clear what is buying what. We never hear that $\frac{8}{10}$ of a cup of coffee will purchase a euro.

FOREX FIRMS AND THE GET RICH QUICK/GAMBLING SIDE OF FOREIGN EXCHANGE TRADING

Most of the world's currency trading is done by banks and large financial institutions with each other. This is called "interbank" trading. In addition, an increasing amount of foreign exchange trading, called "FX" or "Forex," is done by retail firms and their customers. These firms use software platforms, such as is offered by Reuters, which enable their customers to see nearly as much about the worldwide foreign exchange markets as do the traders among the major financial institutions.

Currency traders are a special breed.³⁰ One wrote of his oversized role in the international monetary system: "What created this market? How did the nations of the world conclude that international currency exchange should be determined by profit-oriented traders sitting in front of computer screens with telephones glued to their ears?"³¹

The retail firms have websites which offer free "practice"³² or "virtual trading"³³ accounts. One firm has 55,000 individual accounts with an average account balance between \$5,000-\$10,000.³⁴ Invites one, "Ready to try currency trading? Open an account with as little as \$250. Experience the benefits of FOREX.com."³⁵ In another advertisement, "Why are successful equity and futures traders now trading currencies? Consider all the advantages of the world's largest financial market... Superior liquidity—at \$1.9 trillion per day, the sheer volume of forex facilitates tighter spreads, with no slippage. Profit in both rising and falling markets...."³⁶

Some companies are developing artificial intelligence software to assist traders, but market themselves like snake oil.³⁷

A search on www.amazon.com for books with "forex" in the title brings up twenty-eight books, sorted by sales rank, beginning with:

1. *Getting Started in Currency Trading: winning in Today's Hottest Marketplace* by Michael Arther and Jim Bickford;
2. *ForeX Trading for Maximum Profit: The Best Kept Secret Off Wall Street* by Raghee Horner
3. *Forex Made Easy : 6 Ways to Trade the Dollar* by James Dicks
4. *Forex Revolution : An Insider's Guide to the Real World of Foreign Exchange Trading* by Peter Rosenstreich, and
5. *Forex for Small Speculators* by Noble DraKoln.

Most have the flavor of a Gold Rush, rather than the taste of a system of dealing with real money that real people have struggled to earn and save, and of a market on which the financial stability of the world depends. Perhaps showing the disconnect between the real world and the currency world, a well-known index of fifty currency traders reported that they lost money in 2005,³⁸ despite a healthy overall growth in the world GDP of approximately 4 percent.³⁹

To reduce risk, some currency traders, and mainstream mutual funds have established "currency funds" for investing in currencies or securities denominated in another currency. The Hong Kong office of Fidelity Investments has five such funds, e.g., the "Australian Currency Fund." The others are invested in the euro, Swiss franc, US dollar and the UK pound.⁴⁰ A US bank offers certificates of deposit and savings accounts which can be invested in several currencies.⁴¹ In short, there are many ways to invest in order to profit, or hedge against loss, from the multicurrency foreign exchange system.

While the prospects for gain are appealing, it must be remembered that almost every profit in the foreign exchange markets is balanced by another's loss, and may be considered to be a "zero sum" game.⁴²

REGULATION OF CURRENCY TRADING

In the United States, the Commodities Futures Trading Com-

mission was authorized to regulate trading of currency futures contracts upon its creation in 1974, and pursuant to the “Treasury Amendment” of the same year.⁴³ Such regulation seeks to protect the general public, and it excludes those transactions conducted among banks and other informed institutions.⁴⁴

The Federal Trade Commission ensures that advertising for currency trading conforms to legal standards of truthfulness.

Much of the protection of the system comes from internal rules of the particular regional market or professional associations and committees. In New York, the Foreign Exchange Committee of the Federal Reserve Bank of New York has approximately twenty-five members from the major banks, and other financial services companies in the United States. The Committee’s *Guidelines for Foreign Exchange Trading Activities*⁴⁵ function as a handbook for ethical currency trading. Within the banks and other firms, currency trading is guided by internal audit rules and the prospects for regular outside audits.

The New York Foreign Exchange Committee Chair, Mark Snyder, recently spoke of his concern that “retail aggregators” are pulling people into the foreign exchange market who maybe shouldn’t be there. He expressed concern for the “reputational risk” to the foreign exchange markets due to negative public opinion about “products or activities.”

He said, “...there have been media reports and lawsuits alleging that unscrupulous retail foreign exchange aggregators have defrauded their clients.”⁴⁶

Indeed, there have been. For example, in 2003, the FBI arrested forty-eight currency traders in the New York City area after an 18-month investigation of fraudulent trading where investors lost tens of millions of dollars.⁴⁷

ROGUE TRADERS

From time to time, large cracks develop in the system, as was

the case of John Rusnak of Allfirst Bank in Maryland, US, who had lost \$691 million of his employer's money over five years. According to an analysis by Sharon Burke of Villanova University,⁴⁸ Rusnak was hired in 1993 as a currency trader and pursued a profit-seeking currency trading strategy based on the belief that the Japanese yen was going to increase in value against the dollar. Previously, the bank conservatively traded currencies primarily for customers who wished to protect themselves against currency fluctuations during the period of a business deal.

For example, if a customer agreed in January to purchase Japanese machinery for 1,000,000 yen on 1 March, and the exchange rate was 125 yen to the dollar, the customer would want to ensure that s/he would have to pay the same \$8,000 equivalent in March as was negotiated in January. Such protection is called hedging. If the exchange rate changed to 100 yen to the dollar during that period, making the yen 20 percent more expensive, the machinery would cost \$10,000, if no currency insurance or hedging were purchased. The hedging could be in the form of an option to purchase 1,000,000 yen on March 1 for \$8,000 plus fees plus a risk premium for the risk the seller will take that the currency will, indeed, increase in value by 1 March. Such currency insurance might cost an Allfirst customer approximately \$500, thus bringing the cost of the machinery to \$8,500, but avoiding the risk that it might cost \$10,000.

Pursuing the more aggressive strategy from 1993 until 1997, Rusnak's foreign exchange trades seemed to generate income for the bank and for its customers. However, in 1997 he lost \$29.1 million and thereafter desperately tried to reverse the tide while concealing his efforts. He continued to lose money until the deception was uncovered in early 2002. Caught and convicted, he is now in prison serving a seven and one-half year sentence. Upon his release, he will make token repayment

installments at the rate of \$1,000 per month for five years.

In January 2005, the National Australia Bank discovered a 360 million Australian dollar loss due to unauthorized currency trading by four traders. The losses led to a management shakeup and criminal charges.⁴⁹

In January 2006, a long-term J. P. Morgan Chase employee, Terrence Gumbs, was fired and later arrested for making an unauthorized order to sell €385 million on a certain date. He placed the order in an effort to achieve sufficient profits to make up for earlier losses of \$300,000. Instead, his foreign exchange contract cost the bank approximately \$6 million.⁵⁰

SPECULATION PLAYS LARGE AND DANGEROUS ROLE

Who are the speculators? They are everyone who buys or sells currency for reasons unrelated to the actual need for currency for financial or trading transactions.

George Soros is probably the most famous currency speculator in the world. He was born in Hungary and now lives in New York, where he runs several financial funds and has become an active political philanthropist. His most famous currency gamble was his bet that the British pound was overvalued in September 1992, and he profited by as much as £500 million. At the time, the Bank of England tried to hold the value of the pound within the range agreed upon as part of the European Rate Mechanism (ERM), roughly at 2.95 deutschmarks. The economic fundamentals in the United Kingdom were weak, and Soros sold pounds short and purchased deutschmarks, meaning that he contracted to sell pounds at a later date, when they would be worth less than at the time of the currency contract. The Bank of England attempted to intervene in the markets by purchasing billions of pounds, but it failed and on 17 September 1992, the British Chancellor of the Exchequer declared defeat and took the pound out of the ERM and let

it float on the markets as it has done since then.⁵¹

Probably the world's most successful investor is Warren Buffett, with an entirely self-made personal worth of approximately \$44 billion.⁵² He announced in 2002 that he was so pessimistic about the value of the dollar, in view of the large trade and federal government deficits, that his company, Berkshire Hathaway, was going to speculate in the currency markets against the dollar.⁵³ In June 2005, the B-H bet was at the \$21 billion level, out of a total investment portfolio of \$137 billion. By November it had been trimmed by \$6 billion,⁵⁴ possibly because his gamble has thus far failed, since the dollar has not declined in the international markets as predicted. We will likely never know the true results of his currency gambles. If that \$6 billion had been used to purchase euros at an average price of \$.86 in 2002,⁵⁵ and he had sold those roughly €7 billion in 2005 for \$1.20, he would have made a profit of \$.34 on each euro, or 40 percent in three years, or 13 percent a year. However, such timing is unlikely, and in the foreign exchange markets, like all markets, timing can be "everything." Mr. Buffett perhaps foresaw such difficulties when he wrote in the 2003 Berkshire Hathaway Annual Report that "the cemetery for seers has a huge section set aside for macro forecasters."⁵⁶

On 29 January 2005, Bloomberg.com reported that Bill Gates, the world's richest person, "is betting against the dollar."⁵⁷ He was quoted as saying "I'm short the dollar." Without knowing the details of his transactions, he could have gone "short" using different types of transactions. Let's suppose that on Monday, 10 January, he purchased \$100 million in euros from a currency dealer in Chicago and promised to pay that person back \$100 million in dollars on 10 November 2005. That is, he could have purchased a contract, committing him to deliver \$100 million on 10 November. On 10 January 2005, with the exchange rate of \$1.3108/euro he could have purchased

€76,289,289. By 10 November, with the exchange rate of \$1.1740/euro he could have sold the €76,289,289, but would have been able to purchase only \$89,563,626 and thus would have been short \$10,436,374, i.e., a loss of that amount. Thus, to perform his contract to deliver \$100 million, he would have needed to dip into other assets for the \$10,436,374 and cover his loss. The timing of Mr. Gates's forward contracts is not known, and the final results of his splash into the foreign exchange markets will likely never be fully revealed.

Another speculator to mention is the lesser-known Henryk de Kwiatkowski. For his own personal account, he traded a large volume of currency futures over five months, beginning in late in 1994. In the first few trading weeks, he netted over \$200 million but then suffered successive daily losses of \$112 million, \$98 million, and \$70 million. In 2000, he sued his brokerage firm, Bear Stearns, in New York District Court for his losses. He was awarded \$164.5 million, on the theory that his broker should have kept him informed about factors affecting market prices. In September 2001, the Appeals Court for the Second Circuit reversed the verdict and found that Mr. de Kwiatkowski was responsible for his losses and was not an unsuspecting victim. The court noted his "trading experience, his business sophistication, and his gluttonous appetite for risk."⁵⁸

Related to speculators is the unofficial "black market" for currencies which exists when government seeks to over-control the foreign exchange trading sought by citizens. Typically, the black market in currencies thrives when countries fix the value of their currencies at an unrealistic value. Indeed, the black market currency values are said to be more accurate reflections of currency values than the nominal values.⁵⁹

One friend recalls that he was in Egypt on a monthly US dollar allowance which he calculated was not sufficient to sustain him if he used those dollars to purchase Egyptian pounds

at the official rate. So he took his dollars to the black market and traded them for Egyptian pounds at the higher unofficial exchange rate. He recalls never being so scared in his life, as he watched a dealer take his money and then disappear behind a curtain; and not return for several minutes. The rules in the black market are different from those at Egyptian banks.

Another friend, who is now an economics professor, recalls making money as a young boy when his grandmother would send him deutschmarks as birthday presents and he would trade them for local currency on the black market rather than at an official bank. A far more serious use of the currency black market is the trading of drug and weapons-market money, as the black market does not keep official records of transactions.

TRANSACTION COSTS

Willem Buiter, a supporter of the euro, wrote that “The transaction cost saving advantages of a common currency are familiar.... The usefulness to me of a medium of exchange is increasing in the number of other economic agents likely to accept it in exchange for goods, services and securities. By eliminating the need for the exchange of one currency for another, monetary union saves real resources.”⁶⁰ Although the concept of the savings from elimination of transaction costs is commonly understood, there are few studies of such savings, and none, worldwide.

What are transaction costs? They are the salaries of the traders and all the corporate infrastructures which support them, and the purchases and maintenance of the computers and all the associated costs of buying and selling complex securities. They are often invisible and have to be calculated.

When purchasing *Le Chateau de Sable*, the quoted price in Canadian dollars was \$28.00 CAD⁶¹ plus \$5.00 CAD for shipping. When the bank statement arrived with the charge of

\$28.93 USD, it utilized the exchange rate of \$.851212, which was almost identical to the Bank of Canada quoted rate for that day. In addition, there was included a \$1 CAD “exchange rate adjustment,” which works out to be a 3.57 percent transaction charge. When I called the bookseller about the charge, the sales person said she was not aware of the charge and would contact her bank and give me more of an explanation, which never came.

When purchasing Paul De Grauwe’s *Economics of Monetary Union* from Amazon.co.uk, the quoted price was £29.99 plus a delivery charge of £6.98 for a total of £36.97. Amazon.co.uk then used the exchange rate of \$1.77360 to the Pound, which was very close for the Bank of Canada rate for the day, and my Visa card was billed \$65.61. Thus, Amazon.com bundled its foreign exchange transaction charges into its pricing for the book or for delivery and it was invisible to me.

Transaction costs are often unbundled or invisible. In her refreshing look at global trade, *The Travels of a T-Shirt*,⁶² Pietra Rivoli traces the life of an American T-shirt beginning in the cotton fields of Texas and ending in a second-hand clothing store in Tanzania. The first currency transaction comes when the Texas cotton is sold to China and the second is when the T-shirts are sold back to the United States as finished clothing. The final transaction is when the used T-shirt is sold in bulk to used clothing dealers in Tanzania. However, as an illustration of how the huge world of foreign exchange and currency transactions can be invisible to some, including economists, the book does not mention the issue in any way.⁶³ Each transaction is like a particle of DDT which is undetectable to individual taste, but it adds up and large concentrations can be expensive.

For people purchasing currency online through such companies as American Express, Oanda, and Wells Fargo, the percentage charges are typically between 4-7 percent, when

purchasing less than 1,000 dollars worth of foreign currency, in cash.⁶⁴ When placing a hypothetical order for \$1,000 worth of euros, the Wells Fargo utility used an exchange rate of \$1.2370 and determined that I could purchase €805, for \$995.79 plus \$8.00 in shipping. On that day, the Bank of Canada quoted rate⁶⁵ was \$1.1784, a rate which meant that Wells Fargo was charging me \$.0585, or 5 percent more than its cost when purchasing euros in large \$1 million-plus blocks.

Also to be included in the transaction cost of my micro-transaction would be the value of my time to shop for the best deal and then to complete the online form, and the charge from my credit card company, invisible to me though it may be.

Wells Fargo's utility has a "Frequently Asked Questions" section and the obvious question is asked and answered: "Why are rates quoted on the site different from those in the newspaper? Answer: Rates quoted in newspapers aren't available to the public. These rates are usually wholesale rates available on amounts of \$1 million or more, transferred electronically between banks."⁶⁶

In general, credit card companies charge one percent for consumer foreign exchange transactions and many banks add another one percent.⁶⁷ PayPal, now a division of E-Bay, "adds a 2.5 percent spread above" the Interbank rate, and it also charges one percent "cross-border fees" which may include foreign exchange charges.⁶⁸

As most of the \$2.5 trillion daily currency trading is in larger sized trades than my hypothetical Wells-Fargo \$995.79 purchase of currency or my \$28.93 purchase of *Le Chateau de Sable*, or \$65.57 purchase of *Economics of Monetary Union*, the percentage cost of such trading is substantially lower for all trades on average. In fact, my currency trades were not even recorded in the foreign exchange markets as they were included in the vastly larger transactions by Wells-Fargo, the Montreal bookseller's

bank, and Amazon.co.uk.

The European Council's 1990 pre-euro study, *One Market, One Money*, cited a 1988 Belgian experiment which involved a hypothetical person traveling through 10 European Community countries and converting all his/her cash at each border. Beginning with 40,000 Belgian francs, the traveler ended the hypothetical journey with 21,300 Belgian francs, showing a cost of 47 percent, for an average of 4.7 percent cost for each transaction.⁶⁹ If a similar traveler had traveled in 2006 from Belgium with €40,000 to all of the 146 other currency areas, with each charging 4.7 percent for currency exchanges on average, his or her funds would have diminished to less than €1,000 by the 78th currency, and dropped to €35.45 by the 146th. These high transaction cost hypotheticals were for cash, and the foreign exchange transaction charge percentages decline dramatically for large, non-cash transactions. Nonetheless, even small charges still add up. If the border exchanges charged only two percent, the worldwide "€40,000" traveler would have returned with only €2,094.

On 27 December, I "sold" a Canadian twenty-dollar bill at a local Maine bank for \$18.20, which translated into roughly a 6 percent transaction charge, compared to the Bank of Canada or Oanda quoted rates. At that rate, our traveler would have had to leave Belgium with €413,000 in order to ensure a return home with at least €1,000, perhaps to celebrate being a multicurrency foreign exchange system survivor.

Paraphrasing the late US Senator Everett Dirksen, if you take a bit of small change here and a bit of small change there, pretty soon we are talking real money.⁷⁰

For the poor of the world, these percentages matter when it comes to \$96 billion in remittances received from relatives who have migrated to employment elsewhere. Jose de Luna Martinez of the World Bank has written that the exchange rate

transaction charge is one of the three components of the 8.3-10 percent transaction fee which is applied to remittances.⁷¹ If the exchange rate transaction charge is only one percentage point of that 8.3-10 percent range, that means at least a \$960 million charge to the poor.

INTERNATIONAL TRAVELERS

As noted with the Belgian study of a hypothetical traveler converting currency at each border, travelers pay dearly for the multicurrency foreign exchange system.

In addition to high transaction charges, they also leave unconverted their foreign currencies and accumulate bills and coins in pockets or purses and then in containers at home. While resting there, the contents of those containers change value according to the exchange markets, but they do not earn interest. Except for the value of the metal in the coins, the money has no intrinsic value and it's invested in nothing productive; and represents another inefficient and inconvenient aspect of the multicurrency foreign exchange system. One company, Travelex, addresses this need with an online utility, "Sell Us Your Currency" whereby customers print out a form and mail their foreign currency to the company, and home-currency cash or credit will be returned.⁷² Travelex recently won the right to provide currency exchange services in a new terminal at Prague's airport, which will bring the size of its operations in the Czech Republic to sixty people.⁷³

INTERNATIONAL INVESTORS

The fluctuations in currency values have significant effects on investors. In 2003, the US Dollar declined by 17 percent against the euro and nearly 10 percent against the yen. *The Wall Street Journal* reported that "Depending upon one's geographic location, currency exposure could have accounted for more than

half of equity returns last year...."⁷⁴ For example, for Europeans who invested in stocks paralleling the Standard and Poors Index which gained 29 percent, the currency fluctuation eliminated more than half of the gain. For those who held 10-year US Treasury notes, bearing 1.4 percent interest, the effect was more dramatic and worse. For holders of US dollars who invested in Europe and Japan, the effects were reversed, and those investors did well. All international investors know that currency risk is a major part of such investing, but the wide fluctuations of the two major anchor currencies divert investor attention from the real value of their primary investments. With so much money changing hands and with such large changes in valuations, there are many who believe they can profit from the multicurrency foreign exchange system. As Fidelity Investments says on its website, "Currency fluctuation can be good for investors."⁷⁵

INTERNATIONAL CORPORATIONS

International corporations make investments and sell products and services around the world and must constantly be on the alert for currency risk. They have to price their products and services in the currencies of their customers and always be alert that the exchange rates will not eliminate their profits. In addition to paying a percentage on all their foreign exchange transactions, international corporations have to cope with the fluctuations of foreign exchange values, in two areas: reporting and worldwide allocation of resources.

Reporting

Using the pound sterling as its home currency, the U.K.-based Reuters reported in 1999 that it "has significant costs denominated in foreign currencies with a different mix from revenue. Reuters profits are, therefore, exposed to currency fluctua-

tions." The *Annual Report* continued, "...the impact of an additional unilateral 1 percent strengthening of sterling would have been a reduction of approximately £10 million on operating profits."⁷⁶ Thus, a one percent increase in value of the pound from \$1.7000 to \$1.7171 will mean an increase in Reuters profits by £10 million, and a similar drop would bring a decrease. Does this make cents/sense?

It's estimated that Nissan Motor gains about \$440 million in profits for each one percent drop in value of the yen against the US dollar. For Toyota, the gain would be about \$1.2 billion.⁷⁷ The reverse would also be true, but do these possible shifts make cents/sense?

Honda stated in its 2004 *Annual Report* that it "generates a substantial portion of its revenues in currencies other than the Yen. Honda's results of operations would be adversely affected by an appreciation of the Yen against other currencies, in particular the US dollar."⁷⁸ In 2003 Nestle, the world's largest food company, headquartered in Zurich, announced that its profits for the first half of 2003 fell by half from the year previous, hurt by a strong Swiss franc.⁷⁹

For some corporations, the effect is larger than Nestle's lost profit opportunities. Also in 2003, Nintendo estimated a loss of 3 billion yen (\$27 million, computed at 111.11 yen to the dollar), which was its first loss since its shares were first listed in 1962. The primary reason for the loss was its booking of a 40 billion yen loss (\$360 million) due to foreign exchange fluctuations. The problem was that Nintendo had approximately \$5 billion in cash deposits in the United States, and a 7.2 percent drop in the value of the dollar relative to the yen caused the loss.⁸⁰ Does this make cents/sense?

Of course, these reports of harm were likely balanced for other corporations by the increase in profits due to currency translation, except that in the annual reports of those corpora-

tions, the credit for such profits was not as likely to be allocated to currency translation. Sometimes, such windfalls are reported. In 2002 Avon Products hedged against the devaluation of Latin American currencies; but when that devaluation didn't occur, the appreciation of Avon's holdings contributed to its profits.⁸¹

While the companies cited above are international, and the effects of currency fluctuation have been substantial, Mark Hulbert has written that international corporations are "immune from the effects of currency fluctuations," to the extent that their operations and risk are spread across currency areas.⁸²

The problem is not so much profits and losses as it is uncertainty and risk—both anathema to corporations and their economies. In a standard text, *Corporate Risk-Strategies and Management*, currency risk is featured in seven of its thirty chapters.⁸³ All international corporations have people and departments to manage the foreign exchange risk. Joachim Herr is the head of risk management at BMW International where he has approximately five people trading currencies with the goal of making "sure that the fluctuations of a currency do not impact our operating business, which is producing and selling cars."⁸⁴ He continued, "What we see ourselves as is hedgers...we have long-term strategic hedging, where we do very long, deep analysis on currency movements, and we have short-term technical hedging, where we decide how to cover the remaining open risk in the coming months...."⁸⁵ For each country where BMW operates, there is a Treasurer who is responsible for local currency exposure, and Herr estimates that such foreign exchange work takes about ten percent of such treasurers' time.

Allocation of Resources

Richard Cooper noted that one of the widest fluctuations in currency values, the 70 percent appreciation of the yen to the US dollar between 1995 and 1998, may have thrown many other-

wise healthy firms into bankruptcy. Further, he surmises that the prolonged nature of the late 1990–2000 recession in Japan was partly caused by Japanese firms investing in other currency areas in order to hedge against losses in yen due to currency fluctuations.⁸⁶

Many international corporations do more than hedge to control currency risk. One article notes, “Currency speculation has always had a vast influence on systems of flexible exchange rates. A large variety of empirical, experimental, computational, and theoretical investigations deal with this topic. But what determines the speculative decision of a firm? Why do non-financial firms speculate [in the currency markets]? How do they deal with exchange rate uncertainty?”⁸⁷

INTERNATIONAL BANKS

For many banks, trading currencies for their customers represents a sizable portion of revenue. The European Commission 1990 report found that such trading represented 5 percent of European banks’ revenues.⁸⁸

The Bank of America trades approximately \$100 billion per day, according to Steve Nutland, Director of North American trading. Of the foreign exchange markets generally, he stated, “many people believe Forex is a necessary evil. On the institutional/hedge fund side of the business, many view it as the largest casino in the world. I like to see it that somewhere in between the two lies the truth.”⁸⁹

As part of its trading business and in order to protect its own international operations, Nutland states that the Bank of America “manages interest rate and foreign currency exchange rate sensitivity predominantly through the use of derivatives. Fair value hedges are used to limit the Corporation’s exposure to total changes in the fair value of its fixed interest-earning assets or interest-bearing liabilities that are due to interest rate or for-

eign exchange volatility. Cash flow hedges are used to minimize the variability in cash flows of interest-earning assets or interest-bearing liabilities or forecasted transactions caused by interest rate or foreign exchange fluctuation.”⁹⁰

Scotiabank is a leading Canadian Bank, and does extensive business in the United States, Mexico, South America and the Caribbean. Its 2005 *Annual Report* financial results depended in substantial part on a critical change over which it had no control: the Canadian dollar “strengthened” in relationship to the US dollar by eight percent, from .7586 to .8217 per US dollar.⁹¹ Scotiabank reported a net income of \$3.184 billion (CAD),⁹² which was \$292 million (CAD) greater than the year before. However, it also noted a negative effect of \$145 million (CAD) due to currency translation, meaning that without the currency translation, net income would have risen by that additional amount. The oft-repeated phrase in the report is, “Before the impact of foreign currency translation....” The effect is summarized, “In the absence of hedging activity, a one percent increase(decrease) in the Canadian dollar against all the currencies in which we operate, decreases(increases) our earnings by approximately \$23 million (CAD) before tax. A similar change in the Canadian dollar would decrease (increase) the foreign currency translation account in shareholders’ equity by approximately \$81 million (CAD).”⁹³ To illustrate, a 1 percent increase in the value of the Canadian dollar from \$.87000 to \$.87870 or \$.88 would decrease Scotiabank’s profits by \$23 million (CAD) and decrease shareholders’ equity by \$81 million (CAD).

Increasingly, banks are generating revenues and earning profits through their foreign exchange trading. In 1992, the foreign exchange trading profits of the top 8 US banks was \$2.695 billion.⁹⁴ Even small regional banks are joining in the foreign exchange game not just to protect against currency risk but by promoting foreign exchange derivatives as “an

opportunity for potential revenue enhancement.”⁹⁵

BALANCE OF PAYMENTS/CURRENT ACCOUNT

For all the countries/currency areas in the world, there must be a long term balance of payments for goods and services which are imported into a country/currency area and those which are exported, plus or minus capital flows. The term, “current account” is the same as “balance of payments,” except that it excludes “capital transfers” or money used to buy/sell long term investments.

In theory, there are balancing factors which force countries into equilibrium. For example, if a country is buying more than it is selling and its foreign reserves of other currencies decline to make those purchases, and the demand for its currency decreases; then the foreign exchange markets take notice. The result is that the value of the currency drops and the country’s exports become cheaper, which leads to an increase in exports, which then leads to a surplus. Then, the value of the currency rises, and the cycle renews. Another remedy, for short term imbalances, is a loan from the IMF.

Considering the money supply of every country as a fuel tank, there must be inflow of fuel to balance the consumption outflow. If an imbalance continues for too long, the tank will either overflow or run out. With a money supply, payments out of a currency must balance receipts into a currency. When receipts exceed payments, the reserves of a currency area’s central bank increase; and the reverse causes depletion. While an overflow can be a problem, the much-feared danger for a money supply is extended outflow, causing a central bank’s reserves to diminish so far as to reduce confidence in the value of the currency, possibly leading to a currency crisis. Thus, every central bank watches closely the balance of payments of its own currency.

The only country in the world which appears to be immune from the requirement that the current account be in balance is the United States, because the US dollar is recognized as the world's primary reserve currency and it is used throughout the world. Approximately one-half to two-thirds of the \$700 billion in US dollars in circulation, are circulating outside the United States.⁹⁶ There is no rush nor panic to send those dollars home and use them to purchase US goods and services, because the dollars are useful in other countries as widely accepted money, and a lot of them have been returning to be invested in the United States.

The major source for the US current account deficit is the trade deficit as more US citizens purchase foreign goods and services than foreigners purchase from the United States. The current downward swing in the current account deficit began in the early 1980s and in 2005, it was nearly \$804.9 billion out of balance.⁹⁷

Since the United States decided in 2000 to abandon its fiscally responsible record of federal government surpluses and even of balanced budgets, it has accumulated large annual deficits running into the hundreds of billions of dollars, and constituting three, four, five, and six percent of the annual Gross Domestic Product of the country. It has sold its bonds on the open market to finance its vast borrowing, and because the United States is viewed as a stable economy, foreigners purchase these debt securities in large amounts. Floyd Norris has noted in *The New York Times* that almost all, \$800 billion, of the \$1.1 trillion increase in the US national debt incurred since 2000 has been purchased by foreigners.⁹⁸

One may ask here why the US dollar cannot be regarded as the Single Global Currency, as some have suggested. The short answer is that while it's used in the retail marketplace, it's not deemed as "legal tender" for all obligations including the pay-

ment of taxes in other countries. Also, its value is tied inextricably to the fortunes of one country, and its management is not shared with others as a common currency.

WHAT ARE THE REAL COSTS TO THIS MULTICURRENCY FOREIGN EXCHANGE SYSTEM?

So far we have explored a system that is huge and has some pitfalls and risks and is largely invisible. How much does all this really cost, and how much might it cost if it breaks? The most easily quantifiable determination of cost is the total cost of foreign exchange transactions and then there are estimates of the cost of low asset values due to currency risk, and then the potential cost of currency crises and, worst of all, a worldwide currency crisis.

ESTIMATE OF TOTAL WORLDWIDE ANNUAL TRANSACTION COSTS— \$400 BILLION

In studies prepared during the run-up to the introduction of the euro, it was estimated that foreign exchange transaction costs were approximately .3 percent (.003) of the value of the currency being traded.⁹⁹ Applying that percentage to the daily \$2.5 trillion traded, the daily transactions cost would be \$7.5 billion and the annual cost to the world, using a 260 trading day year would be \$1.95 trillion per year.

Since the European Commission studies were done, the automation of the currency markets has continued and the per transaction costs of trading have dropped in the fifteen years since 1990. To be conservative about the current transaction costs, this book assumes that the average transaction cost is .062 percent (.00062) of the value of the transactions, and thus one-fifth of the .3 percent level previously determined in the 1990 European Commission study. This estimate includes the initial foreign exchange trading costs as well as all the charges to cus-

tomers at various levels, and it's applied only to the total for "traditional" foreign exchange transactions, and does not include the dollar volume for derivatives or over-the-counter transactions. At the .062 percent rate, the annual worldwide transaction costs for foreign exchange trading are \$403 billion ($.00062 \times \$2.5 \text{ trillion} \times 260 \text{ days}$), which are rounded to \$400 billion in this book.

Another such cost is the administrative burden of requiring some parties to contracts to denominate a foreign currency as the currency for payment. The European Commission's *One Market, One Money* study estimated that there would be a .05 percent GDP benefit to the European Community member countries when corporations and others engaging in international contracts could denominate their obligations in their home currency rather than in a foreign currency, such as the dollar.¹⁰⁰

Another way to summarize the total cost of transactions is to express them as a percentage of GDP. "Focusing only on the transaction costs that are incurred in the Canadian foreign exchange market," John Murray found those costs to be \$3.0 billion (CAD) annually, or .4 percent of GDP.¹⁰¹

The *One Market, One Money* study found that "Overall, transaction costs can be conservatively estimated to amount to around 0.5 percent of GDP..."¹⁰² In 1996, the IFO Institute of Munich found that "foreign exchange management costs within the EU amounted to almost 1 percent of the EU12 GDP in 1995," and explained that more up-to-date data accounted for the increased estimate.¹⁰³ Although trade and international financial transactions accounted for a larger percentage of the GDP for European countries than for others in 1990, the world has globalized significantly since then, so that the 1 percent estimate can be fairly applied to the rest of the world. Hugo Mendizabal found that the savings to the EMU from the elimination of intra-EMU transactions could be as much as .69 percent of EMU GDP,

which accounted for one-half of members' international trade foreign exchange transactions.¹⁰⁴ For all transactions, including those with non-EMU countries, the percentage would be twice that, or 1.38 percent.

If those percentages were conservatively adjusted downward to .95 percent, and assumed to include all transaction costs at all levels, and applied to the world's estimated 2005 GDP of \$42.2 trillion, that would bring the annual cost of transactions to \$400 billion.

Thus, using either method, whether by calculating from each transaction or by summing up total costs and expressing as a percentage of GDP, the annual total transaction costs of worldwide foreign exchange operations are estimated conservatively here to be \$400 billion. Again, it is noted that these estimates are for the total transaction costs, and not only those incurred at the currency trading desk.

We've seen how much \$2.5 trillion might be, though it is still impossibly large to understand; and we know that \$400 billion is 16 percent of \$2.5 trillion. But how much is \$400 billion, really?

- \$61.54 for every human being on earth;
- 200 times the annual budget of the United Nations;¹⁰⁵
- 100 times the total value of worldwide microloans; and¹⁰⁶
- 25 times the estimated annual spending for family planning and reproductive health care support.¹⁰⁷

The \$400 billion estimates here are intended to be conservative, and more research is welcomed to better determine the actual cost of worldwide foreign exchange transactions.

THE COST OF LOW ASSET VALUES DUE TO CURRENCY RISK

When calculating the value of an asset, an investor or owner must determine the likelihood of getting a real return on that

investment; and such return will be adversely affected in inverse proportion to currency risk.

When the value of an asset is artificially low, compared to similar assets in other situations or places, the difference in value can be said to be a cost or opportunity cost. That is, owners of such undervalued assets are losing the opportunity to use that asset for other purposes that might be available if valuation were not artificially deflated by currency risk.

One down-to-earth illustration of the effect of high exchange risk on asset values is the status of the home mortgage market around the world. The issue in the United States or Europe is not whether there are mortgages available, but whether they are for ten, fifteen, twenty, or thirty years and whether they have a fixed rate or an adjustable rate, to be moved up or down with the linked prime rate. In contrast, in some parts of the world, mortgages are not available because of the high long term currency risk. John Edmunds pointed out to me in 2003 that mortgages with longer terms than a year were unavailable in Buenos Aires, due to Argentina's on-again, off-again currency problems. As mortgages were unavailable, demand for homes was crippled, and the resulting oversupply led to prices which were a small fraction of their equivalent value in a similar city and neighborhood in the United States or Europe. For example, a three-bedroom home in London might be worth €490,000, but the same home in Buenos Aires might be worth about €70,000 (252,700 Argentine pesos).

Similarly, the values of financial assets in the less developed, or high currency risk or sovereign risk,¹⁰⁸ world, are undervalued because of that currency risk, i.e., the risk that a currency might severely inflate or collapse. Due to currency risk, the ability to earn reliable interest on an asset far into the future is in doubt, and therefore potential lenders are unwilling to lend. Financial assets such as stocks and bonds are also undervalued

due to the uncertainty of future return.

The IMF Global Financial Stability Report estimates that the total value of the world's financial assets is \$144 trillion,¹⁰⁹ but if all currency risk were lowered to the same level as the developed world, and the ratio of asset value to GDP were the same, it's estimated here that an additional \$36 trillion would be added. Hence that amount could be called a cost of the existing multicurrency foreign exchange system.

CURRENCY CRISES

When confidence in a currency falls, then foreigners and citizens within a currency area accelerate their selling of the home currency and the purchase of other currencies. If confidence in the currency is not restored quickly, a classic market panic will set in and a currency crisis will begin, causing enormous loss of wealth and confidence in an economy. In the 1990s several currency crises shook the international financial system: Mexico (1994), Argentina (1995, and again in 2001), East Asia (1997), and Russia (1998).

These crises caused significant economic damage to the affected countries and their peoples. Benn Steil and Robert Litan report that in Asia, "an estimated 22 million people were pushed into poverty. In Thailand, where the crisis started, unemployment rose from 0.9 percent in 1997 to 5.3 percent in 1998, and measures of poverty rose significantly. Household expenditure on health care declined by 40 percent from 1996 levels.... But the hardest hit was Indonesia, which at one point saw its currency, the rupiah, fall to a mere 15 percent of its pre-crisis value. The country's 13.8 percent GDP decline in 1998 was comparable to the total decline over the worst of the Depression years (1929-32) in the United Kingdom."¹¹⁰

Argentina's GDP dropped 7 percent in 1989 and 10.9 percent in 2002.¹¹¹ Michael Hutchison and Ilan Neuberger estimated that

currency crises in twenty-four emerging market economies during the years 1975-1997 suffered a 5-8 percent GDP output reduction over a typical two-to-three year period, before returning to a normal growth rate.¹¹²

Several factors have been identified which facilitate and worsen a currency crisis such as an unrealistic fixed exchange rate, government instability, lack of capital controls and lack of central bank independence.¹¹³ For example, if a currency with a fixed exchange rate to the euro is perceived by speculators and others to be artificially high, and thus likely to be lowered at some point, holders of that currency will move their assets into stronger currencies. Such sales will then reinforce the perception that a currency is overvalued and weak. Without capital controls, large amounts of money can be transferred quickly, and the selling can quickly become a rout, which a weak government is not likely to stop.

Note that there are three related types of financial crises: currency crises, banking crises where banks fail, and debt crises where individuals, corporations and nations default on their debts.¹¹⁴ In this book, we focus on the first, the currency crisis. Each type of financial crisis may well lead to one or two of the others, but we are concerned here about those situations where the currency crisis is the leading edge.

Accumulated current account deficits are like accumulations of DDT in the bodies of animals, and up the food chain. At some point, the financial body cannot tolerate the imbalances and a crisis occurs. As with animals dying from DDT poisoning, it's hard to pinpoint the precipitant cause of death, but in a weakened financial system, a financial crisis can start when one individual or bank or government refuses to accept payment in a currency because a person has lost confidence in that currency's ability to hold its value for other transactions.

The emphasis in this book is not about trumpeting the fear

of a regional or worldwide financial or currency crisis. There is enough fear in the world today. Nonetheless, it's important to note that there is considerable risk in the current foreign exchange system to cause concern, and many are sounding that alarm.

Former US Secretary of Commerce Peter G. Peterson wrote, "Many see a risk of a real crisis." He continued, "Former Federal Reserve Chairman Paul Volcker says the odds of this happening are around 75 percent within the next five years; former US Treasury Secretary Robert Rubin talks of 'a day of serious reckoning'."¹¹⁵ Harvard University President, and former US Treasury Secretary and 2006 World Economic Forum Annual Davos Meeting Co-Chair, Larry Summers, stated in a pre-meeting interview, "There is the ever present risk that these balances will not prove sustainable and the adjustment process will be disrupted. If that happens there will be serious consequences for the US economy and the global economy."¹¹⁶

As the next currency crisis has not occurred, a specific cost cannot be predicted in advance; but, by definition, a currency crisis affects all the users of a currency. Hundreds of billions of dollars are at risk, as are the livelihoods of millions, if not billions, of people. Every currency crisis that occurs until the implementation of a Single Global Currency will have been totally avoidable, and a vast waste.

SUMMARY

The multicurrency foreign exchange trading world in 2006 is complex, expensive, unstable and hazardous. The economic well-being of every human being on earth depends upon the international financial system, and it should therefore be simple to understand, inexpensive, stable and safe.

The dangers and risks do not come from the lack of effort by many smart, well-intentioned people to make the multicur-

rency foreign exchange system work. Chapter 2 explores some of those efforts.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. The rhythm for the title of this chapter may have come from reading aloud Judith Viorst's *Alexander and the Terrible, Horrible, No Good, Very Bad Day*, to granddaughters Madeline and Cameron. New York, NY: Aladdin Paperbacks, Simon & Shuster, 1972.

2. The count of 147 comes from the listing on the Single Global Currency Association website, www.singleglobalcurrency.org/currencies_by_country.html. The calculations start with the number 184 which was the number of full nation-state members of the United Nations in 1994. Then are subtracted the countries who are fully "ized" (Dollarized(2) where the US Dollar is legal tender, and Euroized(4) where the Euro is legal tender) and are subtracted the countries which belonged to monetary unions as of that year. Then the new U.N. members are added and further subtractions are made for izing or formation of monetary unions. Where a monetary union includes two mutually legal tender currencies, the count of currencies is one, as is the case with the Singapore/Brunei Darussalam monetary union.

As with many count-em-ups, a lot depends upon definition, and the choice of the 191 U.N. members is a stake-in-the-ground starting point. There are actually many more currencies in the world. In addition to the "complementary" or "private" currencies which are discussed later, there are a number of territories or countries with ambiguous political status which have convertible currencies, such as Netherlands Antilles, Aruba, Cayman Islands, Falkland Islands, Hong Kong, Macao, and Taiwan.

3. The term "currency area" became best known with the 1961 publication of Robert Mundell's "A Theory of Optimum Currency Areas," *American Economic Review*, May 1961, pp. 657-65. The article is also contained in Robert Mundell's textbook, *International Economics*, as Chapter 12, pp. 177-86, and online at <http://www.columbia.edu/~ram15/ie/ie-12.html>. He originally defined "currency area" as a "domain within which exchange rates are fixed," at p. 662.

4. This \$2.5 trillion estimate is calculated in two ways. First, we take the \$1.9 trillion baseline for April, 2004, from the Bank for International Settlements report, and multiply by the conservatively estimated 32 percent

increase in trading from April, 2004 to 21 December, 2005. See Bank for International Settlements, *75th Annual Report*, Chapter 6, "Foreign Exchange Markets," issued 27 June 2005, pp. 77-87, at <http://www.bis.org/publ/arpdf/ar2005e5.htm>. That report, in turn, references the "Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2004—Preliminary Global Results," B.I.S., 28 September 2004, at <http://www.bis.org/press/p040928.htm>. The final results were published in March, 2005, at <http://www.bis.org/publ/rpfx05.htm>.

Another method would be to take the reported daily volumes from London, New York, and Singapore on October 2005, of \$.73 trillion, \$.37 trillion and \$.20 trillion respectively, and divide by their respective shares of the foreign exchange market, as taken from the earlier Triennial Survey, above, of 31 percent, 19 percent and 5 percent, respectively. Those extrapolated worldwide volumes average to \$2.4 trillion. The city totals are reported at <http://www.bankofengland.co.uk/markets/forex/fxjsc/fxturnresults060123.pdf>, and <http://www.newyorkfed.org/fxc/2006/fxc012306.pdf> and <http://www.sfemc.org/statistics/fxvol23jan2006.pdf>, respectively.

5. These totals for the non-traditional, or "derivatives" or "over the counter" are not included in the above totals as their numbers are less reliable. The numbers in the text are extrapolated from the London, New York, and Singapore Reports, from endnote 4, above, but the 2005 B.I.S. Triennial report states that the worldwide daily trading in these instruments was \$1.2 trillion, or almost as large as for the traditional instruments.

6. "Babson Economist Works to Reduce World Poverty," Interview with Babson Prof. Maria Minniti, *Boston Globe*, 6 November 2006, p. A31.

7. Senator Everett Dirksen was a US Senator from Illinois and he used to tell a story to the same effect: "An old man once taught me what a million is. He said, look at your watch, and watch the second hand. You can see it every second, every minute, every day, every night, every week, every month, every year—and in three years it would go around 1,000,000 times." from http://en.thinkexist.com/quotes/everett_dirksen/. However, it would actually take a little less than two years as there are 525,600 minutes in a year.

8. This estimate of \$42.2 trillion was calculated using the World GDP number from the World Bank data for 2004 of \$40.89 trillion, and the World Bank's estimate in November, 2005 of a 3.2 percent growth rate for 2005. See "Prospects for the Global Economy," 16 November 2005, at <http://web.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/EXTGBLPROSPECTS/0,,contentMDK:20665612~menuPK:612510~p.PK:64218950~piPK:64218883~theSitePK:612501,00.html>

9. New York Stock Exchange, online statistics at <http://www.nyse.com/>

Frameset.html?displayP=/marketinfo/1022221393893.html

10. "FX Volume Survey Results," Foreign Exchange Committee of the Federal Reserve Bank of New York, <http://www.newyorkfed.org/fxc/volumesurvey/>

11. "A Little Perspective on \$87 billion," Crunchweb.net, Alexandria, Virginia, at <http://www.crunchweb.net/87billion/>

12. "Apollo 8," National Space Data Center, National Aeronautics and Space Administration (NASA), at <http://nssdc.gsfc.nasa.gov/planetary/lunar/apollo8info.html>.

13. This concept that foreign exchange represents the bartering of different goods, i.e., currencies, is, like some other ideas, an idea that I thought I developed on my own. As with most such ideas, there indeed was at least someone else. In this case, Richard Cooper had this to say, "Yet the exchange rate is technically not anchored by anything in the long run, being the barter price between two nominal variables (as Kareken and Wallace pointed out two decades ago)," at Richard Cooper, "Toward A Common Currency?" June 2000, p. 18, presented at the conference on the Future of Monetary Policy and Banking, organized by the IMF and the World Bank, at <http://www.worldbank.org/research/interest/confs/upcoming/papersjuly11/cooper.pdf>.

14. For an impassioned statement of the value of money, see "Francisco's Money Speech" in Ayn Rand's *Atlas Shrugged*, 1957, at <http://capmag.com/article.asp?ID=1826>. Francisco d'Anconia said, in part, "To trade by means of money is the code of the men of good will. Money rests on the axiom that every man is the owner of his mind and his effort. Money allows no power to prescribe the value of your effort except the voluntary choice of the man who is willing to trade you his effort in return. Money permits you to obtain for your goods and your labor that which they are worth to the men who buy them, but no more. Money permits no deals except those to mutual benefit by the unforced judgment of the traders."

15. World Trade Organization, *World Trade Report*, 2005, p. 6, Table 3, "World Merchandise Trade by Major Region," of Chapter 1, "Recent and Selected Medium-Term Developments" at http://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report05_e.pdf

16. "Total GDP," 15 July 2005, World Bank Data and Statistics, at <http://siteresources.worldbank.org/DATASTATISTICS/Resources/GDP.pdf>

17. Dominick Salvatore, "The Euro-Dollar Exchange Rate Defies Prediction," *Journal of Policy Modeling*, June 2005, pp. 455-64, at <http://www.sciencedirect.com/science/article/B6V82-4G5YSNX2/2/8bd46e0652074df47caa9c04052a1e2d>

18. During my research for this book, I found many such puzzles and may have discovered a new one which can be called the "currency pair

sum puzzle." However, as with most ideas, it's likely that someone has already identified this puzzle and solved it, or deemed it not a puzzle at all. I wondered about the sum of the two currency values in a traded pair, e.g., the euro/US dollar on 4 January 1999 of .8422/1.1874 summing to be 2.0296, and the significance of the changes in that sum over time. Looking at the daily sum of those pairs in 1999, the highest value for the sum occurred that first day of trading of the euro and it was also the high for the year for the euro (low for the US dollar). The sum never dropped below 2.0000, which point was reached on the same day as the euro low for the year on 3 December at \$.9984, and on other days as well. On 30 December 2004, when the euro hit a high of \$1.35, the sum was 2.0924.

To what extent should this sum be a "constant sum game," analogous to zero sum games? Readers who have comments on this puzzle, please send them to me at morrison@singleglobalcurrency.org. Better yet, and consistent with the general request in this book to economists, please devote whatever energy you might spend on the above and idly contemplated "puzzle" to the far more important issues of the Single Global Currency.

19. Sarah Perry, Director of Visa's Strategic Investment Program, in *Finance Insider*, Issue 3, 17 April 2001. The Single Global Currency Association followed up with a 5 August 2005 email to Ms. Perry about the mutual interest in a Single Global Currency.

20. Foreign Exchange Committee of the Federal Reserve Bank of New York, *Annual Report*, 2005, for October 2004 at <http://www.newyorkfed.org/FXC/annualreports/fxcar04.pdf>

21. Mark Snyder, "New Opportunities and Risks in Foreign Exchange: The Role of the Foreign Exchange Committee," speech presented at the Profit & Loss Forex Network Conference, 20 September 2005, Chicago, at <http://www.newyorkfed.org/fxc/2005/fxc051117.pdf>.

22. The Foreign Exchange Joint Standing Committee, "Results of the Semi-Annual FX Turnover Survey in October 2005," 23 January 2006, at <http://www.bankofengland.co.uk/markets/forex/fxjsc/fxturnresults050725.pdf>.

23. Andrew Krieger, with Edward Clafin, *The Money Bazaar*, New York, NY: Times Books, 1992, at p. 21.

24. Foreign Exchange Committee of the Federal Reserve Bank of New York, *FX Volume Survey*, 2005, for April, 2005 at http://www.newyorkfed.org/fxc/volumesurvey/explanatory_notes.html

25. "Derivative" as defined in Investopedia.com, "In finance, a security whose price is dependent upon or derived from one or more underlying assets. The derivative itself is merely a contract between two or more parties. Its value is determined by the fluctuations of the underlying asset. The most common underlying assets include: stocks, bonds, com-

modities, currencies, interest rates and market indexes. Most derivatives are characterized by high leverage.

"Futures contracts, forward contracts, options and swaps are the most common types of derivatives. Because derivatives are just contracts, just about anything can be used as an underlying asset. There are even derivatives based on weather data, such as the amount of rain or the number of sunny days in a particular region.

"Derivatives are generally used to hedge risk, but can also be used for speculative purposes. For example, a European investor purchasing shares of an American company on an American exchange (using American dollars to do so) would be exposed to exchange-rate risk while holding that stock. To hedge this risk, the investor could purchase currency futures to lock in a specified exchange rate for the future stock sale and currency conversion back into euros." At <http://www.investopedia.com/terms/d/derivative.asp>

26. Alan V. Deardorff, "Deardorff's Glossary of International Economics" at <http://www-personal.umich.edu/~alandear/glossary/>

27. The Associated Press, via Asahi.com, "Dollar Rises Past 120 Yen in Tokyo," 2 December 2005, at <http://www.asahi.com/english/Herald-asahi/TKY200512020245.html>

28. Martin Fackler, "Yen at 32-month Low as Japan's Small Investors Look Abroad," *The New York Times*, 5 December 2005, p. C3.

29. Raul Lopez, "Currency Trading: Understanding the Basics of Currency Trading," at <http://www.articlebiz.com/article/1626-1-currency-trading-understanding-the-basics-of-currency-trading/> and also at <http://ezinearticles.com/?Currency-Trading:-Understanding-the-Basics-of-Currency-Trading&id=100502>

30. For a view of the requisite personality characteristics of foreign exchange traders, see "Perceptions of Successful Traders by Foreign Exchange Professionals," by Thomas Oberlechner, in *Journal of Behavioral Finance*, Vol 5, No. 1, pp. 23-31, at http://www.leaonline.com/doi/pdf/10.1207/s15427579jpfm0501_3?cookieSet=1

31. Andrew Krieger, with Edward Claflin, *The Money Bazaar*, New York, NY: Times Books, a division of Random House, 1992, at p. 105.

32. Forex Capital Markets, at www.fxcm.com

33. Forex.com, a subsidiary of Gain Capital Group, www.forex.com.

34. Jack Egan, "Investing: Check the Currency Risk. Then Multiply by 100.," *The New York Times*, 19 June 2005, p. BU 8, at <http://select.nytimes.com/gst/abstract.html?res=F40A17F83F5F0C7A8DDDAF0894DD404482>.

35. Forex Capital Markets, at www.fxcm.com

36. Forex.com advertisement in *Currency Trader*, December 2005, p. 5.

37. Remington Ventures, Inc., represents that it sells software "that automatically renders neural network predictions from real time data. The system's neural network input database is designed so that the neural net

actually chooses the instrument to trade as well as the trade parameters.... It means this company is on the brink of changing the market itself, and today investors recognized it as they began scooping up the shares like crazy." Information on the web at <http://diswww.mit.edu/menelaus/asa-exec/30684>.

38. "Currency Managers Close Out 2005 in the Red," *Currency Trader* magazine, February 2006, p. 41.

39. "Transcript of the World Economic Outlook Press Conference," International Monetary Fund, 13 April 2006 at <http://www.imf.org/external/np/tr/2005/tr050413.htm>.

40. Fidelity Investments, at <http://www.fidelity.com.hk/ourfunds/>, at "Money Market Funds" and then "Currency Funds."

41. EverBank, at <http://www.everbank.com/main.asp?affid=eb>, with offices in St. Louis, Missouri and Islandia, New York.

42. A theme for this book is that economists should direct their research away from how the current multicurrency system works or doesn't work, and toward the questions of how a Single Global Currency will benefit the world and how it will be implemented and how it will function. Thus, while I'm curious about the extent that foreign exchange trading is a zero sum game, it's more important that economists focus their research in the direction of the 3-G world.

43. The "Treasury Amendment" was passed by Congress to ensure that the CFTC did not infringe upon the mandate of the Treasury Department, and was upheld by the US Supreme Court in *Dunn v. Commodity Futures Trading Commission*, 519 U.S. 465 (1997) at <http://law.onecle.com/ussc/519/519us465.html>. Subsequently, Congress passed the Commodities Futures Modernization Act of 2000, at <http://www.cftc.gov/opa/press00/opa4479-00.htm>

44. William Nissen, "The Long and Tangled History of the CFTC's Jurisdiction in Foreign Exchange," in the *Futures Industry* magazine at the Futures Industry Association website at <http://www.futuresindustry.org/fimagazi-1929.asp?a=962>.

45. "Guidelines for Foreign Exchange Trading Activities," The Foreign Exchange Committee of the Federal Reserve Bank of New York. July 2004. at <http://www.newyorkfed.org/fxc/2004/fxc040713b.pdf>

46. Mark Snyder, "New Opportunities and Risks in Foreign Exchange: The Role of the Foreign Exchange Committee," speech presented at the Profit & Loss Forex Network Conference, 20 September 2005, Chicago, at <http://www.newyorkfed.org/fxc/2005/fxc051117.pdf>. He also said "I might also mention that I cannot see a day when a nation's central bank would cede its sovereign authority over the currency component of its monetary policy to any worldwide currency regulatory authority."

47. Jonathan Fuerbringer and William K. Rashbaum, "Currency Fraud Ran Deep, Officials Say," *The New York Times*, 20 November, 2003, p. C1.

48. Sharon Burke and edited by Klaus Volpert, "Currency Exchange Trading and Rogue Trader John Rusnak," Villanova University, 2004, at http://www.publications.villanova.edu/Concept/2004/John_Rusnak.pdf
49. See the 31 January 2005 address to the Bank's stockholders by the new Chairman, Graeme Kraehe at http://www.nabgroup.com/vgnmedia/download/AGM_Script_310105.pdf
50. "Dismissed Salesman Faces Fraud Charge," *The New York Times*, from Reuters, 7 February 2006, p. C7. See Reuters article at http://today.reuters.com/investing/financeArticle.aspx?type=fundsNews2&storyID=URI:urn:newsml:reuters.com:20060206:MTFH11506_2006-02-06_19-03-20_N06275728:1
51. Kit Dawney, "A history of sterling," the online *Telegraph* at <http://portal.telegraph.co.uk/news/main.jhtml?xml=/news/campaigns/eunion/cesterling.xml>
52. *Forbes* magazine's list of the "World's Richest People," at <http://www.forbes.com/static/bill2005/LIRC0R3.html?passListId=10&passYear=2005&passListType=Person&uniqueId=C0R3&datatyp=Person>
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COPING WITH THE MULTICURRENCY FOREIGN EXCHANGE SYSTEM

EARLY HISTORY OF MONEY AND FOREIGN EXCHANGE

Before there was money, the exchange mechanism for trade was simple barter. For each transaction, the parties needed to negotiate the relative worth of the goods and services they sought to trade and then execute. For example, how many apples can be traded for ten oranges? (If trading by unit, trading twenty apples for ten oranges might work in northeastern USA. If trading by weight, twenty-two apples might buy eighteen oranges.)¹ Such a process can be very time consuming and imprecise, without, of course, having a market currency price to begin with. As metallurgy was developed and bartering value was assigned to weights of gold, silver, bronze, and other metals, the idea arose to establish uniform weights and shapes to pieces of metal.

Money was thus developed and it had the familiar three functions:

1. Medium of Exchange;
2. Store of Value; and
3. Unit of Account.

While the first metal coins may have been cast from bronze in China around 2000 B.C., it's believed that recognizable coinage in India and Turkey began around the seventh century

B.C.² The silver drachma was coined in Athens around 580 B.C. and a currency by that name continued, with minor interruptions, as Greece's currency until replaced by the euro on 1 January 2002.

Specimens of the coins of China, India and Greece/Turkey have been unearthed archeologically in the other currency areas, but it's not clear how those coins were traded. They could have simply been used for their weight in precious metal and not in exchange with their counterpart coins of pre-determined value from another currency area.

In *The History of Foreign Exchange*,³ Paul Einzig notes that foreign exchange trading really did not occur until people were exchanging standardized coins whose value was recognized and accepted without having to weigh them or otherwise assay them. It's not known when that moment first occurred. At that point, the art of barter passed from those trading with what could be called "primary goods" to those trading with "secondary goods," i.e., different types of money. They were then faced with the same kind of valuation problems as those bartering for "primary" goods.

With a goal of 2024 A.D. for a Single Global Currency, and thus the practical end of foreign exchange trading as we know it, let's arbitrarily set the date of that first foreign exchange trade as 476 B.C., giving such trading, or Forex or FX, a round number run of 2,500 years (2024+476).

It was at that point of the first foreign exchange that the deficiencies of the new invention, money, became more clear. With the exposure to other currencies, people learned that they could not easily use *their* money to exchange it for goods of services from people who used *other* money. People could see that *their* money was not as secure as a store of value because the value of that money rose and fell in comparison to *other* money. Finally, people could see that the units of account of

their money were not easily transferable and thus useless when dealing with people using *other* money.

At the time, however, there was no opportunity to choose between moving to a multicurrency foreign exchange world or persuading the world to utilize one currency. Even the concept of “the world” was beyond the reach of humans on the several continents.

The best known example of foreign exchange trading comes from the *Bible*, where the “money changers” were trading Roman currency for Hebrew currency and that of other currency areas. One impetus for the trading was the Hebrew requirement that the annual half-shekel tax to the Temple be paid in only the Hebrew currency, and thus the burden of trading was upon the payers of the tax. Jesus found this currency trading in the Temple in Jerusalem sufficiently offensive to the belief that commerce and religion should be separate that he overturned their tables.⁴

During these 2,500 years, from the first coinage through today’s digital signals, money was minted and printed by noblemen, traders, banks, corporations, nation states, and monetary unions.

Whether by ethnicity or geography, nation states became the world’s dominant political organization, throughout the nineteenth and twentieth centuries. One of the badges of nationhood was having a national currency and due primarily to the end of European colonialism, there was a large increase in the number of countries and currencies in the world. In 1945, there were 51 countries which established the United Nations, and now there are 191 members.⁵

The history of the economies of the world is, in some substantial part, the history of money. As trade grew larger, more sophisticated and more international, the role of money also grew larger as did the potential damage it could cause. Kings,

queens, and countries struggled with gold, silver, and paper money, and the establishment of national and central banks. Several of the depressions and crashes of the nineteenth and twentieth centuries were either caused or exacerbated by the inappropriate management of money by the managers of the money system, whether they were bankers or public officials. Those failures, in turn, were exacerbated and spread by the multicurrency system through a process now called “contagion.” The Great Depression of the 1930s is the largest example where countries constricted their money supplies precisely at the time when monetary expansion was needed to thwart the decline in investment. Each industrialized country was seeking to keep its currency exchange rate at a low value compared to others, in order to maintain or increase exports. It was a race to the bottom.

THE 1944 BRETTON WOODS INTERNATIONAL MONETARY CONFERENCE

In July 1944, the representatives of twenty-nine countries gathered at the rehabilitated Mt. Washington Hotel in Bretton Woods, New Hampshire where the town’s human winter population the previous year was two: the caretaker of the hotel and his wife.⁶ The goal of the conference was to establish a stable, internationally cooperative, postwar financial system that would avoid the perils of the Great Depression and would assist in the post-war recovery.

From the conference, and of primary interest here, came the International Monetary Fund and a gold-US-dollar-based exchange rate system. Also, the conference created the predecessor to the World Bank, the International Bank for Reconstruction and Development. The conference’s work on trade issues contributed to the later development of the World Trade Organization.

Later in this book will be discussed the idea of the world-wide reserve currency, the “bancor,” which John Maynard Keynes brought to the conference.

THE BRETTON WOODS EXCHANGE RATE SYSTEM

From 1946 to 1971, the IMF member countries pegged the values of their currencies to the US dollar and the value of the dollar was set as \$35.00 per troy ounce⁷ of gold.

A major problem was that even with a relatively minor US balance of payments deficit, as compared to the hundreds of billions in the early twenty-first century, foreigners with US dollars were redeeming them for gold. In 1950, the United States had gold reserves worth \$23 billion, @\$35 per troy ounce in its stockpile, which would be worth \$345 billion at December 2005 gold prices @\$525 per troy ounce. Due to redemptions of dollars for gold, the value of the stockpile had declined to \$11 billion by 1970.⁸ The problem was that the amount of US dollar currency circulating outside the United States had grown from a manageable \$8 billion to \$47 billion,⁹ and every one of those dollars could legally be converted into US gold upon demand.

In 1971, the United States announced that it was abandoning its treaty requirements to back up its currency with gold, and without the anchor, the futures for all currencies were uncharted. The thirty-year trend toward nearly universal floating, or “treading water,” of exchange rates on the open markets began in earnest. Actually, Canada began floating its dollar in 1950 until 1962, and then resumed floating again in 1970.¹⁰ Other countries followed Canada and the United States.

In 1972, negotiations began for the modification of some of the Articles of Agreement of the International Monetary Fund, including the ratification of the US’s departure from the gold standard, and an agreement was reached in 1976. The 1976 amendments legitimized the floating rate system, and elimi-

nated the use of gold in the international monetary system except for settling accounts at the IMF. The amendments also established SDRs, for Special Drawing Rights, with echoes of Keynes's "bancor," as the new reserve asset to be used by the IMF to assist countries with their balances of payments.

In 1977, further changes were made, including the important change to Article IV, that countries should refrain from manipulating their exchange rates in order to gain unfair advantage, but authorizing such intervention in the foreign exchange markets to counter excessive price volatility. When considering such intervention, countries should consider the interests of other countries, especially those whose currencies/reserves were to be used in the intervention.

However, the markets marched to their own drummers and caused concerns about international monetary stability. In September, 1985, The Group of Five (G-5), the United States, United Kingdom, Japan, Germany, and France, met at the Plaza Hotel in New York and decided to collectively intervene in the foreign exchange markets to lower the value of the dollar which was viewed as overvalued at the time.

In 1986, the Group of Seven (G-5 plus Italy and Canada), met in Tokyo and issued the "Tokyo Economic Declaration," and in February, 1987, the Group of Seven met and then issued a G-6 Declaration (without Italy) at the Louvre in Paris. They agreed that the then-current exchange rates were satisfactory and that they would henceforth intervene only if the values of currencies varied excessively from their fundamental/real values. Of course, the key question was the perception of the real value of a currency. The economists' search for the Holy Grail of the true, real, fundamental value indicators of a currency continued.

From the G-6 "Louvre Declaration," we see the concerns of the participating Ministers of Finance and Central Bank Governors:

A high degree of price stability has been attained, and there have been substantial reductions in interest rates. Exchange rate adjustments have occurred which will contribute importantly in the period ahead to the restoration of a more sustainable pattern of current accounts.... the Ministers and Governors recognize that the large trade and current account imbalances of some countries pose serious economic and political risks.... The Ministers and Governors agreed that the substantial exchange rate changes since the Plaza Agreement will increasingly contribute to reducing external imbalances and have now brought their currencies within ranges broadly consistent with underlying economic fundamentals....¹¹

The underlying assumption of Bretton Woods persisted, that countries could somehow agree to fix, in both senses of the word, exchange rates. Central banks around the world were buying or selling dollars or their own currencies in order to keep the values of their currencies at some predetermined level. The lessons of the 1992 attempts by the Bank of England to intervene to maintain the value of the pound were not learned.

INTERNATIONAL MONETARY FUND

The current purposes of the IMF are stated in the “Articles of Agreement” and are consistent with the original documents.¹² The purposes of the International Monetary Fund are:

1. To promote international monetary cooperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems;
2. To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and

- maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy;
3. To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation;
 4. To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade;
 5. To give confidence to members by making the general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity; and
 6. In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.

Note that the last four purposes refer explicitly to exchange rates¹³ or balances of payments, and the first to “international monetary problems.” Even though the second is about trade, employment and “real income,” the primary work of the fund since its creation in 1946 has been to assist member countries in the multicurrency foreign exchange world with the stability of their currencies as represented by their exchange rates and balances of payments.

EXCHANGE RATES AND INFLATION

Among the variables in the international monetary system is the relationship between exchange rates and inflation. We know empirically and intuitively that when the US dollar declines in

value, in relation to the yen, for example, that products made in Japan will become more expensive to US consumers. The reverse should also be true about prices when the dollar rises in value; but there may be an inherent inflationary bias which keeps prices from falling when the prices of foreign-made or foreign-resourced goods decline. Economists call this “price stickiness.”

Inflation is more than an irritant to our society, and can be ruinous, if not controlled. Of the destructive inflation in Germany after the First World War, John Maynard Keynes wrote in *The Economic Consequences of the Peace*: “There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency.”¹⁴

EXCHANGE RATES AND INTEREST RATES

One of the primary tasks for central banks is to set base interest rates, primarily the rate at which client banks can loan money to each other. While there recently has been more emphasis on central bank transparency in the United States and elsewhere, the reasons for interest rate determinations and other decisions are never entirely clear. In late 2005, the US Federal Reserve announced its thirteenth consecutive Federal Funds interest rate hike, to 4.25 percent, and the stated reason was that “possible increases in resource utilization as well as elevated energy prices have the potential to add to inflation pressures.”¹⁵ What wasn’t indicated was the extent to which the United States needed higher interest rates to continue to attract foreign capital to fund its trade and federal government deficits. Perhaps that wasn’t a factor at all, but the US October trade deficit numbers were released a day later, and they showed a record deficit of \$68.9 billion,¹⁶ and thus were running at an annualized rate of \$826.8 billion. Not only is that a record amount, but it’s also a record as a percentage of GDP, at the rate of 6.1 percent of \$1.1

trillion monthly GDP.¹⁷ How much was the Fed's increase related to the increase announced by the European Central Bank two weeks previous, which would have tended to attract foreign capital in that direction?¹⁸ To some unknown extent, the central banks of the world are locked in currency competition for funds for their countries or monetary unions.

For example, in order to prevent rands from flowing to higher investment returns elsewhere, the central bank of South Africa has maintained its "Bank Rate" at the high level of 7 percent despite a high unemployment rate of 40 percent.¹⁹ Without such exchange rate pressures, the Bank Rate could be lowered to encourage job-creating investment in South Africa.

EXCHANGE RATE REGIMES

Much has been written about the correct exchange rate for any one currency area. There is widespread agreement that such rates should reflect the "fundamentals" of a nation's or monetary union's economy, such as labor productivity, inflation, and balance of payments; but there the agreement stops—and becomes part of the larger question of why economists and others are not able to predict the changes in foreign exchange rates.

As with any large scale modern market, there is a context in which they operate, and a major consideration in the foreign exchange market is the degree of freedom which central banks permit to the values of their currencies relative to others.

Richard Cooper writes, "Yet, for most countries, all but the largest, with the most developed capital markets, the choice of exchange rate policy is probably their single most important macro-economic policy decision, strongly influencing their freedom of action and effectiveness of other macro-economic policies, the evolution of their financial systems, and even the evolution of their economies."²⁰ A substantial proportion of the international economics books and academic articles about for-

eign exchange consider this question of which exchange rate regime is appropriate for a country or currency area.²¹ However, in the euro era, it's like asking which type of brakes is best for a vehicle's fifth wheel: disc brakes or shoe brakes.

The increasingly popular exchange rate regime is the "floating" exchange rate, where values of currency are priced entirely according to the buyers and sellers of the foreign exchange markets. Of the IMF's 182 members as of April 2003, the values of thirty-six such currencies were set entirely by the foreign exchange marketplace, without intervention from a central bank. Other regimes include "pegged float" where a central bank will indicate band or limits to the fluctuations it will permit before some kind of intervention. Bands, in turn, can be "crawling bands," or "crawling pegs." Ninety-eight countries have variations of these "intermediate regimes."²²

A fixed exchange rate regime simply sets the value of one currency in direct relationship to another. In 2005, the most famous fixed exchange rate was for the Chinese yuan with 8.28 to the US dollar.²³ Then, in July 2005, the Chinese Central Bank announced that the yuan would henceforth be pegged to a narrow band of prices, and the base rate would be grounded not to the US dollar but to a basket of currencies.²⁴ The value of the yuan is still strongly controlled and until March 2006 had increased by only 2.9 percent since that slight liberalization, to 8.05 to the US dollar.²⁵

For some economists, the solution to the foreign exchange puzzle is the mechanism of a currency board, defined by Alan Deardorff as "an extreme form of pegged exchange rate in which management of both the exchange rate and the money supply are taken away from the central bank and given to an agency with instructions to back every unit of circulating domestic currency with a specified amount of foreign currency."²⁶ Hong Kong's Monetary Authority has been probably

the most successful currency board, and Argentina's 1991-2001 currency board was probably the least successful.²⁷ In 2003, the exchange rates of seven small currencies were managed by currency boards.

Forty-one countries had no independent currency as they belonged to a monetary union or they used the currency of another country in an "izing" arrangement, usually by "dollarization" or "euroization," when using the US dollar or the euro, respectively.

For the purposes of this book, none of the exchange rate regimes is as useful to the people of participating countries as the monetary union, the most beneficial of which will be the Global Monetary Union. Some economists state that a monetary union is a "fixed rate" regime where all the prices in one member country are "fixed" at the same rate as those of another; but that doesn't seem helpful. Instead, the exchange rate regime for members of a monetary union is better termed a "no-exchange rate" regime. Of course, the monetary union still must utilize an exchange rate regime for its own common currency relative to other currencies, but member countries are bystanders to that work.

WHAT CAN GO WRONG WITH THE CURRENT MULTICURRENCY FOREIGN EXCHANGE SYSTEM?

In short, a worldwide currency crisis, and worse. Wrote Paul Krugman, "There is no universally accepted definition of a currency crisis, but most would agree that they all involve one key element: investors selling a currency *en masse* out of fear that it might be devalued, in turn fueling the very devaluation they anticipated."²⁸

What Can Go Wrong: Moving Away from Pricing of Oil in US Dollars, Leading to Currency Crisis

Oil from OPEC and most other countries is priced in dollars and payment must be made in US dollars. For customers in countries other than the United States, this means that they must purchase US dollars on the foreign exchange markets, or from their own central banks, and use those US dollars to purchase oil. Those customers can purchase dollars if they have other foreign exchange or if they can trade their own currency for dollars. This is where the need for a positive current account comes in—for all countries except the United States.

Because its currency is the primary international reserve currency and because the oil prices and payment terms are denominated in dollars, the United States has less need to generate a positive current account and has not done so since the early 1980s. Instead, the United States “prints” dollars and spreads them around the world.²⁹ It can do that by selling US Treasury securities to foreigners for their US dollars either to finance a government fiscal deficit, or by refinancing existing debt and moving a larger proportion of that debt to foreigners.³⁰

What could go wrong is that oil-producing countries could begin to insist that their oil be priced in another currency, such as euros or the future currency of the Gulf Cooperation Council. In fact, it is believed by some that one reason for the US invasion to overthrow Iraq’s Saddam Hussein was his September 2000 decision to require payment for Iraqi oil in euros.³¹ Wrote Clark Kee, “In a major challenge to ‘dollar hegemony,’ in October 2000, the government of Iraq discontinued using the dollar for its reserves and international transactions, in favor of the euro. The value of the euro relative to the dollar was declining at the time, and commentators predicted that the move would be costly to Iraq. Between 2001 and February 2003 almost all of Iraq’s oil exports were paid for

in euros, amounting to approximately \$30 billion. Over the same period, the value of the euro relative to the dollar reversed course and increased by 30 percent."³² Thus, Saddam Hussein had made a sound foreign exchange decision, which earned his country a higher price for his oil, in billions of euros, than if he had stuck with pricing it in US dollars. He could have achieved the same currency result by hedging in some way or by purchasing the equivalent amount of euros at the instance of every sale of oil in dollars, but denominating the price of his country's oil in euros was simpler. For that one country, the effect of invoicing in a non-dollar currency was largely symbolic, and more political than economic, even if it turned out to be profitable. When more oil-producing countries make the same decision, the results will be larger and more economic.

Further changes in oil pricing likely will come from Iran, which was planning to open a new oil "bourse" or exchange in March 2006, where pricing of the precious commodity was to be available in euros, as well as US dollars.³³ Venezuela might take a similar step, furthering its foreign policy goals.

The size of the problem to the United States, and hence the world, of a general shift of oil pricing to the euro or other currencies, could be large. The IMF reports that the ten oil-exporting countries of the Middle East could export \$500 billion in oil in 2006.³⁴ If that estimate were to be changed to €400 billion (@\$1.25 to the euro), then confidence in the US dollar would be shaken since the United States would have to purchase euros instead of printing dollars. If the 2004 12.1 million-barrel-a-day rate of US imports of oil³⁵ were to continue through 2006, and were to be priced in euros, it would cost €220 billion @€50/barrel.

Similarly, other importing countries would need to purchase euros to satisfy their needs for oil, too. Japan and China

would have less of a problem if they start spending their hundreds of billions in accumulated dollar reserves and buy euros. That would throw billions of US dollars into the supply on the foreign exchange markets where there would be reduced demand—and with a predictable result.

What would be the problem? It's supply and demand, once again. With a large number of sizable countries purchasing euros and selling dollars, the value of a dollar would drop and perhaps contribute to a genuine worldwide currency crisis. This scenario is one reason why the oil producers are not pricing their oil in euros, at least not yet, because it's not in the interests of those holding huge reserves of dollars or dollar-denominated securities to drive the value of a dollar down.

What Can Go Wrong: Speculators Drive the Price Down and Panic Selling of US Dollars Occurs, Leading to Currency Crisis

As has been noted, the currency markets are similar to every other market, in that there are buyers and sellers, and demand and supply. When there is less demand or fewer buyers, prices decline. Andy Krieger begins the Introduction to his book, *The Money Bazaar*, with "I have a nightmare," of the collapse of the yen, involving a large Japanese earthquake. "By the time the buying spree is over, trillions of yen have been ripped out of the market and bonds and money-market instruments around the world have been devastated, crumbling under the unprecedented selling pressure."³⁶ Later, Krieger describes a micro-nightmare, "The nightmare for any trader is a scenario in which he offers a currency and no bids come back. He offers the currency again at a lower level—and still there are no bids. As his 'offered' price falls lower, his view of the world changes. Instead of facing the possibility that he might lose 1 percent, 2 percent, or even 5 percent of his investment, he now faces the reality that he may lose 10 percent, 20 percent or conceivably 50

percent. 'Panic' becomes the operative word, because that is exactly what each trader begins to feel upon first confronting the possibility of such losses."³⁷

Rarely does anyone know the precise origin of a panic, from that first seller who could not find a buyer.

What Can Go Wrong: Central Banks Begin to Sell Their US Dollar Reserves in Favor of Accumulating Reserves of Other Currencies, Leading to Currency Crisis

There has been some diversification of the holdings of foreign exchange reserves, with some central banks moving slowly away from the US dollar. Near-panic developed in 2005 when a well-founded rumor spread that South Korea was planning to sell substantial amounts of its US Treasury notes in order to diversify its reserve holdings. The currency markets shuddered, "As Central Banks Shun the Dollar."³⁸ The South Korean central bank then backed away from its publicly announced plan. Similar concerns arose in January 2006 when the Chinese State Administration of Foreign Exchange (SAFE) announced that it wanted to "optimise the currency and asset structure," and subsequently announced that it was a misunderstanding to interpret that announcement as meaning it was planning to diminish its substantial dollar denominated reserves.³⁹ In 2005, Russia announced that it was changing the 10:90 euro/dollar ratio in its reserves to a 50:50 ratio.⁴⁰

An economist at the Federal Reserve Bank of San Francisco takes the view that such selling could harm the sellers, as they would take losses due to the resulting decline in the value of the dollar. Also, such a decline would effectively raise the prices of their countries' exports, which is never a welcomed result.⁴¹ Nonetheless, such movement away from the US dollar seems inevitable, and leaves the critical question of whether that movement will be measured or contain a measure of

panic. When the selling begins and accelerates, who will be the buyers?

CENTRAL BANKS AND FOREIGN RESERVES

The world's central banks store vast amounts of gold and foreign exchange reserves in order to protect the value of their currencies.⁴² For internal purposes, reserves provide confidence in banks' liquidity and gives confidence to citizens and foreigners alike that the currency is backed by credible assets, even though there is no right of redemption. The more confidence, the less is the need for reserves.

The central banks can use the reserves to buy and sell currencies on the open market in order to maintain the value of their own currencies. Japan and China, for example, have purchased hundreds of billions of US Treasury notes over the past several years to keep the relative value of their currencies low, by simultaneously working to elevate the value of the US dollar. China's reserves in December 2005 stood at \$860 billion.⁴³ Japan's reserves were at \$847 billion.⁴⁴

The holding of reserves has ironic effects. As noted by Marion Williams, governor of the Central Bank of Barbados, such reserves are denominated in the hard currencies of developed countries, which means that the central bank is financing investment and development in those other countries.⁴⁵ For the central banks of developing countries, that result seems bizarre.

The amounts of reserves are staggering and they are substantially wasted resources, including the stockpiling of gold.

Robert Mundell has observed, "the importance of gold in the international monetary system is reflected in the fact that it is today the only commodity held as reserve by the monetary authorities, and it constitutes the largest component after dollars in the total reserves of the international monetary system."⁴⁶

In March 2005, the central banks of the world possessed

894.1 million troy ounces or 27,809,626 kilograms of gold as international reserves, which were worth \$360.05 billion (253 billion SDR's, i.e., IMF money).⁴⁷ Of that gold, 203.8 million troy ounces, or \$82 billion at March 2005 prices, are in the Manhattan vaults of the New York Federal Reserve Bank.⁴⁸

The value of this gold fluctuates like any other commodity, and currencies, too. From 1 March 2005 to 1 January 2006, the price of gold rose from \$436 per troy ounce to \$516,⁴⁹ making all the central banks of the world 18.3 percent richer with an increase of \$72.1 billion. Or were they? There is no currency in the world with a claim to any of that gold. It just sits in vaults and waits. Of gold and that status, Milton Friedman memorably wrote, "People must work hard to dig gold out of the ground in South Africa—in order to rebury it in Fort Knox or some similar place."⁵⁰ Does this make cents/sense?

The UK's Chancellor of the Exchequer, Gordon Brown, has championed, since 1999, the idea of selling gold from the IMF's and central banks' reserves in order to assist poor countries with relief of their crushing international debt, which stood at \$220 billion in 1999.⁵¹ The IMF holds 103.4 million troy ounces of gold, for a market value in December 2005 at \$530 per troy ounce of \$54.8 billion. The IMF views gold as "an important asset in the reserve holdings of a number of countries," and states on its website that "As an undervalued asset held by the IMF, gold provides fundamental strength to its balance sheet."⁵² The IMF accepts gold, at current market values, as a payment option of obligations by its 184 members.⁵³ It's the only place in the world where gold is actually exchanged as money, although there are near-money-like alternatives for gold in the marketplace.⁵⁴

CAPITAL CONTROLS

The character of the flow of money across boundaries has

changed dramatically since the early 1970s, when 90 percent of the currency trading was aimed at financing trade and 10 percent for purely financial transactions. By 2004, the mix was reversed with 90 percent of the \$1.9 trillion daily trading being for non-trade related finance, such as investments in public and private securities and other assets.⁵⁵ Since the 1970s, daily trading has increased from approximately \$100 billion per day⁵⁶ to \$2.5 trillion today, an increase of 2,500 percent.

One way to prevent the havoc caused by large transfers of capital across currencies, called the “Achilles heel of globalisation,”⁵⁷ is to regulate capital transfers, but such controls have lost favor in recent years.⁵⁸ For example, South Africa’s “40 years of experience with capital controls on residents and non-residents (1961-2001) reads like a collection of examples of perverse unanticipated effects of legislation and regulation.”⁵⁹ One result is that investors and their lawyers and accountants spend considerable time calculating ways to achieve their investment goals by avoiding such government restrictions on international capital transfers. It’s expensive and a waste of effort.

Even for those countries without controls there are often cumbersome reporting requirements for capital transactions.⁶⁰

China’s capital controls are strict, and no foreign investment is permitted in China without government approval. Also, the trading of its currency has been restricted to trades with the Chinese agency, SAFE (for State Administration of Foreign Exchange). However, in January 2006, the government opened up trading to thirteen international financial firms, including Citicorp, for interbank trading of yuan, which must be reported to SAFE.⁶¹

SUMMARY: COPING WITH THE MULTICURRENCY FOREIGN EXCHANGE SYSTEM IN 2006

By the end of 2005, it had been four years since the most recent

currency crisis, lulling the central bankers and the governments of the world into believing that maybe the multicurrency system is safer against currency crises. As stated US Federal Reserve Chair Alan Greenspan in December 2005, "...it is tempting to conclude that the US current account deficit is essentially a byproduct of long-term secular forces, and thus is largely benign. After all, we do seem to have been able to finance our international current account deficit with relative ease in recent years."⁶²

On the other hand, as several people have said and written,⁶³ these imbalances cannot continue to grow forever, without correction. The existing multicurrency foreign exchange system simply cannot cope with them. Instead of ignoring the symptoms, it would be safer to rely upon Murphy's law: that what can go wrong, will go wrong.⁶⁴ However, if fixing this fifth wheel cannot be reliably and consistently done for all currencies, then the alternative of the Single Global Currency ought to be closely examined and implemented.

Chapter 3 presents the perspectives of economists on the current multicurrency foreign exchange system.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. In 2005, I purchased a package of 10 Navel oranges for \$3.99 weighing 1.81 kilograms, and a package of 13 McIntosh apples weighing 1.36 kilograms for \$2.59. The price per orange was \$.40 and the price per apple was \$.20, thus enabling an easy 1:2 trade. Note that this example is distorted because the parties already knew the currency price of each fruit. Without such pre-barter pricing or trading knowledge, the outcome of each barter trade for apples and oranges would have been far less predictable.
2. Robert Mundell, "The Birth of Coinage," at <http://www.columbia.edu/cu/economics/discpaper/DP0102-08.pdf>
3. Paul Einzig, *The History of Foreign Exchange*. London, UK: MacMil-

lan/St. Martin's Press, 1962.

4. The *Bible*, Book of Mark, Chapter 11:15-17 Revised Standard Version. See also, Book of Matthew 21:12; Book of John 2:15.

5. See "Member States," United Nations website at <http://www.un.org/members/index.html>

6. Carol M. Highsmith and Ted Landhair, *The Mount Washington: A Century of Grandeur*. Washington, D.C.: Archetype Press, 2002, p. 93.

7. A troy ounce equals 1.097 ounces, or avoirdupois ounces. For the conversion of troy ounces and other measures, see utility, "Online Metrics Conversion—US Standard & Metric Unit Converter" by Science Made Simple, Inc., at <http://www.sciencemadesimple.net/conversions.html>

8. Andrew Krieger, with Edward Claflin, *The Money Bazaar*. New York, NY: Times Books, 1992, at p. 122.

9. Andrew Krieger, *ibid.*, at p. 122.

10. David Dodge, "Monetary Policy and the Exchange Rate in Canada," remarks by the governor of the Bank of Canada to the Canada-China Business Council, Beijing, 2 June 2005, at <http://www.bankofcanada.ca/en/speeches/2005/sp05-8.html>, and Gordon Thiessen, previous governor of the Bank of Canada, in speech before the Chamber of Commerce of Montreal, "Why a Floating Exchange Rate Regime Makes Sense for Canada," 4 December 2000, at <http://www.bankofcanada.ca/en/speeches/2000/sp00-7.html>

11. Statement of the G6 Finance Ministers and Central Bank Governors (Louvre Accord), 22 February 1987, from the University of Toronto Library at <http://www.g8.utoronto.ca/finance/fm870222.htm>

12. International Monetary Fund, "Articles of Agreement, Article 1 - Purposes," as "Adopted at the United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 22, 1944. Entered into force December 27, 1945. Amended effective July 28, 1969, by the modifications approved by the Board of Governors in Resolution No. 23-5, adopted May 31, 1968; amended effective April 1, 1978, by the modifications approved by the Board of Governors in Resolution No. 31-4, adopted April 30, 1976; and amended effective November 11, 1992, by the modifications approved by the Board of Governors in Resolution No. 45-3, adopted June 28, 1990," at <http://www.imf.org/external/pubs/ft/aa/aa01.htm>

13. The term "exchange rates" is used throughout this book to mean the published values of one currency in terms of another, also called the "nominal exchange rate." Economists also use the terms "real exchange rate," which is a nominal exchange rate, adjusted for the price level/inflation for each country in the currency pair. See Alan V. Deardorff's "Glossary of International Economics" at <http://www-personal.umich.edu/~alandear/glossary/> Also, Richard Cooper writes that the movements of nominal exchange rates and real exchange rates are highly cor-

related in the short and medium run, except where very high inflation is involved for either currency. In "Toward A Common Currency?" June 2000, presented at the conference on the Future of Monetary Policy and Banking, organized by the IMF and the World Bank, at <http://www.worldbank.org/research/interest/confs/upcoming/papersjuly11/cooper.pdf>

14. John Maynard Keynes, "Europe after the Treaty," *The Economic Consequences of the Peace* (1919), Chapter 6, at <http://socserv2.socsci.mcmaster.ca/~econ/ugcm/3ll3/keynes/peace.htm>

15. Edmund Andrews, "Fed Gives Mixed Sign On Rates—After 13th Raise, Hints of More," *The New York Times*, p. C1, 14 December 2005, at <http://www.nytimes.com/2005/12/14/business/14fed.html?adxnln=1&adxnlnx=1134565380-D3vhdn3QUKhu1M64MsAkkw>.

16. "US Economy: Trade Deficit Widened to a Record (Update3)," Bloomberg.com, 14 December 2005, at <http://quote.bloomberg.com/apps/news?pid=10000006&sid=a8uT5EhaQ2SU&refer=home>

17. Floyd Norris "Off the Charts—Budget Deficit Getting You Down? Just Take a Look at the Trade Gap," *The New York Times*, p. B3.

18. Mark Landler, "In Guarded Tones, European Bank Raises Rates for First Time in 5 Years," *The New York Times*, p. C3, 3 December 2005, at <http://select.nytimes.com/gst/abstract.html?res=FB0E1FF63E550C718CDDAB0994DD404482>.

19. Email from Basil Moore to author, 16 February 2006.

20. Richard Cooper, "Toward A Common Currency?" June 2000, p. 1, presented at the conference on the Future of Monetary Policy and Banking, organized by the IMF and the World Bank, at <http://www.worldbank.org/research/interest/confs/upcoming/papersjuly11/cooper.pdf>

21. See Yin-Wong Cheung, Menzie Chinn, and Antonio Garcia Pascual, "Empirical Exchange Rate Models of the Nineties: Are Any Fit to Survive?" IMF Working Paper WP/04/73, April 2004, at <http://www.imf.org/external/pubs/ft/wp/2004/wp0473.pdf>; and Selim Elekdag and Ivan Tchakarov, "Balance Sheets, Exchange Rate Policy, and Welfare," IMF working paper, WP 04/63, April 2004, at <http://www.imf.org/external/pubs/ft/wp/2004/wp0463.pdf>; and Thomas Willett, "The OCA Approach to Exchange Rate Regimes: A Perspective on Recent Developments," Claremont Colleges, Working paper 2001-04, April, 1999, at <http://econ.claremontmckenna.edu/papers/2001-04.pdf>. For an example of application of theory to the exchange rate regime choice for Kazakhstan and Pakistan, see Aasim Husain, "To Peg or Not to Peg: A Template for Assessing the Nobler," IMF Working Paper 06/54, February 2006, at <http://www.imf.org/external/pubs/ft/wp/2006/wp0654.pdf>.

22. Abdelali Jbili and Vigtali Kramarenko, "Box 1. Classification of Exchange Regimes of the IMF Membership as of April 30, 2003," *Choosing Exchange Rate Regimes in the Middle East and North Africa*. Washington,

D.C.: International Monetary Fund, 2003. pp. 4-5.

23. The words “yuan” and “renminbi” are often used interchangeably, and sometimes together, to denote the Chinese currency. The ISO 4217 code for the Chinese currency is CNY, with “CN” for China and “Y” for yuan, and the currency name at that site is “Yuan Renminbi,” at <http://www.iso.org/iso/en/prods-services/popstds/currencycodeslist.html>. “Renminbi” is translated as “the Peoples’ Currency,” at <http://www.chinatoday.com/fin/mon/>

As “yuan” is the more frequently used term, it’s used here exclusively. For a discussion on Chinese translation, from English and Japanese, including the terms for Chinese money, see <http://www.cjvlang.com/Spicks/interpreting.html>

24. For excellent summaries of aspects of foreign exchange, see the explanations in Wikipedia, e.g., for “foreign exchange market” at http://en.wikipedia.org/wiki/Foreign_exchange_market

25. Christina Soon, “Yuan Has Biggest Gain Since Revaluation After Wen’s Comments,” Bloomberg.com, 15 March 2006, at <http://www.bloomberg.com/apps/news?pid=71000001&refer=home&sid=aXWNQNW6wEOI>. See also Bank of Canada online currency conversion utility, at <http://www.bankofcanada.ca/en/rates/exchform.html>

26. Alan V. Deardorff, “Deardorff’s Glossary of International Economics,” at <http://www-personal.umich.edu/~alandear/glossary/>.

27. Chong Y. Kim, “The System of Currency Board: The Experience of Argentina,” working paper WP2003-006, Le Moyne College, Syracuse, New York, at http://www.lemoyne.edu/library/mgmt_wp/wp2003-006.pdf

28. Paul Krugman, editor, *Currency Crises*. Chicago, IL: National Bureau of Economic Research, by University of Chicago Press, 2000. Promotional paragraph, at <http://www.press.uchicago.edu/cgi-bin/hfs.cgi/00/14111.ctl>

29. In 2000, it was estimated that 50-70 percent, or \$250-350 billion, of the existing \$500 billion in United States currency was held outside the United States. “Text: Report on Foreign Use, Counterfeiting of US Currency,” Federation of American Scientists website at <http://www.fas.org/irp/news/2000/02/000228-bogus-usia1.htm>. See also “Passing the Buck,” Forbes.com, “As of April 2004, nearly \$700 billion in U.S. dollars was in circulation. Somewhere from one-half to two-thirds of it, mostly in \$100 bills, was held overseas.” At http://www.forbes.com/2006/02/11/cx_dal_money06_0214moneyfacts/21.html?thisSpeed=6000

30. For many years, foreigners have been purchasing more assets in the United States than its citizens have purchased abroad. In November 2005, foreigners purchased \$103.2 billion of domestic securities of the United States. Of that amount, \$5.9 billion were purchased by governmental

institutions, and \$97.3 billion by private investors. US residents purchased a net \$14.1 billion in foreign securities. United States Treasury, at <http://www.treas.gov/press/releases/js3079.htm>

31. William Clark, "Petrodollar Warfare: Dollars, Euros and the Upcoming Iranian Oil Bourse," *Energy Bulletin*, 2 August 2005, at <http://www.energybulletin.net/7707.html>

32. Clark Kee, "Petroeuro Futures," *The DUBYA Report*, 25 October 2003, at <http://www.thedubyareport.com/econiraq.html>.

33. William R. Clark, "Petrodollar Warfare: Dollars, Euros and the Upcoming Iranian Oil Bourse," *Energy Bulletin*, 9 August 2005, at <http://www.energybulletin.net/7707.html>; Krassimir Petrov, "The Proposed Iranian Oil Bourse," *Energy Bulletin*, 18 January 2006, at <http://www.energybulletin.net/12125.html>. See also Toni Straka,

"Killing the Dollar in Iran," 26 August 2005, *Asia Times*, online at http://www.atimes.com/atimes/Global_Economy/GH26Dj01.html. See also Gwynne Dyer, "Iran, Oil and Euros: The War Scenario," *Arab News*,

21 February 2006, at <http://www.arabnews.com/?p.=7§ion=0&article=78138&d=21&m=2&y=2006>

34. Mohsin S. Khan, "What is Happening to the Petrodollars?" 27 November 2005, International Monetary Fund, at <http://www.imf.org/external/np/vc/2005/112705.htm>

35. United States Dept. of Energy, "Non-OPEC Fact Sheet—Top World Oil Consumers, 2004," at http://www.eia.doe.gov/emeu/cabs/topworldtables3_4.html

36. Andrew Krieger, op. cit., pp. 3-5.

37. Ibid., pp. 213-14.

38. "Central Banks Shun the Dollar," *Business Week Online*, 23 February 2005, at http://www.businessweek.com/bwdaily/dnflash/feb2005/nf20050223_0503_db053.htm

39. Richard McGregor and Andrew Yeh, "China Plays Down Idea of Selling Off Dollars," *Financial Times*, 11 January 2006, at <http://news.ft.com/cms/s/37fee9b4-8231-11da-aea0-0000779e2340.html>

40. Gunther Schnabl, "The Russian Currency Basket, The Rising Role of the Euro for Russia's Exchange Rate Policies," Econ Working Paper 0512, 12 December 2005, at <http://econwpa.wustl.edu/eps/if/papers/0512/0512005.pdf>

41. Diego Valderrama, "FRBSF Economic Letter: What If Foreign Governments Diversified Their Reserves?" Federal Reserve Bank of San Francisco, 29 July 2005, at <http://www.frbsf.org/publications/economics/letter/2005/el2005-17.html>

42. International Monetary Fund, "Annual Report of the Executive Board for the Financial Year Ended 30 April 2005," Appendix, Table 1, p. 108, at <http://www.imf.org/external/pubs/ft/ar/2005/eng/index.htm>

43. Keith Bradsher, "Speculators Turn Away from China, Making Reval-

- uation Less Pressing," *The New York Times*, 5 January 2006, p. C3.
44. David Lague, "China, a Trade Superstar, Accumulates Foreign Currency (and Anxiety)," *The New York Times*, 17 January 2006, p. C4.
45. Marion Williams, "Foreign Exchange Reserves: How much is enough?" speech delivered at the Central Bank of the Bahamas, 2 November 2005, at <http://www.centralbank.org.bb/Publications/Adlith Brown Lec.pdf>, and at <http://www.bis.org/review/r060123c.pdf>
46. Robert A. Mundell, "Gold," on his website at <http://www.robertmundell.net/Menu/Main.asp?Type=5&Cat=10&ThemeName=Gold>
47. International Monetary Fund, "Annual Report of the Executive Board for the Financial Year Ended April 30, 2005," Appendix, Table 1, p. 108, at <http://www.imf.org/external/pubs/ft/ar/2005/eng/pdf/file7.pdf>. For the current value of an SDR, see the IMF utility at http://www.imf.org/external/np/fin/rates/rms_sdrv.cfm. The SDR is composed of the sum of .632 of the value of a US dollar plus .410 of the value of a euro, 18.4 Japanese Yen and .0903 of a U.K. pound. On January 5, 2006, for example, an SDR was worth \$1.44. And for the conversion of troy ounces into kilograms, see the utility, "Online Metrics Conversion—US Standard & Metric Unit Converter" by Science Made Simple, Inc., at <http://www.sciencemadesimple.net/conversions.html>
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49. "FXConverter—164 Currency Converter Results," at <http://www.oanda.com/convert/classic>.
50. Milton Friedman, *Capitalism and Freedom*. Chicago, IL: University of Chicago Press, 1962, p. 40.
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52. International Monetary Fund, "A Fact Sheet, September 2005—Gold in the IMF," at <http://www.imf.org/external/np/exr/facts/gold.htm>
53. Of the 191 members of the United Nations, the following seven are not members of the 184-member International Monetary Fund: Andorra, Anguilla, Cuba, Democratic Republic of North Korea, Liechtenstein,

eral Reserve Bank of New York, at the Financial Imbalances Conference in London, 23 January 2006, at <http://www.bis.org/review/r060127a.pdf>

64. For the 1949 origin of Murphy's Law, as attributed to the US military engineer, Major Edward A Murphy, Jr., who was working on rocket-sled experiments to measure "g forces," i.e., the force of gravity, see http://en.wikipedia.org/wiki/Murphy's_law

ECONOMISTS VIEW THE PRE-EURO MULTICURRENCY SYSTEM AND ITS EXCHANGE RATE REGIMES

MOST ECONOMISTS WHO RESEARCH AND WRITE about the multicurrency foreign exchange system approach it from the view “inside the box,”¹ according to the ideas and theories developed to understand the pre-euro and pre-Internet economies. The two major questions remain:

How to value one currency compared to another, and
Why do those values rise and fall?

The absence of answers is not for lack of analysis. In a widely used database of “International Finance” articles, there were twice as many articles about “Foreign Exchange” than for any other category.² Below are presented economists’ views on the current multicurrency system and its benefits and costs.

PURCHASING POWER PARITY

The purchasing power of money relates to two of the three parts of the definition of money: to act as a medium of exchange and as a unit of account. The “parity” concept comes when the purchasing power of one currency is compared to another by looking at prices of commonly available goods, as are listed in consumer price indices such as the US Consumer Price Index (CPI), or the European Monetary Union

Index of Consumer Prices (MUICP).

The Economist magazine brought the concept to lay people with its 1986 publication of the “Big Mac Index” based on the price of McDonald’s “Big Mac” burger around the world.³ Nominal exchange rates, as traded on the markets, should reflect the value of a currency, and should reflect, at some point, the Purchasing Power Parity of a currency. However, notes *The Economist*, “Economists lost some faith in PPP as a guide to exchange rates in the 1970s, after the world’s currencies abandoned their anchors to the US dollar. By the end of the decade, exchange rates seemed to be drifting without chart or compass. Later studies showed that a currency’s purchasing power does assert itself over the long run. But it might take three to five years for a misaligned exchange rate to move even halfway back into line,”⁴ i.e., where the Purchasing Power Parity analysis indicates that it should be.

To help understand why Big Mac Purchasing Power Parity does not correlate well to nominal exchange rates, economists have further analyzed the Purchasing Power Parity of the prices of “tradable” ingredients in Big Macs, such as onions, beef, and rolls which can be shipped anywhere in the world, and the “non-tradable” ingredients such as rent and electricity.⁵ The reason for the distinction is that exchange rates work best, in theory, to bring price levels of countries into Purchasing Power Parity to the extent that the goods of a country are traded with those of other countries. If prices are not in parity, and not obeying the “law of one price,” then consumers in the high-priced country would purchase the same good in the lower-priced country, after an exchange rate conversion. Such purchases would, in turn, increase demand and the price in that country and decrease demand in the home country—all of which leads to the prices being brought into equilibrium.

At the extremes of the 12 January 2006 “Big Mac Index” for

a Big Mac that costs \$3.15⁶ on average in the United States are the nominal \$1.30 price (10.48 yuan at the 12 January 2006 exchange rate) in China and the \$4.93 price (6.36 Swiss francs) in Switzerland. If there was “Big Mac” Purchasing Power Parity among the three currencies, i.e., that the same amount of money, whether measured in dollars, Swiss francs, or yuan could purchase a Big Mac in any of the three countries, the nominal Big Mac exchange rates to the dollar would be 3.33 yuan and 2.06 Swiss francs to the dollar. Instead, the actual nominal rates in the foreign exchange markets on 12 January were 8.06 yuan and 1.29 Swiss francs to the dollar. In other words, using *The Economist’s* “Big Mac Index” PPP exchange rates (3.33 yuan and 2.06 Swiss francs to the dollar, respectively), and if the transaction costs for currency exchange were zero, you could take \$3.15 to Shanghai or to Zurich and barter dollars for yuan or Swiss francs and purchase a Big Mac.

A Big Mac in China, Switzerland, and Turkey (\$3.15 in the US)

	<u>China</u>	<u>Switzerland</u>	<u>Turkey</u>
Local Price	10.48 yuan	6.36 Sw francs	4.11 Lira
Nominal Exchange Rate	8.06 yuan/\$	1.29 Sw. Fr/\$	1.34Lira/\$
Nominal Dollar Price	\$1.30	\$4.93	\$3.07
Percent PPP to Nominal	-59%	57%	-3%
PPP Exchange Rate	3.33 yuan/\$	2.06 Sw. Fr/\$	1.31Lira/\$
PPP Dollar Price	\$3.15	\$3.15	\$3.15

Such a finding confirms the widely held view that the Chinese yuan is undervalued and the Swiss franc is overvalued. Nonetheless, two economists have found “compelling evidence that the yuan is not substantially undervalued.”⁷ For those who

relish the experience of finding “good buys,” while the nominal exchange rates remain widely divergent, it might be best to earn your money in Switzerland and then vacation in China. Conversely, it’s probable that the exchange rate tends to dampen Chinese enthusiasm for travel to Switzerland. The table above includes the same data for Turkey, a country for which the “Big Mac” PPP exchange rate, 1.31 Lira/\$, is nearly identical to the nominal exchange rate of 1.34 Lira/\$.

The “Big Mac Index” has become so popular that others have applied the idea to other items such as Ikea furniture. By the “Ikea Index” for fifteen countries, its furniture is the least expensive, using nominal exchange rates, in the United States.⁸

REAL EXCHANGE RATES/EQUILIBRIUM EXCHANGE RATES

Economists use the terms “real exchange rates” or “equilibrium exchange rates” to measure what currencies *should* be worth, as compared to each other, after factoring in Purchasing Power Parity and inflation and other “fundamentals,” such as the unemployment rate, GDP growth and money supply. The real exchange rate is actually unreal, as it’s only a product of economists’ analyses rather than coming from real exchange markets. The nominal exchange rates, i.e., what we read in the newspapers and on the Internet,⁹ are rarely close to the real or the equilibrium exchange rate.

In a 1998 study by the Institute for International Economics, the US dollar was stated to be “overvalued by at least 30 percent against the Japanese yen, in terms of sustainable medium-term currency relationships.”¹⁰ The study said that the “fundamental equilibrium exchange rate of the yen should be between 77-95 yen to the US dollar. However, since 1 January 1998, the yen has varied between the high of 101.55 yen to the dollar on 22 December 1999, and the low of 147.11 on 11 August 1998. Since 2000, the high has been 102.11 and the low 134.79 and not come

close to the “real” value of 77-95 yen to the dollar.

Once again, we see the disconcerting terminology where a larger number is labeled a “low,” and a smaller number is labeled a “high.” On 3 January 2006, the rate was 116.35 yen to the US dollar.¹¹

In an effort to bring order to the vast amount of exchange rate data, the Bank for International Settlements produces two effective exchange rate (EER) indices for 52 major economies, including the Eurozone countries separately and together. Using data from 1994 forward, the indices are not based on any one currency, such as a US dollar or euro, but are set using the averages in 2000 at an arbitrary 100. The nominal EER’s “are calculated as geometric weighted averages of bilateral exchange rates” and the real EER’s are the nominal rates as adjusted by relative consumer prices.¹²

THE UNPREDICTABILITY AND VOLATILITY OF THE UPS AND DOWNS OF EXCHANGE RATES

The other major focus of international economists has been to find answers to the second of the two questions about exchange rates: why they do they go up and down? The ultimate goal for these economists is to predict and control the fluctuations in order to achieve the currency stability that the people of the world require. Thousands of articles, and many books, have been written to explain the movements of exchange rates. Some economists focus on the “fundamentals” of a currency, such as productivity of the currency area or its cost of living or wealth. Others focus on technical, and often mysterious, factors, as the abbreviated list below indicates:

Elections: “Real Exchange Cycles Around Elections”¹³

Inflation Targeting: “The Exchange Rate & Canadian Inflation Targeting”¹⁴

*Interest Rates: "The Link Between Interest Rates and Exchange Rates—Do Contractionary Depreciations Make a Difference?"*¹⁵ and *"Interest Rate Shuffle"*¹⁶

*Level of Economic Development: "The Long-Run Volatility Puzzle of the Real Exchange Rate"*¹⁷

*News: "What Defines 'News' in Foreign Exchange Markets?"*¹⁸

*Order Flow: "Order Flow and Exchange Rate Dynamics"*¹⁹

*Statistical Models: "A Semiparametric GARCH Model for Foreign Exchange Volatility"*²⁰

*Stock Returns: "The Causality Between Stock Returns and Exchange Rates: Revisited"*²¹

*Technical Trading Systems: "The Interaction between Technical Currency Trading and Exchange Rate Fluctuations"*²²

*Tradable, Non-tradables Productivity Differential: "Real Exchange Rates in Developing Countries: Are Balassa-Samuelson Effects Present?"*²³

*Trade Costs: "Remoteness and Real Exchange Rate Volatility"*²⁴

Another explanation of the volatility of exchange rates comes from the nature of markets themselves. Ben Stein wrote about Alan Greenspan, "Mr. Greenspan understands that markets are like sensitive children,"²⁵ and thus not entirely efficient or rational.

When economists are honest enough to admit that they do not understand some aspects of exchange rate economics, they term the unknowns as puzzles.

Maurice Obstfeld and Kenneth Rogoff write of two exchange rate puzzles. The first is the Purchasing Power Parity puzzle which asks why the empirical data do not indicate a close relationship between changes in the exchange rates and changes in national price levels, as would be predicted by economic theory.²⁶ Also, part of the working definition of exchange rates is that they function to adjust the price levels of countries

in the direction of the “law of one price,” or Purchasing Power Parity. Again, however, the empirical data do not support a relationship.

The second multiple currency-related “puzzle is ‘the exchange rate disconnect puzzle,’ a name that alludes broadly to the exceedingly weak relationship (except, perhaps, in the longer run) between the exchange rate and virtually any macroeconomic aggregates.”²⁷

Obstfeld and Rogoff argue that including consideration of trade costs helps to explain the puzzles, but they urge more research.

Lucio Sarno addressed the above two puzzles and one additional, “the forward bias puzzle” whereby “high interest rate currencies appreciate when one might guess that investors would demand higher interest rates on currencies expected to fall in value.”²⁸

What is less well known is the harm caused by “wild gyrations of major exchange rates and the risk of instability of the dollar,”²⁹ as Robert Mundell puts it. He gives four examples of such harm:

“1. The debt crisis of the early 1980s was caused mainly by the swings of the dollar: negative interest rates in the late 1970s led to easy and lax borrowing, followed by soaring real interest rates and dollar depreciation in the early 1980s, pushing emerging market countries all over the world into default.

“2. The tripling of the value of the yen after the Plaza Accord between 1985 and April 1995 weakened balance sheets and clogged up the Japanese banking system with non-performing loans that persist to this day.

“3. The soaring dollar from 78 yen in April 1995 to 148 yen in June 1998 set in motion the Asian crisis, by cutting off FDI from Japan to SE Asia and undercutting the export markets of coun-

tries whose currencies were fixed to the dollar.

"4. Similar stories could be told about the Russian and Argentine crises."³⁰

THE US CURRENT ACCOUNT AND FISCAL DEFICIT DEBATE

Many economists say that the twin US deficits: current account deficit and the federal government deficit cannot continue forever. Raghuram Rajan of the IMF notes that the US current account deficit approaches 6.25 percent of the USA GDP, "and over 1.5 percent of world GDP. And to help finance it, the United States pulls in 70 percent of all global capital flows. Clearly, such a large deficit is unsustainable in the long run."³¹

Maurice Obstfeld and Kenneth Rogoff warn that such a day of reckoning may not be far off and it will be serious, as they refer to "the potential collapse of the dollar" and "the dollar decline that will almost inevitably occur in the wake of global current account adjustment."³² Paul Volcker wrote, "Under the placid surface, there are disturbing trends: huge imbalances, disequilibria, risks—call them what you will. Altogether, the circumstances seem to me as dangerous and intractable as any I can remember, and I can remember quite a lot."³³

The Institute for International Economics proposes "a three-part package that includes credible, sizable reductions in the US budget deficit, expansion of domestic demand in major economies outside the United States, and a gradual but substantial realignment of exchange rates."³⁴

Some do not agree there is a danger, and even if there is, how to fix it. Richard Cooper has written "that the startlingly large US current account deficit is not only sustainable but a natural feature of today's highly globalized economy."³⁵

The current chair of the Federal Reserve, Ben Bernanke, has stated that the US twin deficits are not a problem because they have served to soak up a worldwide "savings glut."³⁶ Others

argue that the “savings glut” theory is not supported by the data.³⁷

THE EXCHANGE RATE AS SHOCK ABSORBER

Exchange rates and foreign exchange trading are believed to be useful to the international financial system as “shock absorbers.” We would argue that they only absorb the shocks, if at all, on the redundant fifth wheel. By “shock,” economists mean something that seriously disrupts an economy such as a natural disaster or a labor strike or a financial bubble. With such negative shocks, the exchange rate for a currency would likely go down, making exports less expensive and therefore paving the way for their growth. The IMF has recently established an “Exogenous Shocks Facility” to assist member countries suffering from such shocks.³⁸ Interestingly, just as the freedom to control one’s own monetary policy usually means in the economic literature the freedom to devalue, rather than revalue, the term “shocks” is usually used to mean negative shocks rather than positive shocks, such as the discovery of an oil field.

The large imbalance of trade between the United States and China might be considered such a negative “shock” to the United States, but positive to China, and classic exchange rate theory would predict the value of the US dollar to decline relative to the yuan. US exports to China would then increase and Chinese imports to the United States would decrease and the imbalance would disappear. However, the Chinese trade for all the countries in the world has been roughly in balance through 2004 so a large change in the dollar/yuan prices, which, in turn, would affect all the currencies of the world; would not help much. As Richard Cooper has pointed out, if the yuan increased in value sufficiently to reduce Chinese exports to the United States, there are several other Asian countries which could export similar goods at lower prices, and these countries man-

age their own exchange rates.³⁹ Another problem with the classic theory is that until July 2005, the value of the yuan was strictly pegged at 8.28 to the US dollar. There has been a slight loosening of the peg since then, but by the end of the year the value of the yuan has increased by only about 2.7 percent, to 8.06 to the US dollar. Further substantial increases in the value of the yuan will be very slow in coming, but the tripling of the 2004 overall Chinese trade surplus of \$32 billion to \$102 billion in 2005 may alter that perspective.⁴⁰ If further increases come, they would represent a shift in exchange rate regime, which raises another category of economic debate: how should a country make such a shift from one exchange rate regime to another? Slowly, answers one article.⁴¹

In an impassioned article supporting the UK's joining the EMU, Willem Buiter argues that in a financially integrated economy, the value of an exchange rate shock absorber is minimal. He states, "The 'one-size-fits-all,' 'asymmetric shocks,' and 'cyclical divergence' objections to UK membership are based on the misapprehension that independent national monetary policy, and the associated nominal exchange rate flexibility, can be used effectively to offset or even completely neutralise asymmetric shocks. This 'fine tuning delusion' is compounded by a failure to understand that, under a high degree of international financial integration, market-determined exchange rates are primarily a source of shocks and instability. Instead, opponents of UK membership in EMU view exchange rate flexibility as an effective buffer for adjusting to asymmetric shocks originating elsewhere. I know of no evidence that supports such an optimistic reading of what exchange rate flexibility can deliver under conditions of very high international financial capital mobility."⁴²

THE EXCHANGE RATE REGIME DEBATE

Since the collapse of the Bretton Woods system, central banks

and economists have focused on the question of which exchange rate regime should a country use: fixed or floating or something in between. James W. Dean notes that “the debate over ideal exchange rate regimes is the oldest and most central debate in open-economy finance.”⁴³ Wrote Paul Krugman, “I would suggest that the issue of optimum currency areas, or, more broadly, that of choosing an exchange rate regime, should be regarded as the central intellectual question of international economics.”⁴⁴

Much has been written simply to categorize the various exchange rate options. Mark Stone and Ashok Bhundia of the IMF list seven: “(i) monetary non-autonomy; (ii) weak anchor; (iii) money anchor; (iv) exchange rate peg; (v) full-fledged inflation targeting; (vi) implicit price stability anchor; and (vii) inflation targeting lite.”⁴⁵

The underlying assumption, which was not extensively questioned until the development of the euro, was that currencies should be issued by nations and managed by national central banks or related institutions. Another specific assumption is that “No Single Currency Regime Is Right for All Countries or at All Times,” as the title of Jeffrey Frankel’s article states.⁴⁶

It’s often forgotten that when an exchange rate declines, and when exports are expected to increase, there are losers, too. For example, importers must pay more for their goods and they pass those increases on to consumers, if they’re still buying. Thus, there is a risk of inflation, especially in a country which imports a substantial portion of its consumer goods, such as the United States. Other losers are foreign investors in the devaluing country.

Many countries have tried to fix or peg the values of their currencies to the US dollar or to other currencies. To support such a “fix” or “peg,” central banks had to be prepared to intervene in the foreign exchange markets by either buying or sell-

ing their own currencies. However, due to the supply and demand dynamics of the foreign exchange market, and its huge size, central banks have found that their interventions could not withstand the power of the market, and sometimes that realization came with spectacular failure as with the 1992 Bank of England defense of the pound, as described earlier.

Economists have studied the benefits and costs of the different exchange rate regimes⁴⁷ and have gradually moved to the view that in the multicurrency world, floating rates are best for most countries. However, for small countries, it's recommended that they not have any independent monetary policy at all, and, instead, join a monetary union or tie to an anchor currency.⁴⁸

The question of which exchange rate to adopt became sufficiently exasperating and puzzling that non-economic terms emerged to explain economic behavior. Guillermo Calvo and Carmen Reinhart suggested that "Fear of Floating," with an echo to Erica Jong's book, *Fear of Flying*, led countries to refrain from allowing their exchange rates to float.⁴⁹ Graham Bird and Dane Rowlands referred to the question of exchange rate regime choice as a "Bi-polar Disorder."⁵⁰

While noting that "we are far from a consensus, however, on the relative merits of managing such regimes through managed floats or crawling bands," Thomas Willett makes the point that "this formal institutional distinction may well prove to be of considerably less importance than the specifics of how either type of regime is managed."⁵¹ Similarly, Jesus Lopez and Hugo Mendizabal observe that most exchange rate regimes are actually intermediate regimes, somewhere in between pure floating and pure pegged, regardless of their nominal characterization.⁵²

One exchange rate regime puzzle bedeviling economists is why the type of regime does not seem to make a macroeconomic performance difference among countries. Assaf Razin and Yona Rubinstein believe that there are discernible differ-

ences if one uses different data and measurements.⁵³ In any case, the performance differences are not large.

CURRENCY CRISES

Economists have written extensively about the currency crises of the 1990s and focus on what caused them. One of the concepts developed by economists is “Original Sin,” which describes the inability of developing countries to borrow in their own currencies, forcing them to borrow in hard currencies, such as the US dollar.⁵⁴ Such borrowing contributes to subsequent currency crises. Whatever the original meaning of the term, “Original Sin,” the real sin is that the existing multicurrency foreign exchange system continues to be tolerated, and those developing countries are forced into hazardous financial transactions.

Many articles describe “early warning systems” (EWS) which list the criteria, such as debt to GDP ratios, to watch in order to predict and avoid a currency crisis.⁵⁵

These articles examine such criteria as the ratio of foreign exchange reserves to GDP, and the growth of M1 and M2 money supply. None, however, recommends the best way to eliminate a currency crisis, which is to replace a currency with one that is more stable such as from a monetary union.

SUMMARY

The theories and observations of economists are often obscure and hard to discern. Some understand that, at bottom, their work must make sense, and that they must write for the people of the world. They have to consider researching and writing “outside the box.” This need to appeal to common sense was confirmed by Robert Mundell when he mapped the “Optimum Currency Area.” Arguing that there is a lower size floor for optimum currency areas, he noted that tiny economic pockets could

not reasonably have their own currencies, writing, "Such an arrangement hardly appeals to common sense."⁵⁶ The Single Global Currency does appeal to common cents/sense.

Further research should be directed away from the twin handles of the currency Holy Grail, the two questions of "What value" and "Why fluctuate," and toward the system which will eliminate the economists' Sisyphusian⁵⁷ pursuit: the Single Global Currency. A key puzzle for this book is why the community of international economists is not moving more rapidly toward a consensus that the Single Global Currency should be implemented.

At least, however, as Alberto Alesina and Robert Barro note, the currency area discussion "has shifted toward one of desirable forms and sizes of currency unions,"⁵⁸ as we will see in Chapter 4.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. Basil Moore has made this point, too. He wrote, "Economists must think outside the box," in his article, "A Global Currency for a Global Economy," *Journal of Post Keynesian Economics*, Summer, 2004, p. 637, at [http://www.metapress.com/\(tx15nw45ef4npcqly5ldin2n\)/app/home/contribution.asp?referrer=parent&backto=issue,7,13;journal,6,13;linkingpublicationresults,1:109348,1](http://www.metapress.com/(tx15nw45ef4npcqly5ldin2n)/app/home/contribution.asp?referrer=parent&backto=issue,7,13;journal,6,13;linkingpublicationresults,1:109348,1) "Thinking outside the box" is a phrase developed in the 1970s by management consultants and others to urge their clients to think of new solutions to old problems. The "box" consisted of three rows of three dots:

. . .
. . .
. . .

and the challenge was to connect all nine dots with no more than four straight lines, drawn continuously without lifting the pencil from the paper. The key to the solution is that the straight lines must extend outside the imagined four walls of the box. See the solution in "Etymologies and word origins" at <http://www.wordorigins.org/wordoro.htm>.

2. Social Science Research Network, using the JEL (*Journal of Economic Lit-*

erature) category of "F3-International Economics." Category F31 is "Foreign Exchange," with 1,308 matches compared to 576 for the next most frequent, "International Monetary Arrangements and Institutions," at <http://papers.ssrn.com/sol3/displayjel.cfm>

3. "The Economist's Big Mac Index: Fast Food and Strong Currencies,"

The Economist, London, 12 January 2006, at <http://www.economist.com/markets/bigmac/index.cfm>

4. "The Economist's Big Mac Index: Fast Food and Strong Currencies," *The Economist*, London, 9 June 2005, at http://www.economist.com/markets/bigmac/displayStory.cfm?story_id=4065603&no_na_tran=1

5. David Parsley and Shang-Jim Wei, "A Prism Into the PPP Puzzles: The Microfoundations of Big Mac Real Exchange Rates," December 2005 version available at <http://www2.owen.vanderbilt.edu/david.parsley/research.htm>

6. *The Economist* stated that it obtained the average price of \$3.15 from four unnamed United States cities. However, together with friends and relatives, we contacted 15 McDonald's restaurants to obtain their prices for Big Macs. The average for the four large cities was \$2.78 (and not counting the Chicago offer to purchase two for \$3.00), and \$2.55 for smaller cities. Not excluded were the sales taxes, which vary by locality. If those two averages had been obtained from restaurants in other countries, their Big Mac Purchasing Power Parities would have been -11.7 percent and -19.0 percent, respectively. This example illustrates the difficulty in measuring representative prices for an average price even within a currency area.

7. Michael Funke and Jorg Rahn, "Just How Undervalued is the Chinese Renminbi?" *The World Economy*, Vol. 28, No. 4, pp. 465-89, April 2005, Oxford UK and Malden, MA: Blackwell Publishing. Also at <http://gul.liver.econ.uni-hamburg.de/IWWT/homep./qmwps/qm405.pdf>. See also Steven Dunaway and Xiangming Li, "Estimating China's 'Equilibrium' Real Exchange Rate," IMF Working Paper 05/202, October 2005, International Monetary Fund, at <http://www.imf.org/external/pubs/ft/wp/2005/wp05202.pdf>

8. Eric Sylvers, "Ikea Index Indicates the Euro is Not a Price Equalizer Yet," *The New York Times*, 23 October 2003, page 1. See also, "Ikea-Index 2003," November 2003, at <http://willmann.bwl.uni-kiel.de/~gerald/econ429/ikea-index.pdf>

9. See Currency conversion calculations at the Bank of Canada site at <http://www.bankofcanada.ca/en/rates/exchform.html> or the Oanda.com site at <http://www.oanda.com/convert/classic/index.html>

10. "Dollar Overvalued Substantially Against Yen, Modestly Against Euro," Institute for International Economics, May 1998, at <http://www.iie.com/publications/newsreleases/newsrelease.cfm?id=42>, relying on the book by Rebecca Driver and Simon Wren-Lewis, *Real*

Exchange Rates for the Year 2000, Policy Analyses in International Economics 54. Washington, DC: May, 1998, Institute for International Economics.

11. "10-year Currency Converter," Bank of Canada, at <http://www.bankofcanada.ca/en/rates/exchform.html>

12. "BIS Effective Exchange Rate Indices," Bank for International Settlements, 6 March 2006, at <http://www.bis.org/statistics/eer/index.htm>

13. Ernesto Stein, Jorge Streb, and Piero Ghezzi, "Real Exchange Cycles Around Elections," Vol 17, Issue 3, *Economics and Politics*, p. 297, November 2005, at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=856728

14. Christopher Ragan, "The Exchange Rate and Canadian Inflation Targeting," Bank of Canada, November 2005, at <http://www.bankofcanada.ca/en/res/wp/2005/wp05-34.pdf>

15. Marcelo Sanchez, "The Link Between Interest Rates and Exchange Rates—Do Contractionary Depreciations Make a Difference?" European Central Bank, Working Paper Series, No. 548, November, 2005, at <http://www.ecb.int/pub/pdf/scpwps/ecbwp548.pdf>. See also, Menzie Chinn, "The (Partial) Rehabilitation of Interest Rate Parity in the Floating Rate Era: Longer Horizons, Alternative Expectations, and Emerging Markets," *Journal of International Money and Finance*, February 2006, pp. 7-21, at http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6V9S-4HS3BKY-2&_coverDate=02%2F28%2F2006&_alid=356849919&_rdoc=1&_fmt=&_orig=search&_qd=1&_cdi=5906&_sort=d&_view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&_md5=7de1fe563e1846b0ceb03e23861c4861

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Part II

THE PRESENT TO THE FUTURE

MONETARY UNIONS

A MONETARY UNION, also called a “currency union,” is created when two or more currency areas, usually countries, share a currency or currencies. To varying degrees the monetary unions move the responsibility for the currency away from the previous separate issuers and onto a union entity. In earlier monetary unions, there was agreement among political entities to accept the money of the other, essentially as legal tender. In the twentieth and twenty-first centuries, a monetary union is typically among countries which replace their own currencies with the common currency, and the responsibility for the new currency is assumed by a monetary union central bank.

THE IDEA OF MONETARY UNION

By 1582, the difficulties of valuing the coins of the various kingdoms, principalities, and republics of Europe led Gasparo Scaruffi of Viareggio on the coast of Toscana¹ (now part of modern Italy), to propose the “alitinonfo” as a common currency, with every mint in Europe producing the same coins with the same characteristics, so as to create a standard currency. According to 1999 Nobel Prize winner, Robert Mundell, “alitinonfo” was derived from a Greek word meaning true light, and if all of Europe had a single currency, this would give true light to all transactions.²

EARLY MONETARY UNIONS

There have been many efforts to overcome the difficulties of foreign exchange by forming monetary unions, and some of the better known are presented here.

Beginning in 1379 until the Napoleonic wars, cities along the Baltic Sea and North Atlantic Ocean joined together in the trading association known as the Hanseatic League, and cities and principalities inside Germany formed the Monetary Federation of the Rhine.³ Within each group there was agreement upon the same gold and silver content for coinage.

From the 1600s until 1750, the British colonies of Connecticut, Massachusetts Bay, New Hampshire, and Rhode Island shared a paper currency unit and recognized each other's paper currency. Shmule Vaknin regards this union as the "first truly modern example" of a monetary union,⁴ even though it lacked a central bank.

After the American Revolution, the thirteen states of the United States decided in 1787 on a common unit of account, with little more than the name of the "dollar," but the value of paper money depended upon the credibility, i.e., reserves, of the issuing bank. Those thirteen states also formed a federal political union.

In 1838 a German Monetary Union was established. "Baden, Bavaria, Frankfurt, Hesse, Nassau Saxe-Meiningen (joined later), Schwarzburg-Rudolstadt (joined later), and Wurttemberg agreed on a monetary union with the northern states adopting the thaler and the southern states, the florin with a fixed rate of exchange between them."⁵ In 1857 the Austro-Hungarian Empire joined, but that union was dissolved by Bismark, the prime minister of Prussia, in 1867 after the Battle of Sadowa with the Austro-Hungarian Empire. The 1871 creation of the German Empire replaced the German monetary union with political and monetary union, which then used the

mark as the national currency.

As a political union is not required for a successful regional or Global Monetary Union; the examples of monetary unions within political unions are not discussed further in this book. One of the objections to the Single Global Currency is that it would require a world government, but that is not the case as the examples in this chapter will show.

Although the US dollar began more than 200 years ago as a common currency, the monetary role of the member states of the United States has disappeared, and the monetary role of the federal government has occupied the field. The US dollar is now as national a currency as can be. The 1873 “gold mark” has been succeeded by its German progeny with the same root name, e.g., deutschmark, and then in 2002 by the euro.

In 1865, the Latin Monetary Union was established among Belgium, Bulgaria, France, Italy, and Switzerland, and in 1868, Greece and Romania joined. The monetary union continued until World War I, and the members shared coinage of the same values.

From 1873 through 1913, Denmark, Norway, and Sweden (the latter two being politically joined until 1905), comprised the Scandinavian Monetary Union which adopted the gold standard and the currency unit, the krona.⁶

TWENTIETH-CENTURY MONETARY UNIONS AND ACADEMIC BACKGROUND

Princeton Economist Edwin Kemmerer became known as the “Money Doctor” as he advised numerous countries around the world on how to ensure a stable money system, including the roles of central banks. In 1916, he proposed the creation of a monetary union for all the Americas, with the unit to be called the “oro,” the Spanish word for gold.⁷

Belgium and Luxembourg formed a monetary union in 1921

where each accepted the currency of the other, with monetary policy set by the Belgian Central Bank and “exchange regulations overseen by a joint agency.”⁸ This union was superseded by the European Monetary Union and the euro.

In 1930, a fundamental innovation was proposed for monetary unions: that the common currency be managed by a supranational central bank. This was the contribution of German banker Hans Furstenberg at the Congress of the Pan-European League in 1932.⁹

Henceforth, the money of most monetary unions was issued and managed by their central banks.

In 1950, the British Caribbean Currency Board was established among islands in the Caribbean. There have been subsequent inclusions and departures, and the successor Eastern Caribbean Currency Authority was formed in 1965. In 1981, the Treaty of Basseterre established the Organization of Eastern Caribbean States and in 1983, the Eastern Caribbean Central Bank and Monetary Authority was formed.¹⁰ It now includes Anguilla, Antigua and Barbuda, Commonwealth of Dominica, Grenada, Montserrat, St Kitts and Nevis, St Lucia, and St Vincent and the Grenadines. The authority’s central bank is located in Basseterre, St. Kitts, and its currency, the Eastern Caribbean dollar, is pegged at 2.7 to the US dollar, or at the value of \$.37.¹¹ Other monetary union options are now being considered in the larger Caribbean area.

In 1957, J. E. Meade wrote approvingly of a common currency for areas where there was significant labor mobility, where workers could move freely to find work.¹²

In 1958, economist Tibor Scitovsky¹³ published *Economic Theory and Western European Integration*, where he discussed monetary union and presented the view that countries within a monetary union tended to grow more alike.¹⁴ Thus, monetary union was both a result of common economic interests and a

cause of increased commonality. Both Meade and Scitovsky were cited by Robert Mundell in "A Theory of Optimum Currency Areas." He wrote, "In terms of the language of this paper, Meade favors national currency areas whereas Scitovsky gives qualified approval to the idea of a single currency area in Western Europe."¹⁵

Robert Mundell is called the "godfather of the euro," as the idea for a European Common Currency received a major boost with his 1961 article, "A Theory of Optimum Currency Areas." As he noted there, the idea of a European common currency had been "much discussed" before his article,¹⁶ but he gave it the necessary theoretical backbone with that article and others over the next twelve years, including the 1973, "A Plan for a European Currency."¹⁷

Mundell's thinking came in the context of the drive toward Western European peace and unity after the devastation of World War II and the draping of the Iron Curtain. The movement toward openness in trade and finance was led by Jean Monnet. In 1952, six countries moved dramatically toward the elimination of trade barriers, first for coal and steel with the establishment of the European Coal and Steel Community. It was expanded to include all goods and services with the 1957 establishment of the European Economic Community, known as the Common Market. That grouping led, in turn, to the formation of the European Union with the 1993 adoption of the Maastricht Treaty.

In his 1961 "Optimum Currency Areas," Mundell wrote, "Or, supposing that the Common Market countries proceed with their plans for economic union, should these countries allow each national currency to fluctuate, or would a single currency area be preferable? The problem can be posed in a general and more revealing way by defining a currency area as a domain within which exchange rates are fixed and asking:

‘What is the appropriate domain of a currency area?’¹⁸ That, perhaps, is the twenty-first century’s \$64 trillion question.¹⁹

In 1967, and echoing the Belgium-Luxembourg union, Brunei, Malaysia, and Singapore formed a monetary union, but Malaysia exited soon afterwards on 12 June 1967. Brunei, now known as Brunei Darussalam, and Singapore have 1:1 currency parity, meaning that the Brunei dollar and the Singapore dollar have the same value throughout the monetary union. They manage their exchange rate regime with a currency board which is required to have foreign exchange reserves equivalent to 70 percent of the outstanding internal currency, and internal liquidity reserves of 30 percent.²⁰

Postwar independence for countries in French West Africa led to the transformation of the colonial currency arrangements to a loose monetary union linked to the French franc. The union split into two monetary unions in 1994: the West African Economic and Monetary Union (WAEMU) and the Central African Economic and Monetary Community (CAEMC). They both use what they call the CFA franc, but with slightly different values and names; it stands for the *Communaute Financiere Africaine* in the WAEMU and *Cooperation Financiere en Afrique Centrale* in the CAEMC.

The WAEMU has eight member countries: Benin, Burkina Faso, Ivory Coast, Guinea-Bissau (joined 1997), Mali (left in 1962 but rejoined in 1984), Niger, Senegal, and Togo. The CAEMC has six countries: Cameroon, the Central African Republic (C.A.R.), Chad, the Republic of Congo, Equatorial Guinea (joined in 1985 and is the only non-former-French colony), and Gabon. The WAEMU and CAEMC are also pursuing further trade integration through tariff reduction and other means.²¹

A list of existing monetary unions can be seen in the list of prices for this book, inside the back cover.

A VARIATION OF MONETARY UNION: "IZING" AND "IZATION"

The term "dollarization" was applied by economists in the 1990s to the practice of a country using the US dollar as its own currency.²² Then the term was applied to the practice of countries using as an "anchor" another currency, such as a euro, and thus the term, "euroization." The generic process is called here "izing" or "ization."²³

The use by one country of another's currency has been a long standing practice, because of military conquest, colonialism or voluntary cooperation. However, as the one-nation-one currency custom reached its peak after the independence of colonized countries in Africa, and from the former Soviet Union, ization was one of the processes reflecting the counter-trend toward monetary unions. This was especially true for small countries for whom an independent monetary system was an expensive and even dangerous option.

The best known recent examples of izing to the US dollar are Ecuador and El Salvador, which separately adopted the US dollar as legal tender in 2000 and 2001, respectively.²⁴

Ecuador had a GDP of \$20 billion in the 1990s, but it had fallen to \$13 billion by 2000 due in part to the border war with Peru and excess government deficit spending which brought high inflation. Ecuador's foreign debt was more than \$16 billion. There were extensive negotiations with the International Monetary Fund about monetary assistance, but on 9 January 2000, President Mahuad abruptly announced the plan to ize to the US dollar, or dollarize.²⁵ Stanley Fischer, then the first deputy managing director, wrote, "If they had asked us, we would have said that the preconditions for making a success of dollarization were not in place. In particular, the banking system was unhealthy and the fiscal position was weak."²⁶ Mahuad was overthrown eleven days later, but his successor chose to continue the dollarization and the new system continues. Infla-

tion and interest rates have dropped dramatically. This is perhaps another example of how economists advise against actions which are nevertheless taken and become successful.

El Salvador dollarized on 1 January 2001 pursuant to the "Monetary Integration Law." Despite initial confusion, the new monetary exchange rate regime seems to be working as inflation is relatively low at 5 percent and GDP has almost doubled since 2001.²⁷ El Salvador's connection to the dollar is strengthened by the annual volume of expatriate remittances, \$2.4 billion or 15.4 percent of GDP, which are sent to the country in US dollars²⁸

Benn Steil, of the Council on Foreign Relations, approvingly notes that Ecuador was Latin America's "star performer" in 2004 with 6.6 percent GDP growth with 2.7 percent inflation, and he urges other countries to follow, saying, "the best option for developing countries intent on globalising safely is simply to replace their currencies with internationally accepted ones, namely the dollar or the euro."²⁹

Other countries which are ized to the US dollar, or dollarized, are the Marshall Islands, Micronesia, Panama, Timor-Leste, and Palau, the smallest member nation of the United Nations. With a population of only 20,300, it made no sense for Palau to have an independent monetary policy or currency area.

UN member countries which have euroized are Monaco, Andorra, Liechtenstein, Montenegro (which shares a UN seat with Serbia, but which is not euroized), and the Vatican.

Ized to the Australian dollar are Kiribati, Nauru, and Tuvalu.

A major concern about ization is that the chosen anchor country have stable monetary policies with stable exchange rates. Jeffrey Frankel and Andrew Rose note that the benefits of such ization depend upon the strength and stability of the

anchor and not only whether the economies of the ized and anchor countries are integrated.³⁰

In choosing an anchor currency, one would think that size equals stability, but the two largest currencies, the US dollar and the euro, have fluctuated widely against the other since the 1 January 2002 full implementation of the euro. Another major concern about ization is the lack of a vote at the monetary policy decision table, i.e., the US Federal Reserve Board or the European Central Bank Governing Council. Even if such a vote might not have much weight, it would preserve some measure of dignity for the residents of the ized country. This problem of ization without representation will be familiar to citizens of the US whose own revolution from 1775-83 was powered by the slogan, "No Taxation Without Representation."³¹

A related issue is the value of the seigniorage to the country issuing currency. Seigniorage is the profit accruing to the central bank issuers of currency which equals the nominal value of the currency minus the cost of production and reissuance. In the United States, for example, it costs 5.7 cents (\$.057) to print a paper note, regardless of the denomination. Thus, the seigniorage is 94.3 cents (\$.943) for a \$1 bill, and \$99.94 for a \$100 bill.³² The value of seigniorage to an issuing bank depends upon the relative usage of cash in an economy compared to other means of transacting business, but for most currency areas, the value is .5 percent of GDP or less.³³ A bill named "The International Monetary Stability Act" was introduced into the US Congress in 1999 to assist countries with the dollarization process. The bill provided for sharing seigniorage with countries which dollarized, but it didn't become law.³⁴ Its failure was a loss for the US and the world. Even though ization is an imperfect means of monetary union, it is better than an independent monetary policy for most small nations, and is a genuine step in the direction of the 3-G world.

TWENTY-FIRST-CENTURY MONETARY UNIONS

The European Monetary Union and the Euro

Although the euro was established in the 1990s and was formally introduced on 1 January 1999 as a unit of account for banks and corporations, it's designated here as a twenty-first century monetary union because euro coins and bills became available to the people of the twelve member countries on 1 January 2002.

C. Fred Bergsten writes that the euro has been a “spectacular success” and that “countries throughout the world are expressing their admiration for the euro by seeking to join or emulate it.”³⁵

The vision for European monetary union took hold as political reality in 1971 when the Werner Commission recommended that Europe proceed with planning for a common currency.³⁶ In 1988, the Delors Commission continued those recommendations for a common currency.

In 1992, the Treaty on European Union was signed in Maastricht, the Netherlands, and when ratified in 1993, it was informally called the Maastricht Treaty.

Quite elegantly, the treaty RESOLVED, among other goals, “to achieve the strengthening and the convergence of their economies and to establish an economic and monetary union including, in accordance with the provisions of this Treaty, a single and stable currency.”³⁷

With twelve member countries with a total Gross Domestic Product in 2003 of \$8.2 trillion, or 75 percent of the United States,³⁸ the European Monetary Union is the largest and the most important monetary union in the world. The twelve are: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain.

Three other members of the European Union have thus far decided not to adopt the euro, as joining was optional for the

original fifteen EU members. Denmark voted by referendum 53.1 percent to 46.9 percent against the euro in September, 2000. However, the Danish currency, the krone, "is still closely linked to the euro via the Exchange Rate Mechanism, ERM II. Danish monetary policy thus shadows the policy of the European Central Bank, ECB."³⁹ In practical terms, the value of the krone has not varied from the mid-point-value, 7.45 kroner to the euro, by more than .05 krone, i.e., from a low, from the perspective of the euro, of 7.5046 and a high of 7.4008. For euro members, the krone has varied by no more than €0.0018, i.e., far less than a euro cent, from a low of €1.1333 to a high of €1.1351.⁴⁰ The ERM II mechanism is the same mechanism, or probationary phase, through which potential members of the Eurozone pass on their way to adopting the euro.

On 14 September 2003, almost two years after the euro had been circulated among the twelve member countries, Sweden voted by referendum 56 percent to 42 percent against adopting the euro. The United Kingdom has not formally voted on the euro either in the Parliament or by referendum since the government has neither generated nor found sufficient popular support.

In contrast to Denmark's link to the euro, Sweden and the United Kingdom allow their currencies to float on the currency markets. Since the 1999 establishment of the value of the euro, Sweden's krona has varied by 10.34 percent in both directions from the midpoint of 9.00 kronas to the euro, for a total swing of 20.68 percent. The UK pound has varied 11.9 percent from the midpoint of .647 pounds to the euro, for a total swing of 23.8 percent.⁴¹ Such fluctuations have no real connection to the real health of the economies of the currency areas, and little correlation to Purchasing Power Parity; and that is a major problem with the multicurrency foreign exchange system—its detachment from the reality of money and the people who use it.

In May 2004, ten countries were admitted into the European Union, with the requirement that they all join the European Monetary Union. The ten Accession countries, or “New Member States,” are: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. Of the ten, it’s expected that Slovenia, and perhaps Lithuania, will introduce the euro on 1 January 2007, and the remaining Accession countries will follow over the next several years as they work to bring their economies and monetary systems into line with the EMU guidelines.⁴²

How the European Central Bank (ECB) Works

Willem Buiter described the governing structure of the ECB, “Technically, the national central banks are the shareholders of the ECB. The Maastricht and Amsterdam⁴³ treaties distinguish between the ECB and the European System of Central Banks (ESCB), the collective of the ECB and the national central banks. In publications of the ECB and in public statements of its Executive Board members, there are frequent references to the ‘Eurosystem.’ Each national central bank provides one member of the decisionmaking Governing Council of the ECB (which consists of the eleven [now twelve] national central bank governors and six Executive Board members) and certain aspects of the implementation of the centrally determined monetary policy are administratively decentralized through the NCBs (national central banks). None of this detracts from the reality that the ECB/ESCB is a ‘unitary’ central bank. Monetary policy authority is unambiguously centralized in Frankfurt and the NCBs have effectively become the regional branch banks of the ECB.”⁴⁴

Like other central banks, the European Central Bank controls interest rates and the money supply within its currency area, the Eurozone. The bank has inevitably been compared to

the US central bank, the Federal Reserve, and one recent study by Paul De Grauwe and Claudia Storti found it to be similarly effective.⁴⁵ From the beginning, the ECB has rigorously pursued its chartered goal of price stability,⁴⁶ to the apparent exclusion, according to critics, of other goals such as full employment. As inflation has stayed close to two percent, there have been few interest rate changes. In December 2005, the Governing Council raised a key interest rate to 2.25 percent, the first change in five years. The ECB then quickly reassured the markets that it had no plans for further increases, lest anticipation of such increases cut off planned investments.⁴⁷

There is little question that the euro has been a remarkable achievement, and that the Eurozone is growing. There are questions, however, about how to make it better and how to make the European economy grow more rapidly. The three EU members who have thus far opted out, Denmark, Sweden and the UK, are continually evaluating their option to join; and they will ultimately join when their citizens and governments believe joining to be in their best interests. Already, there are studies about what might have been the economic results of joining. One study found that the UK would have benefited.⁴⁸

It remains to be seen how much financial integration will occur within the EMU, and to what extent it will be a direct or indirect result of the creation of the Eurozone. One area of progress is with non-cash payments across national borders, which still are managed by nation-centered banks. In March 2002, just after the introduction of the euro bills and coins to the public, the major banks of the EMU launched the plan for SEPA, the Single Euro Payments Area. The SEPA goal is that "individuals and corporations are able to make cashless payments throughout the euro area from a single payment account anywhere in the euro area using a single set of payment instruments as easily, efficiently and safely as they can make them

today at the national level.”⁴⁹ SEPA is expected to be fully implemented by 2010, with ATM and debit cards to be fully recognizable across the Eurozone. Such consolidation is expected to save consumers and corporations (and cost banks) approximately €13-29 billion through lower payments charges which are expected to drop 30-60 percent of current levels.⁵⁰

Future Twenty-First-Century Monetary Unions

Inspired by the success of the euro, countries around the world are exploring whether to join an existing monetary union or start a new one. With each such option, there are studies of whether such a geographical grouping constitutes an “optimum currency area.” Optimal or not, the people of the world are slowly asserting their interest in euro-like currencies.

ARABIAN GULF:⁵¹ The six countries of the Gulf Cooperation Council—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates—are forming a monetary union with a single currency to be launched in 2010. The council is consulting with the European Central Bank which has recommended the establishment of a “supranational GCC monetary institution...to conduct a single monetary and exchange rate policy geared to economic, monetary, and financial conditions in the monetary union as a whole.”⁵²

Not surprisingly, the ECB-based authors recommended that fiscal policies of the six states be coordinated within a framework, echoing the EU’s Growth and Stability Pact.

The IMF has contributed to the project with a paper recommending the use of uniform economic statistics, and the creation of a GCC-wide statistical unit, “Gulfstat,” which would do for the Gulf what Eurostat and Afristat do for Europe and Africa, respectively.⁵³

EUROPE/ASIA: Since the breakup of the Soviet empire, several former satellites have considered monetary union with

Russia. The most promising is with Belarus. The Tass News Agency quoted the Belarussian Central Bank Chairman Pyotr Prokopovich as saying, "The agreement signed in 2000 says that the Russian ruble shall become the legal tender in Belarus starting from 1 January 2005, and the Union will have a common currency starting from January 1, 2008."⁵⁴ However, these timetables have slipped. In September 2003, Belarus, Kazakhstan, Russia, and Ukraine signed an agreement to create a common market and a common currency within five to seven years.⁵⁵

AFRICA: In addition to the two CFA zones, there are several other combinations of African countries which are considering monetary union.⁵⁶ Five countries, Ghana, the Gambia, Sierra Leone, Guinea, and Nigeria are forming the West African Monetary Zone which will issue the common currency, the "eco." While previous implementation goals have been missed, the current plan is to introduce the "eco" by 2010.⁵⁷

In southern Africa, the sixteen-member South African Development Community, led by South Africa, is planning a free trade area by 2008, a customs union by 2010, a common market by 2015, and a monetary union by 2016.⁵⁸

In East Africa, the countries of Kenya, Tanzania, and Uganda plan to have a common currency by 2009, a common stock market, and even a federal constitution and court system.⁵⁹

Most ambitiously, the director of the Reserve Bank of South Africa has urged monetary union for the entire African continent by 2025.⁶⁰

AUSTRALIA AND NEW ZEALAND: Many studies, with ambiguous results, have been done on the viability of New Zealand joining Australia in a two-country monetary union.⁶¹ The most thorough is the 1999 study by Andrew Coleman, who was then working for the New Zealand Treasury. Noting that

New Zealand is the smallest OECD country with an independent monetary policy, he recommended either izing to the US dollar or Australian dollar, or joining in a monetary union with Australia.⁶² Due to the size differential, and because there would be only two member countries, the idea has not moved forward.⁶³ At nearly every high level finance or economics meeting between the two countries, the subject arises, which is a sign of public and media interest.⁶⁴

PACIFIC ISLANDS: T. K. Jayaraman has concluded that the Pacific Island countries do not yet meet the OCA criteria for them to join in a monetary union, and urged further steps toward economic integration beforehand.⁶⁵ Options being considered are monetary union with Australia or with a future East Asian monetary union, or an izing relationship with the Australian or US dollar.

SOUTH ASIA: The South Asian Association for Regional Cooperation (SAARC), was established in 1985 and is composed of seven countries: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. In January 2004 Indian Prime Minister Vajpayee urged a South Asian common currency, and a subcommittee of the association has recommended monetary union by 2020.⁶⁶

EAST ASIA: The leading advocate for East Asian monetary union has been Haruhiko Kuroda, director of the Asian Development Bank. He stated in October 2005, that “our long run objective should be the creation of an Asian monetary union with a single currency.”⁶⁷ In spring 2006, the Asian Development Bank planned to launch an “Asian Currency Unit” (ACU), which would consist of a specific mix in a basket of Asian currencies and be used as a monetary benchmark for the region.⁶⁸ It is modeled after the pre-euro European Currency Unit (ECU).

In November 2005 and using OCA criteria, Arief Ramayandi examined five ASEAN countries (Indonesia, Malaysia, the

Phillipines, Singapore, and Thailand) and found that they “appear to be relatively suitable to form a monetary union.”⁶⁹ As it has done for other prospective monetary unions, the European Central Bank studied the prospects for East Asian monetary union and inconclusively suggested that “further progress in real and monetary integration may prove instrumental in shaping ongoing developments in the sphere of domestic policies (including monetary and exchange rate policies) and regional cooperation efforts.”⁷⁰

SOUTH AMERICA: While adoption to the US dollar, as implemented by Ecuador and El Salvador, seemed a valid option to some, no other South American country has followed their path. Instead, the South American countries are pursuing the path of trade integration, as did the European Community. In December 2004, twelve nations created the “South American Community of Nations” at a summit in Cuzco, Peru.⁷¹ This bloc appears to supercede and integrate the two previous trading groups: MERCOSUR and CAN. The four southernmost countries—Argentina, Brazil, Chile, and Uruguay—belong to MERCOSUR⁷² but had not developed an explicit plan for a common currency. Nonetheless, the issue has been studied.⁷³ The northern Andes mountain range countries of Venezuela, Colombia, Ecuador, Peru, and Bolivia form the Andean Community of Nations (CAN).

NORTH AMERICA: Several economists and others have recommended monetary union among Canada, Mexico, and the US. Most of the impetus comes from Canadians, including Herbert Grubel, who coined the name “amero” for the proposed common currency. He wrote, “The Case for the Amero” in 1999.⁷⁴ Mexico’s President Vicente Fox, inaugurated in 2000, urged the United States toward stronger trade ties, including a monetary union.⁷⁵ However, and similar to New Zealand’s dilemma, there is a clear size differential among the three, and

an aversion by the smaller countries to being swallowed by the larger US. When the European Monetary Union was established, it was clear that Germany was the economic powerhouse, but it was not so much bigger than the others that they felt they were going to an anchor rather than joining a union of equals. George von Furstenberg recommends pegging Mexico to the US dollar,⁷⁶ but as that is likely to be as politically unpalatable to Mexicans as immediate full monetary union would be to the US, perhaps some politically feasible middle ground can be developed.

In 1964, five Central American countries formed a Monetary Council with the goal “to promote the coordination of credit and exchange policies which would progressively form the basis of a Central American Monetary Union.”⁷⁷ The countries are Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua, but political turmoil in Nicaragua and El Salvador subsequently diminished the prospects for success.

BENEFITS AND COSTS OF MONETARY UNIONS—BENEFITS

Until a single Global Monetary Union is implemented, all monetary unions will still exist in a multicurrency foreign exchange world and will not fully realize the benefits of monetary union. Therefore, the extent of most of the benefits described below are proportional to the ratio of countries’ economic activity and financial flows within the union and outside.

To the extent that a monetary union solves the problems of the existing multicurrency foreign exchange system for a country or countries, the benefits and costs are, in some ways, the flip side of the previously discussed benefits and the costs of the existing system. First come the benefits.

1. Reduce the Total Cost of Foreign Exchange Transactions

When a country joins a monetary union, there are no longer any foreign exchange transactions among member countries. The transaction costs, are reduced in the ratio of the value of intra-monetary union transactions to extra-monetary union transactions. For example, while there were foreign exchange transactions with deutschmarks and French franc pairs, both those currencies were also traded with non-European currencies as well. The former transactions have disappeared, and the latter have been replaced by foreign exchange trading with the euro.

Included in such savings will be the previously incurred costs of hedging against fluctuations of currencies now within a monetary union. Such hedging, which can be called “currency fluctuation insurance,” might have included such foreign exchange transactions as buying and selling currencies for future delivery as described in Chapter 2.⁷⁸ Also diminished are the costs of translating foreign exchange values for corporations and individuals with assets and operations in the monetary union area. Gone, too, are the speculators in the currencies which have disappeared. In Europe, the legions of people who can describe how they made, or lost, their fortunes by speculating in lira or guilders are diminishing in number. It wasn’t productive work.

2. Increase Asset Values

One of the most dramatic effects of monetary union is the increase in financial asset values which occurs when currency risk and interest rates decline. John Edmunds and John Marthinsen first described this dramatic effect in their book, *Wealth by Association, Global Prosperity through Market Unification*.⁷⁹

Briefly, the effect is that a decline in interest rates increases the ability of people to borrow to finance investments and

expansion, which increases the demand for such assets. That increased demand results in higher value for assets. This effect begins when the prospects for monetary unification become real to investors. Edmunds and Marthinsen wrote, "Adopting a stable foreign currency or creating an enduring currency union is an instantaneous way to reduce country risk, to stimulate economic growth, and to deliver a massive increase in a nation's wealth."⁸⁰

In 2005, they used their analysis to show that the increase in asset values in the ten New Member States in the Eurozone in the years 1993-2003 was between €5 and €11 trillion, and the effect continues. They state, "After our analysis of the primary effects of currency unification, we describe dynamic processes of wealth creation that last beyond the initial quantum leap. The decline in a nation's currency risk unleashes an array of beneficial growth-generating forces, such as increased rate of output, intra-regional trade, specialization and logistic efficiencies."⁸¹ One illustration of the phenomenon came in March 2006 when Moody's Investors Services increased the bond ratings for 7 EMU-bound countries because those countries "are set to benefit from participation in the EU's Exchange Rate Mechanism (ERM2)."⁸²

They also applied their analysis to understand the possible effect on asset values in Italy if it seceded from the EMU, thereby increasing Italy's currency risk. They predicted that a loss in value of financial assets would be more than €4 trillion.⁸³ That's a substantial proportion of the value of all financial assets in Italy.

Richard Cooper noted in 2000 "that among Latin American countries long-term fixed interest mortgages exist only in Panama, a country that uses the US dollar domestically."⁸⁴ Presumably, that list would now include the dollarized Ecuador and El Salvador. When the countries in the Americas join a

monetary union, whether by fixing or by formal representative monetary union, the stabilization of their currencies will result in the availability of such long-term mortgages and an increase in the value of the underlying real estate. Similarly, with the assurance of stable returns of interest, the values of financial assets will rise.

3. Reduce the Need to Maintain Foreign Exchange Reserves

Banks maintain reserves for several reasons. Internally, there must be sufficient reserves of coins and cash to supply banks within the country which may be subjected to large, or even panic, demand. Also, reserve requirements can be used to affect the size of the money supply as they determine the percentage of deposits that can then be loaned, which together with cash in circulation is known as the M1 money supply.⁸⁵

In the US, pursuant to the Monetary Act of 1980, the Federal Reserve Board of Governors sets the reserve requirement for all banks and credit unions and other similar depository financial institutions. The reserve amounts must be in “vault cash” or demand deposits at a Federal Reserve Bank. For “transaction” accounts, i.e., checking and other very liquid accounts, the reserve requirement is three percent for banks with total deposits between \$7 and \$47.6 million and ten percent for larger banks.⁸⁶

Foreign exchange, or international, reserves are maintained by central banks for similar, but external reasons. There is a stubborn belief that with more reserves, there will be more confidence in the quality of a currency, so central bankers are naturally inclined to accumulate foreign exchange reserves. The foreign exchange reserves can be used to intervene in the currency markets to buy and sell one’s own currency, and to respond to a current account deficit.⁸⁷ An initial result of a monetary union is that the member countries no longer need to

maintain foreign exchange reserves, but would continue to support members' banks with their reserve requirements and other operational support. The central bank of the monetary union is the holder of the foreign exchange reserves.

4. Reduce the Balance of Payments/Current Account Problem for Every Country or Monetary Union

As the number of countries and trading partners in a monetary union increases, the proportion of intra-union trade to extra-union trade would increase. Correspondingly, the scope of concern for the balance of payments by the central bank of the monetary union would decrease, in relative terms. For example, if Germany was party to twenty percent of France's international trade before the euro and vice versa, then the international exposure to balance of payments problems for each country and the EMU, other things being equal, was reduced by twenty percent thanks to the implementation of the euro. Some European countries may have had large trade deficits with their future EMU partners, and smaller trade surpluses with the extra-European world. After the euro, their net contribution to the EMU current account would have been positive.

5. Reduce the Risks of Excessive Capital Flows among Currencies and Countries

Large capital flows can be a major problem for small and underdeveloped countries with fragile monetary systems. It's been known for some time that large capital flows among currencies can be disruptive to their values. At Bretton Woods, IMF Article of Agreement #6 reserved the right of member countries to use capital controls to limit capital flows.

Large capital flows caused or exacerbated all the recent currency crises. What's often overlooked in the discussion of capital flows is that they are a problem only when moving from one

currency to another. Within a currency area, they may cause price fluctuations, but there is no risk of a currency crisis.

Within a currency area, there are surely large flows of capital back and forth, but to the extent that there are concerns at all, they are about differences in income among regions within that currency area and not about the risks of a flow-induced currency crisis. We do not hear concerns about capital flows between the Netherlands and Portugal, or between Grenada and St. Lucia, or between New Hampshire and California.

6. Reduce the Cost of Operating an Entirely Separate Monetary System

Running a monetary system is complex work. To the extent that the foreign exchange work performed by multiple countries is replaced by the work of a single central bank, the total costs will be reduced. Since the adoption of the euro, the total number of people employed by the Eurozone's central banks, now including the European Central Bank, has declined.

7. Separate the Value of Money from the Value of a Particular Country

The value of money in a monetary union is a function of confidence in the money and the custodian of the money, and not in any single country or its economy or its leaders. As Basil Moore has written, "Confidence is absolutely essential to the general acceptability of money."⁸⁸ Even in a two-country monetary union, such as the Brunei Darussalam-Singapore monetary union, the value of the money does not depend upon the perceptions of a single country, but of the joint custodians of the money. The larger the monetary union, the more secure is that perception that the value of one's money is protected by something larger than one's own elected officials.

8. Reduce National Currency Crises, e.g., Mexico, Argentina, East Asia, Russia

For some countries, this can be the most important effect of separating a national government from a currency. In each recent currency crisis, sellers of a currency were doubting that the country issuing the currency was stable enough to ensure the stability of the currency. While a currency crisis in a currency union is not impossible, it's far less likely to occur for large monetary unions than small ones, and less likely for monetary unions than for national currencies. In short, it's less likely to occur when the people know that the currency is being managed by people with the goal of monetary stability high on the list of priorities.

9. Reduce the Possibility of Currency Exchange Rate Manipulation by Countries

In 1988, the US Congress passed the Omnibus Trade and Competitiveness Act which requires the Secretary of the Treasury to report to the Congress semi-annually about countries which unfairly manipulate their currencies. The May 2005 report urges China to loosen exchange rate controls on its pegged yuan currency.⁸⁹ As dramatic as such reports are—and the US Treasury is seeking to generalize the report so it doesn't focus so directly on individual countries⁹⁰—there is nothing new about this concern about what other countries will do for their currencies.

During the Great Depression, several countries devalued their currencies in order to increase their exports, but the net result was close to zero change in the trade balance and a great loss of income, as each devaluation canceled out the other. The IMF Articles of Agreement, crafted at Bretton Woods, explicitly discourage such exchange rate manipulation, directing members to “avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of pay-

ments adjustment or to gain an unfair competitive advantage over other members."⁹¹ The irony of the country with the largest current account problem, with its prospects for devaluation of its currency, complaining about the currency manipulations of other countries is surely not lost on those other countries.

In any case, countries in a monetary union do not have the ability to manipulate their own currency. Thus, the economic nostalgia that exists for some in such countries as Italy, which almost made devaluation an element of trade policy, may be misplaced. Those practices violated the spirit of Article IV, and unfairly moved onto other countries the burden of fixing local economic problems.

10. Reduce Inflation, Thereby Ensuring Low, Reasonable Interest Rates

Independent of the governments of the members of a monetary union, the central bank is chartered to promote monetary and price stability, which should lead to low inflation.

As predicted by the theory of "the impossible trinity", this benefit is limited by the ability of the monetary union's central bank to control inflation while at the same time managing the value of the exchange rate. That exchange rate value, in turn, can affect inflation as the prices of imported goods rise and fall. The European Central Bank has made price stability its number one goal and has generally succeeded at that goal, even while contending with the wide fluctuations in value of the euro compared to the US dollar and other currencies. As a monetary union becomes larger, the targeting of inflation will be more effective as the percentage of trade with non-monetary union areas will be diminished, thereby reducing the risks of inflation due to exchange rate fluctuations.

11. Increase Trade Volume

There is considerable disagreement about the effect of a common currency on trade. Andrew Rose at the University of California at Berkeley has written extensively about how trade among countries increases dramatically within a currency union. At a May 2000 economic conference, Jeffrey Frankel and Andrew Rose stated, "We estimate that when one country adopts the currency of another, trade between them eventually triples in magnitude."⁹² In an article presented to the American Economic Association in 2001, Rose and Eric van Wincoop of the Federal Reserve Bank of New York, concluded that trade within the European Monetary Union could increase over fifty percent.⁹³ In a subsequent study, Andrew Rose and T. D. Stanley found that a currency union led to increases in "bilateral trade by between 30 percent and 90 percent."⁹⁴ In 2002, Andrew Rose summarized the research on trade and monetary union and concluded, "my quantitative survey of the literature shows substantial evidence that currency union has a positive effect on trade."⁹⁵

Then, skeptics did more research and questioned those results. John Helliwell and Lawrence Schembri found that, at least with respect to Canada, the potential impact on trade of a common currency with the US would not be significant.⁹⁶ That conclusion may, however, depend upon the specific idiosyncrasies of the US-Canada relationship.

More recent studies of real data from the EMU indicate that a common currency *does* improve trade, leaving only the question of how much. Alejandro Micco, Guillermo Orgonez, and Ernesto Stein found in their 2003 article that intra-EMU trade had increased, due to the common currency, 8-16 percent since the monetary union began. They even determined that trade between the Eurozone and the UK dramatically increased after the implementation of the euro.⁹⁷

After summarizing the studies about trade and monetary unions, Paul De Grauwe concluded that “monetary union in Europe could lead to an expansion of trade of 20 percent to 40 percent.”⁹⁸

The percentage of increase does not matter if the question comes to a draw, or close to a draw, as there are so many other reasons for a common currency. Still, it does seem that as a matter of common cents/sense, if a barrier to trade and travel, and a cost of doing business, is removed, trade will increase. The barrier is not just the cost. For travelers, it includes the time wasted in calculating costs of travel and in storing unused foreign currency following the completion of a trip. For trade, it’s the avoided time and cost of deciding what currency to use in a trade transaction, and how to protect against a large, unpredictable change in the currency values during the time between the execution of a trade contract for the delivery and payment of the goods or services. Surely, with all those steps eliminated, trade among countries using a common currency would be facilitated.

BENEFITS AND COSTS OF MONETARY UNIONS—COSTS

The major monetary problems for a monetary union come not from within the monetary union, but from without. That is, until a Global Monetary Union is adopted, all monetary unions will continue to exist in a multicurrency foreign exchange world. For example, much of the debate about the success of the euro concerns whether the exchange rate has been too high, which throttles exports, or too low, which shows weakness. As that question is really about the functioning of the multicurrency foreign exchange system, and not about monetary unions, it’s not discussed here. Below, other costs are discussed.

1. Sovereignty Theory of Money

It is believed by many that citizens of nations prefer that their nation continue to use its own national currency out of loyalty to the nation. Robert Mundell wrote, "In the real world, of course, currencies are mainly an expression of national sovereignty, so that actual currency reorganization would be feasible only if it were accompanied by profound political changes."⁹⁹ Thus, money is a symbol of national pride, but such a preference is only as strong as the lack of evidence apparent to citizens about the actual costs of the national money, and the lack of awareness of a real alternative, such as monetary union. That's the major benefit of the euro; as people around the world now see that there is a realistic alternative to national currencies.

To the extent that people wish to retain such a national symbol, then the cost of moving to a regional or Global Monetary Union might be the loss of public support for the government or loss of pride in a country; but no monetary value can be assigned to this cost.

Another way to look at this sovereignty value is that it's been a way for governments to communicate to the governed the power and history of the state or ruling family.¹⁰⁰ Every day, citizens using money see images reminding them of their country's heritage and pride, so the question arises about the extent to which citizens' loyalty to their nation's money was created by the state or arose from their hearts and minds.

Within a monetary union, the sense of sovereignty and political identity is transferred from a single nation to a group of neighboring countries, so there still can be personal identification with the money, albeit more remotely. Many parts of the world already use such remote monetary symbols. For example, countries of the British Commonwealth such as Australia and Canada, use the image of Queen Elizabeth II on their cur-

rencies. In the Eurozone, there are euro coins with unique national reverse sides for each of the EMU members with the front image being for all of Europe.¹⁰¹ To the extent that citizens within a monetary union feel that they are members of a larger entity, such as “Europe” or “West Africa” or the “Caribbean,” then citizens can still identify with their money. Someday, that entity will be the world.

2. Need for Independent Monetary Authority to Deal with Local Economic Needs, Also Called Asymmetric Shocks

A major concern of economists is that nations need the flexibility to adjust interest rates to heat up or cool down an economy and to influence exchange rates to achieve those goals.

The larger the monetary union, the smaller is each country’s ability to influence the crucial decisions about interest rates and exchange rates.

On the other hand, the economists are divided about whether the loss of monetary independence is really a loss at all. When preparing for the euro, the European Commission study found that the European Community would have better weathered the economic shocks of the 1970s and 1980s, especially the OPEC oil price shock, if a common currency had been in place.¹⁰² Robert Mundell wrote that monetary independence “involves monetary independence to have monetary instability, and sometimes even hyperinflation. Monetary independence becomes valuable only when the rest of the world is unstable.”¹⁰³

ELIGIBILITY CRITERIA, WHEN CONSIDERING A MONETARY UNION

In addition to the simple criteria of benefits and costs, there are other criteria to consider. Some people have the view that substantial trade is a pre-requisite for monetary union and that a monetary union will not work where the trade links are minor

among members, or where there are trade barriers. One way to look at that argument is to ask what would happen within the European Monetary union today if each country began charging a tariff on wine coming into the country. The tariff would be paid in euros and the prices of wine from outside each country would become more expensive, but what effect would there be on the functioning of the union itself? Politically, there would be difficulties, since the wine-exporting countries would be hurt by lower sales, and the consumers of the net wine-importing countries would not be happy to pay more for their wine. But even if the economy of the Eurozone would be hurt by less trade, it's not clear that the tariff would have any bearing on the success of the monetary union. The issues would not be about the currency, but about free trade which is a related, but different issue.

Optimum Currency Area

The best known criteria for evaluating the suitability of an area for monetary union come from Robert Mundell's 1961 "Theory of Optimum Currency Areas." He wrote that "The optimum currency area is the region,"¹⁰⁴ and the region is defined by the similarity of three factors among the nations considering monetary union: the mobility of labor and capital, the extent of trade, and the congruence of economic cycles.

Mundell wrote that paper primarily as an argument against "a system of national currencies connected by flexible exchange rates."¹⁰⁵ While the three criteria are important, they have been considered by some economists to be three requirements for a minimally successful monetary union rather than, as the title of Mundell's article stated, criteria for "optimum" currency areas.

Even the United States is not clearly an "Optimum Currency Area."¹⁰⁶ A 1991 article "Is Europe an Optimum Currency Area?" found that "Europe remains further from the ideal of an

optimum currency area than the currency unions of Canada and the United States, or China."¹⁰⁷ In a recent analysis, three economists from Lund University in Sweden concluded that China is "more of an optimum currency area than first expected," but they questioned whether Hong Kong and Macao would be appropriate additions pursuant to the criteria.¹⁰⁸ The political reality is that China has been a monetary union since the first emperor of a united China, Qin Shi Huang, implemented a single Chinese currency and other unified measurement systems in 221 B.C. Whether "optimum" or not, Hong Kong and Macao will soon be part of the Chinese monetary union, if not an East Asian or Asian monetary union. The optimum currency area analysis has been applied to many other geographies, too, e.g., North America,¹⁰⁹ Asia,¹¹⁰ or East Africa.¹¹¹

Jeffrey Frankel and Andrew Rose enlarged the perspectives of those examining whether an area was "optimum" for a monetary union by examining whether preparations for joining a proposed or existing monetary union might, themselves, modify the economic landscape to transform the participating countries into a currency area more closely fitting the optimum currency area criteria.¹¹² They concluded that even for countries whose pre-monetary union trade relationships and correlation of business cycles did not appear to make those countries ideal candidates for optimum currency union, monetary union could be beneficial because of changes which would occur *after* such union. They wrote about the Eurozone, "EMU entry, *per se*, for whatever reason, may provide a substantial impetus for trade expansion; this in turn may result in more highly correlated business cycles. That is, a country is more likely to satisfy the criteria for entry into a currency union *ex post* than *ex ante*."¹¹³ They called the effect, "endogeneity."¹¹⁴ The result is like a company having application criteria for a job opening and then finding that people who didn't initially meet those criteria ulti-

mately performed very well on the job. Thus, the use of the original Optimum Currency Area criteria as predictors of successful entry into a monetary union is of little or uncertain value.

In 2000, at the IMF Panel “One World, One Currency: Destination or Delusion?”¹¹⁵ it was said of Mundell that, “He stated that the EMU had met the basic optimum currency area criteria of a monetary union:

- “• common target or anchor for monetary policy;
- common measures for inflation;
- locked exchange rates;
- implying a common monetary policy; and a
- means for dividing up the seigniorage.”¹¹⁶

On the other hand, the European Commission’s 1992 report stated that “It became conventional wisdom to say that Europe was *not* an optimum currency area,”¹¹⁷ and gave several reasons why EMU was still a good idea. The report concluded, “Summing up, the optimum currency area approach provides useful insights but cannot be considered a comprehensive framework in which the costs and benefits of EMU can be analyzed. Empirical applications of this approach are scarce and hardly conclusive.”¹¹⁸

The Maastricht Criteria

Led in substantial part by concerns from Germany, the most prosperous European country with the strongest currency, the Maastricht Treaty established five criteria for entry into the monetary union:

1. Candidate country inflation is no more than 1.5 percent above the average of the lowest three inflation rates in the European Monetary System (EMS);
2. The long-term interest rate of the candidate country is no

- more than 2 percent higher than the average of the low inflation countries in the EMS;
3. The candidate country is a member of the exchange rate mechanism of the EMS and has not observed a devaluation in the two years preceding entrance into the EMU;
 4. The candidate country government budget deficit is no higher than 3 percent of GDP; and
 5. The candidate country government debt does not exceed 60 percent of GDP.¹¹⁹

There was initial difficulty by some of the EU members meeting the criteria, and there was even some concern that the numbers were distorted in some countries to make them fit the criteria. With each passing year of successful use of the euro by all EMU countries, such concerns fade in importance, and bring into question their original utility.

British Five Criteria for Joining the EMU

The British government evaluated the utility of adopting the euro and established five criteria, in addition to the above criteria in the Maastricht Treaty, which the UK was acknowledged to have met.

- “1. Are business cycles and economic structures compatible so that we and others could live comfortably with euro interest rates on a permanent basis?
2. If problems emerge, is there sufficient flexibility to deal with them?
3. Would joining EMU create better conditions for firms making long-term decisions to invest in Britain?
4. What impact would entry into EMU have on the competitive position of the UK’s financial services industry, particularly the City’s wholesale markets?

5. In summary, will joining EMU promote higher growth, stability, and a lasting increase in jobs?"¹²⁰

The answers to these questions were not viewed sufficiently positively to give the government the political confidence to take the issue to the parliament or to the people in a referendum. Many pro-euro economists felt that either these criteria were not necessary or that the United Kingdom satisfied them, and thus that the issue of the UK entry into the EMU is far more a political than an economic question. The mixture of motivation is entirely legitimate as the motivations of the twelve countries which did join the EMU were also a political and economic combination. Someday, the UK's political assessment of the benefits and costs will turn positive and the UK will join the Eurozone.

GENERAL CRITICISM OF MONETARY UNIONS

Perhaps nobody has written as pessimistically about monetary unions as Benjamin J. Cohen in his *The Future of Money*.¹²¹ He labels the movement to a smaller number of currencies, through ization or monetary unions as the "Contraction Contention."¹²² He believes that the power of nationalism, leading nations to establish and maintain their own currencies, will outweigh the public's desire for stable money. He writes, "...the Contraction Contention, I contend, is utterly wrong. The central argument of this book is that the population of the world's moneys is more likely to expand, not contract, both in number and diversity. The future of money will be one of persistently growing complexity, posing increasingly difficult challenges for state authorities."¹²³

While noting the momentum of monetary union in Europe, Professor Cohen discounts the example of the EMU as "only one new monetary union."¹²⁴ Despite the evidence of the fifth

anniversary of the euro and the accession of the ten New Member States, he believes that countries are simply not willing to give up their monetary sovereignty for the sake of monetary stability. His vision of nation states is that they are locked in a Darwinian struggle of currency competition on a zero-sum game basis, instead of being willing to join with others. Borrowing from the observation by George von Furstenberg, a monetary union supporter, that “like-minded countries” were best for monetary unions,¹²⁵ Cohen asks rhetorically, “Where in the quarrelsome family of nations can the requisite like-mindedness be found? The obstacles to finding willing partners are formidable and, in most instances, likely to turn out to be insurmountable.”¹²⁶

The answer is that the “quarrelsome family of nations” is seeing a better way of international relations and it’s called working together, or soft power. That’s the core of Mark Leonard’s thesis in *Why Europe will Run the 21st Century*. He wrote, “By coming together and pooling their sovereignty to achieve common goals, the countries of the European Union have created new power out of nothing. The silent revolution they have unleashed will transform the world.”¹²⁷

Another critic of the euro is Bloomberg.com’s Matthew Lynn who presented the view reminiscent of the US Army major during the Vietnam War who announced that he had to destroy a village in order to save it. Lynn wrote that the way to save the euro is to “try reissuing the twelve national currencies that were replaced with just one.” Relying upon recommendations from John Gillingham, a historian from the US, Lynn argued that the euro is responsible for the sluggish EMU economy. He wrote, “What is important is that people recognize that the euro hasn’t worked as planned...” and that member countries should have the option of bringing back their legacy currencies.¹²⁸ In an unintended rejoinder to this book, Lynn wrote

that the recommendation was “just common sense.”

We will see in the next few years whether the people of the world have common cents/sense and whether they really want stable money, or a risky, costly, worldwide currency competition. As Thomas Paine wrote, “Time makes more converts than reason.”¹²⁹ With every passing day of stable money in Europe, and with every new country that joins the EMU, the world is seeing that monetary union works, and the “Contraction Contention” will itself contract out of contention as an explanation of actual events.

It is true that nearly all of the monetary unions of the past have ended, mostly due to political and economic changes. While the Maastricht Treaty contains no explicit provision for a member country’s secession from the European Monetary Union, such a split is possible, and a few politicians in Italy have openly discussed it.¹³⁰ A major difference between such discussion now and with previous monetary unions, is that the European Monetary Union is growing and there is no limit, except symbolically for the name. Growth of any organization has a way of becoming empowering and self-fulfilling. As will become clear in subsequent chapters, the ultimate end of such growth will be the Global Monetary Union, where the advantages of monetary unions are compounded annually.

SUMMARY

The monetary unions of the twenty-first century, and those which survived the twentieth, are the milestones on the path to the future, and to the Global Monetary Union. It ought to be the policy of every country of the world to join an existing or new monetary union if the money managed by that union’s central bank is likely to be more stable than the current money of that country. Thus, every country should join a monetary union.

Many economists now recommend this course of action for

small countries.¹³¹ William White, economist and head of monetary policy at the Bank for International Settlements, has recommended that the world move to “a small number of more formally based currency blocks.”¹³²

As a monetary union’s central bank is far more focused on its goal of stable money than are the governments of any of its member nations, the probability is high that joining is better than not joining.

Until the rise of the international monetary unions, central banks were considered to be best oriented to a single nation, but that alignment made money a symbol of a nation, instead of being a symbol and unit of value. Once that critical distinction was discovered or re-discovered, the road to Global Monetary Union was opened.

As the euro is now securely established as a stable international reserve currency, it is more attractive to potential members than it was in 1999 when joining meant an uncertain future.¹³³ The larger the Eurozone gets, the more stable it will be, and the closer the world will be to the “tipping point” toward the Single Global Currency.

Chapter 5 explores the logical final step for any discussion about monetary union: a Global Monetary Union.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. The Toscana region translates as Tuscany in English. I’ve tried in this book to use the rule that localities should be known as they are known by the local inhabitants, rather than just to speakers of English. It’s easier to apply that rule for non-state localities as Toscana and the Arabian Gulf, than for countries such as Italy and Germany, which are known as Italia and Deutschland to their citizens.

2. Scaruffi, Gasparo, *L’Alitinofo. Reggio Emilia*. Italy:1582, as cited by Robert Mundell, at IMF Economic Forum “One World, One Currency: Destination or Delusion?” 8 November 2000, with Alexander Swoboda,

Maurice Obstfeld and Paul Masson, at <http://www.imf.org/external/np/tr/2000/tr001108.htm>. Not having read the original text, it's assumed that even if Count Scaruffi used the term "world," he was really thinking of Europe at the time, and there was no consideration of including China, India, or Japan, of which little was known in Europe.

3. Luca Einaudi, "'The Generous Utopia of Yesterday can become the Practical Achievement of Tomorrow': 1000 Years of Monetary Union in Europe," *National Institute of Economic Review [Italy]*, 1 April 2000, p. 2, at <http://www.allbusiness.com/periodicals/article/539455-1.html>

4. Sam Vaknin, "The History of Previous Currency Unions," at <http://samvak.tripod.com/nm032.html>

5. John Hawkins and Paul Masson, "Introduction" to "Regional Currencies and the Use of Foreign Currencies," Annex A, May 2003, Bank for International Settlements, p. 27, at <http://www.bis.org/publ/bppdf/bispap17.pdf>

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10. "Finance Ministers Express Confidence in Strength, Stability of EC Currency," Press Release from the Office of the Prime Minister, St. Kitts & Nevis, 22 February 2006, at <http://www.cuopm.com/newsitem.asp?articlenumber=845>

11. See website of Eastern Caribbean Monetary Union, at <http://www.eccb-centralbank.org/About/index.asp>

12. J. E. Meade, "The Balance of Payments Problems of a Free Trade Area," *Economics Journal*, Sept. 1957, pp. 379-96.

13. Tibor Scitovsky, *Economic Theory and Western European Integration*. London: Allen and Unwin, 1958, cited by Robert Mundell at <http://www.columbia.edu/~ram15/ie/ie-12.html>

14. T. K. Jayaraman, "Prospects for a Currency Union in the South

- Pacific," 31 December 2001, p. 12, at <http://72.14.207.104/search?q=cache:-tvAkNmvdHIJ:www.fdc.org.au/files/gdnjaya.pdf+jayaraman+currency+prospects&hl=en>
15. Robert Mundell, "A Theory of Optimum Currency Areas," *American Economic Review*, May 1961, pp 657-65, at p. 661. The article is also contained in Mundell's textbook, *International Economics*, as chapter 12, pp. 177-86, and online at <http://www.columbia.edu/~ram15/ie/ie-12.html>.
16. *Ibid.*, at p. 661.
17. Robert Mundell, "A Plan for a European Currency" and "Uncommon Arguments for Common Currencies," both in H. G. Johnson and A. K. Swoboda, *The Economics of Common Currencies*. London, UK: Allen and Unwin, 1973, pp. 143-72. See also "Capital Mobility and Stabilization Policy under Fixed and Flexible Exchange Rates," in *Canadian Journal of Economics and Political Science*, Vol. 29, November 1963, pp. 475-85. Citations from Ronald McKinnon's, "Optimum Currency Areas and the European Experience," 16 October 2001, at <http://www.stanford.edu/~mckinnon/papers/optimumreueur.pdf>
18. Robert Mundell, 1961, op. cit., p. 657.
19. The reference to a "\$64 trillion question" refers to a US television quiz show in the 1950s called the "\$64,000 question." On the show that question was *the* question, as is the question now of planning and implementing a Single Global Currency. See "The \$64,000 Question and the \$64,000 Challenge" at [http://www.museum.tv/archives/etv/S/htmlS/\\$64000quest/\\$64000quest.htm](http://www.museum.tv/archives/etv/S/htmlS/$64000quest/$64000quest.htm)
20. "Introduction," Brunei Darussalam Currency Board, at http://www.finance.gov.bn/bcb/bcb_index.htm
21. Lubin Kobla Doe, "Reforming External Tariffs in Central and Western African Countries," IMF Working Paper, No. 06/12, 1 January 2006, at <http://www.imf.org/external/pubs/cat/longres.cfm?sk=18617.0>
22. See the major analysis of dollarization, *The Dollarization Debate*, edited by Dominick Salvatore, James W. Dean, and Thomas D. Willett. Oxford, UK: Oxford University Press, 2003. See also, for an analysis of dollarization in the Americas, Harvey Arbelaez, "The Political Economy of the Dollarization Debate in the Americas: Pros and Cons, Myths and Realities, Issues and Implications," from a First Paper Development Workshop in Stockholm, July 2004, at <http://scholar.google.com/scholar?hl=en&lr=&q=cache:iVS0990SdxAJ:faculty.fuqua.duke.edu/ciber/programs/pdf/arbe.pdf+percent22harvey+arbelaez+percent22+dollarization>
23. The term "ization" has no etymological relation to Alain Ize, who is an economist at the International Monetary and who has written about dollarization. See his "Financial Dollarization" written together with Eduardo Levy Yeyati, *Journal of International Economics*, Vol 59, 2003, pp 323-47, and at http://www.utdt.edu/~ely/dolarJIE_final3.PDF

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26. Stanley Fischer, *ibid.*, pp 2-10.
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31. This expression originated in the British colonies in America when taxes were imposed by the British Parliament, in which the colonies had no elected representatives. See the summary on the internet of a 2005 exhibition in the British Parliament, "No Taxation Without Representation" at http://www.parliament.uk/parliamentary_publications_and_archives/parliamentary_archives/archives_stamp_act.cfm. See also, the Wikipedia entry, including the reference to today's license plates in Washington, DC, the US capital where citizens do not have elected representatives in the US Congress. At http://en.wikipedia.org/wiki/No_taxation_without_representation
32. "Dollars and Cents", Forbes.com, at http://www.forbes.com/2006/02/11/cx_dal_money06_0214moneyfactslide_8.html?thisSpeed=6000. Complicating the seigniorage value is the life expectancy of paper money. See "R.I.P." at Forbes.com, at http://www.forbes.com/2006/02/11/cx_dal_money06_0214moneyfactslide_12.html?thisSpeed=6000, "One-dollar bills have an average lifespan of twenty-two months, while ten-dollar notes live for only eighteen months. Twenties can circulate for twenty-five months, and \$100 notes last about five years," See also "New Money" at Forbes.com at http://www.forbes.com/2006/02/11/cx_dal

[money06_0214moneyfactslide_3.html?thisSpeed=6000](#), "The US Bureau of Engraving and Printing produces thirty-five million notes a day with a face value of approximately \$635 million. Ninety-five percent of the notes printed each year are used to replace notes already in circulation, and forty-five percent of the notes printed are \$1 notes."

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36. For an excellent summary of the progress toward European Monetary Union, see Chapter 4, "European Monetary Unification" in John Edmunds' and John Marthinsen's *Wealth by Association, Global Prosperity through Market Unification*. Westport, CT: Praeger Publishers, 2003, pp. 43-77.

37. Treaty on European Union, popularly known as the Maastricht Treaty, on the website of the European Central Bank at http://www.ecb.int/ecb/legal/pdf/maastricht_en.pdf

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39. Denmark National Bank, "euro referendum," at http://www.nationalbanken.dk/dnuk/eurohist.nsf/side/Euro_referendum

40. Bank of Canada "10-year Currency Converter" utility, using dates from 1 January 1999 through 10 December 2005, at <http://www.bankofcanada.ca/en/rates/exchform.html>

41. *Ibid.*

42. Meera Louis, "Slovenia Becomes First Eastern State to Ask for Euro(Update 1)," Bloomberg.com, 8 March 2006, at http://www.bloomberg.com/apps/news?pid=10000087&sid=azJ0XluoStac&refer=top_world_news#, and "Lithuania Applies for Euro Over EU Inflation Warnings (Update 2)," Bloomberg.com, 16 March 2006, at <http://>

www.bloomberg.com/apps/news?pid=10000085&sid=aAlZ00 MQkA&refer=europe

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45. Paul De Grauwe and Claudia Costa Storti, "Is Monetary Policy in the Eurozone Less Effective than in the US?" CESifo Working Paper No. 1606, November 2005, at http://www.cesifo.de/pls/guestci/download/CESifo_percent20Working_percent20Papers_percent202005/CESifo_percent20Working_percent20Papers_percent20November_percent202005/cesifo1_wp1606.pdf

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50. "SEPA: Everything You Need to Know," Gtnews.com, 17 January 2006, p. 6, at <http://www.gtnews.com/feature/112.cfm>

51. The Arabian Gulf is known by that term, albeit not in English, to the people living in that region. The term Persian Gulf is used by non-Arabs. Using the rule that geographical places, cities, and countries should be known to the world as they are known to the local inhabitants, the term "Arabian Gulf" is used here.

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tion in the Member States of the Gulf Cooperation Council," European Central Bank, June 2005, at <http://www.ecb.int/pub/pdf/scpops/ecbocp31.pdf>

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Part III

THE FUTURE

THE SINGLE GLOBAL CURRENCY: ORIGIN, BENEFITS, AND COSTS

WHAT IS MEANT BY A SINGLE GLOBAL CURRENCY? The easiest way to answer is to present the typical responses of people to whom the idea is presented. Many ask, “Do you mean like the euro?” Yes, indeed. Like the euro, except that it’s for the entire world. Our definition of a Single Global Currency is:

A common currency, managed by a Global Central Bank within a Global Monetary Union, that people can use within member countries as legal tender and for international transactions.

In short: A euro-like currency for the world.

This doesn’t necessarily mean that the Single Global Currency must be the only currency in the countries that utilize it. There can be others, too, whether national or local, alternate currencies, but the common cents/sense, inherently simple, goal is for one global currency. Almost all of the economic analysis below assumes that “single” equals “one.”

Some people would say that the US dollar already functions as a global currency, but it is proprietary to the United States which, so far, has shown no inclination to share governance of its currency. The US dollar is not considered legal tender except in the USA and dollarized countries. People

cannot, for example, pay their taxes in Egypt with US dollars.

When the world eventually commits itself to a Single Global Currency, more precise criteria will be established to determine when the goal is reached. It might be when the currency is used as legal tender by countries with a specified percentage of the people of the world, or in countries with a percentage of the world GDP. Fifty-one percent would work in both instances, but it could also be forty. Another measure might be when a common currency is involved in a specified percentage of foreign exchange trades, or when the total volume of trading declines to a specified percentage of its current \$2.5 trillion daily. On the other hand, and paraphrasing the late US Supreme Court Justice Potter Stewart, perhaps we will know it when we see it,¹ as for example, when a future international monetary conference creates a 3-G world, with a Global Central Bank and a Global Monetary Union and a Single Global Currency.

THE ORIGIN OF THE IDEA: JOHN STUART MILL

There is a fine line between the idea of a regional monetary union and a Global Monetary Union. It's the difference between "all" and "some." It's the difference between a one-, two-, or three-wheeled vehicle and a four-wheeled vehicle. The implicit origin of the idea of a Global Monetary Union can be said to have been John Stuart Mill's observation in 1848, "Let us suppose that all countries had the same currency, as in the progress of political improvement they one day will have...." He went on to say, "So much of barbarism still remains in the transactions of the most civilized nations that almost all independent countries choose to assert their nationality by having, to their own inconvenience and that of their neighbours, a peculiar currency of their own."²

Of Mill's and Walter Bagehot's views, an early editor of *The Economist* magazine, Robert Mundell wrote, "...they wanted to go further and fine-tune the system to eliminate or reduce unnecessary information and transaction costs associ-

ated with international trade. This concern, which was shared by Bagehot and other far-sighted economists, derived from the common sense of saving on information and transactions costs, before the development of erudite mathematical models of information theory.”³

These statements were not idle observations by the versatile Mill who had also written about feminism, slavery, and other subjects. The comments came in Chapter XX, “Of the Foreign Exchanges,” of Book III, “Exchange,” of his five-book 1848 volume, *Principles of Political Economy*. Other chapters in Book III have titles showing considerable thought about economics and money: “Of Value,” “Of Money,” “Of the Value of Money as Dependent on Demand and Supply,” “Of International Trade,” and “Of Money, Considered as an Imported Commodity.”⁴

In sum, while most ideas have many sources, John Stuart Mill’s role in the origin of the idea of a modern Single Global Currency seems substantial, as he used common cents/sense in 1848.

Over the next century there were several International Monetary Conferences, beginning with the 1867 Conference in Paris. Although termed “international,” its primary focus was Europe, and proponents tried to achieve a larger monetary union than the existing Latin Monetary Union. The United States participated and even minted samples of appropriate coins, including a 5 dollar/25 franc coin, but the differences in metallic content among the coins of the participating countries contributed to the failure of the idea.⁵ There was no significant participation from non-Western countries.

Much of the discussion centered about mutually acceptable coinage and standardizing the values of currency, gold, and silver. Robert Mundell observed that the goals of the Paris conference were thwarted primarily by the United Kingdom which was then the world’s financial superpower.⁶ Part of the lesson

here is that the country at the top of the world financial system gets benefits from that status, and is usually reluctant to be dislodged, especially by another country.

In 1930, the Bank for International Settlements was established and “is the world’s oldest international financial institution and remains the principal centre for international central bank cooperation.”⁷⁷ In the succeeding years, the bank has fulfilled several temporary roles such as the development of the Basel Capital Accords in 1988, and acting as “agent” for the European Exchange Rate System (ERM) immediately prior to the euro and the establishment of the European Central Bank.

The first explicit proposal for a proto-global currency came at the 1944 Bretton Woods international monetary conference, with John Maynard Keynes’ proposal for a new global currency clearing system called the “Bancor.” The US proposal for a world currency was developed primarily by Harry Dexter White of the US Treasury, and given the name, “Unitas.”⁷⁸ It was withdrawn before the conference, perhaps, as suggested by Robert Mundell, because of the upcoming 1944 elections. The US reluctance, as the reigning financial superpower, to relinquish that position, even to a non-national world currency, fit the earlier-noted pattern established by the United Kingdom in the nineteenth century.

Although the conference ultimately established the dollar as the pre-eminent national currency, and fixed its value to gold at \$35.00 per troy ounce, a kernel of the Bancor proposal was resurrected with the establishment of Special Drawing Rights (SDRs) in 1969, as administered by the International Monetary Fund. “Originally intended within the IMF as a sort of international money for use among central banks pegging their exchange rates, the SDR is a transferable right to acquire another country’s currency. Defined in terms of a basket of currencies, today it functions as a unit of international account.”⁷⁹

The basket originally consisted of more than ten currencies, but has been reduced to only four, thanks to the consolidation of currencies in the European Monetary Union. The four are the US dollar, euro, UK pound, and yen.¹⁰ Each IMF member is allocated amounts of SDRs which can be used to acquire other members' currencies to restore balances of payments. For example, the IMF loaned SDRs to Argentina during its currency crises of 1997-99 and thereafter. In December 2005, Argentina announced its plan to complete its repayment of the remaining SDR 16.102 billion.¹¹ Someday, the four currencies in the basket will be collapsed into one, the Single Global Currency, and SDRs will disappear.

In addition to solving the exchange rate problem, the Bretton Woods conference also permitted, if not encouraged, the use by member nations of capital controls, again at the behest of John Maynard Keynes. He viewed the flow of international capital in support of trade and commerce as essential, but deplored the free movement of speculative funds as "the major cause of instability... Nothing is more certain than that the movement of capital funds must be regulated."¹² The use of capital controls subsequently diminished as part of the general opening of international trade and commerce. The elimination of capital controls was considered to be part of the economic prescription in the 1980s called "the Washington Consensus."¹³

Robert Mundell briefly touched on the idea of a world currency in "A Theory of Optimum Currency Areas" when he wrote, "The 'optimum' currency area is not the world. Optimality is here defined in terms of the ability to stabilize national employment and price levels."¹⁴ However, in the same article he noted that when considering that the role of money is to make transactions more convenient, "Money is a convenience and this restricts the optimum number of currencies. In terms of this argument alone, the optimum currency area is the world,

regardless of the number of regions of which it is composed.”¹⁵

Thus, in 1961 the verdict was mixed on whether the world could be considered an optimum currency area, at least according to the criteria stated in that innovative article. However, as has been noted by many, Europe did not satisfy all the criteria either, at least not before the establishment of the euro.¹⁶

In 1968 Mundell presented his “Plan for a World Currency” to the Joint Economic Committee of the US Congress.¹⁷ He wrote, “It is clear in what direction we need to move. We need to construct, out of all the assets currently used by the monetary authorities, a new world currency,” and then he quoted a former central banker of the Bank of France, Charles Rist, who wrote in 1952, “What international commerce needs is a common and unquestioned money to which all the international prices can be pegged.”¹⁸ Rist’s belief that the backing should be gold does not detract from the point of the statement. The world currency would be open to any country in the world, although Mundell clarified that its success would depend upon adoption by the large economic powers, who would contribute assets into a monetary fund, like a world central bank.¹⁹

Mundell was not alone in his vision for a new world financial architecture. Retired US Federal Reserve Chair William McChesney Martin recommended a “strong world central bank” in his 1970 book, *Toward a World Central Bank?*²⁰

In 1972, Nobel Prize Winner James Tobin proposed an international tax to reduce the increasingly worrisome cross-currency capital flows, with the observation that the tax was the second best alternative after a Single Global Currency which he viewed as infeasible for several decades. Nonetheless, he continued to believe it to be the best solution, and guardedly repeated the suggestion in 1998 at a World Bank “Conference on Developmental Economics.”²¹ Note that the daily volume of foreign exchange trading in the 1970s was less than \$100 billion, or

only 5 percent of the volume in the early 2000s.

In 1979, *The New York Times* first used the phrase, “Single Global Currency,” in the sense used here, in a column by Robert Magnuson. He noted that Charles Kindleberger had urged economists to “become more ‘artistic’ than technical if they are to solve the world’s monetary woes. On the other hand, artistic solutions often tend to be unrealistic. They envision the evolution of a monetary system with a Single Global Currency and overseen by a world bank.”²² The previous use of the phrase by *The New York Times* was to describe the US dollar, in a 20 November 1967 article by Edwin Dale about the devaluation of the pound.²³

In 1984, Richard Cooper of Harvard wrote “A Monetary System for the Future,” which was considered by many as a clarion call for a Single Global Currency. He wrote, “I suggest a radical alternative scheme for the next century: the creation of a common currency for all of the industrial democracies, with a common monetary policy and a joint Bank of Issue to determine that monetary policy.” The term “industrial democracies” is viewed by Cooper as being restrictive.²⁴ However, as illustrated by the success of the Eastern Caribbean Monetary Union and others, monetary unions can be useful to all peoples and nations, regardless of the level of their economic development.

In his 1987 book, *The Alchemy of Finance*, George Soros called for the creation of a Single Global Currency, together with an international central bank.²⁵ Even by that time, he was one of the best known currency speculators in the world, so his recommendation might have been considered ironic, but who would better understand the failings of a system than someone who has mastered its intricacies? Subsequently, he is understood to have earned over \$1 billion by betting that the United Kingdom’s pound sterling would be pounded down from its pegged position in 1992, and it was.

Soros is not the only currency speculator to understand what is needed for world financial stability. Andrew Krieger, a currency trader, wrote in 1992 in *The Money Bazaar*, "Ever since John Maynard Keynes' finest hour at Bretton Woods, there have been strong advocates of a single world currency. In fact, at this point it is a concept with so many benefits that it requires little advocacy."²⁶

In 1988, *The Economist* published a cover story, "Get Ready for a World Currency," which it called the "Phoenix." The article begins, "THIRTY years from now, Americans, Japanese, Europeans, and people in many other rich countries, and some relatively poor ones, will probably be paying for their shopping with the same currency. Prices will be quoted not in dollars, yen, or D-marks but in, let's say, the phoenix. The phoenix will be favoured by companies and shoppers because it will be more convenient than today's national currencies, which by then will seem a quaint cause of much disruption to economic life in the late twentieth century."²⁷ Ten years later, in 1998, *The Economist* followed up with "One World, One Money," which presented the option of a "global currency union," four months before the 1999 introduction of the euro on the books of the Eurozone's financial institutions. The article concluded, "Fine, you say, but how would the world ever get from here to there?"²⁸ (See Chapter 7).

In 2000, Robert Mundell participated in a panel discussion at the International Monetary Fund, "One World, One Currency: Destination or Delusion," where he said, "But I don't know anyone who has actually advocated a single currency for the world," and " 'One World, One Currency' could exist in a dictatorship or a world empire, but I couldn't imagine a world democracy with a single currency. I couldn't imagine that system."²⁹ It appears, however, that he was addressing the question of whether a Single Global Currency was required to be the *only*

currency around the world and the answer is no. Also, he seems to have believed that a Single Global Currency required a higher degree of world government than is necessary. A monetary union requires only an agreement among peoples or nations to vest responsibility for the issuance and stability of their money in a non-national entity, usually a central bank. Other governmental agreements may be helpful, but are not required, as can be seen with the range of integration among current monetary unions.

As could have happened with the euro, which was considered at one point to be utilized in parallel to the retained national currencies, it may be that nations or cities or corporations want to issue or retain their own currencies in parallel with the Single Global Currency, and that will be up to the issuers. Panama uses two currencies: the US dollar and the Panamanian balboa. During the 1999-2002 implementation of the euro, it was used in parallel to the legacy currencies. Bank statements were issued to customers in both currencies, and customers could write checks and make other payments in euros, but not with cash. Perhaps that experience with parallel currencies strengthened the resolve to discard the legacy currencies upon the issuance of cash in January 2002. Barry Eichengreen recommends a parallel currency approach for Asia, with an AMU (Asian Currency Unit) which would be similar to Europe's pre-euro ECU.³⁰

Cramped by the pre-euro views of the inviolability of the sovereignty value of money, Mundell didn't believe many countries would willingly abdicate their monetary control.

Mundell fine-tuned his expectations by saying that what he was really hoping for was "one world, one currency area" with a system of fixed exchange rates, beginning with the G-3: the United States, United Kingdom, and Japan.³¹

At a 2001 OECD conference in Luxembourg, Charles

Goldfinger gave a name to a prospective “Single Global Currency,” the “geo,” calling it “a logical consequence of a broad globalisation trend, a monetary translation of deepening economic integration.” He continued, “...over the next ten to twenty years, the question of a global currency is more than likely to return to the top of the public policy agenda.”³²

Also in 2001, Mundell, then widely recognized as the 1999 Nobel Prize laureate for his work on exchange rates and common currencies, returned to the IMF to give a lecture, “The International Monetary System: Quo Vadis?”³³ and renewed the call for G-3 monetary union, saying that such a monetary union would set the stage for the implementation of a Single Global Currency. The *IMF Survey* article reported, “Such an IMF currency would need a new name, he said, ‘because who wants a currency called *special drawing rights*.’ The currency would be perfectly convertible into the currencies of the group of three, and the IMF Board of Governors could then designate the group of three [currency] area as the agent for managing the world currency. “The establishment of a world currency along the lines of the original 1944 proposals would insulate it from the criticism that the IMF was being transformed into a central bank, he said, or that the world currency would be ‘run by a bunch of international bureaucrats.’ A world with a single currency, he said, ‘would be a tremendous inducement to trade and to a great opening up of trade. It would make for transparency. There’d be no currency crises in the world, by definition. There’d also be no hedge funds to make \$20-30 trillion on derivatives now floating around the world—hedge funds trying to overcome the inefficiency that’s created by this absurd currency system.’”³⁴ Mundell’s term for this G-3 currency is the “dey” for dollar-euro-yen, and his term for the world currency would be “intor,” with “int” for international, and “or” for the word for gold in French.³⁵

GLOBALIZATION AND THE SINGLE GLOBAL CURRENCY

The term “globalization” means many things to many people. To supporters of the trend, it may mean greater international trade with the rising tide of international prosperity lifting all boats. To opponents, it may mean the destruction of local customs and natural resources without just compensation.

The Single Global Currency is obviously a part of globalization, but will play a nominally neutral role in the struggle to promote equality and fair utilization of the world’s resources. The SGC is part of what can be called “good globalization” and should be included with other global standardizations, such as the metric system, the calendar and the internet, each of which has had different side effects on the world.

Perhaps a Single Global Currency could be considered the eleventh “flattener” by Thomas Friedman in subsequent editions of his *The World is Flat*. In his flattened world, people everywhere have a chance to compete in the international marketplace. Paul Volcker’s article in 2000, “Toward a Single World Currency to Level the Playing Field,” can be considered an endorsement of such an additional flattener or leveler.³⁶

BENEFITS AND COSTS OF THE GLOBAL MONETARY UNION/SINGLE GLOBAL CURRENCY—BENEFITS

The overall benefit of the Single Global Currency will be to promote international financial stability, the essential basis of commerce and economic growth. All of the foreign exchange systems which have been developed since approximately 476 B.C. have failed in this essential goal. In fact, some exchange rate regimes have rendered the international financial system less stable. As noted earlier, Robert Mundell has labeled it, “an absurd currency system.”³⁷

In the lists below of benefits and costs, there are close similarities to the benefits and costs of monetary unions, as listed in

Chapter 4. As Ramkishan Rajan wrote in 2000, "...the conceptual framework with which the costs and benefits of the EMU have been discussed would be just as pertinent in analyzing the feasibility of an AMU [Asian monetary union], or even Global Monetary Union."³⁸ However, there is a quantum leap from a world of several monetary unions, which still must relate to each other in the existing multicurrency foreign exchange system, to a world with one Global Monetary Union.

For some benefits, it's the leap from "reduce" to "eliminate." For others, it's more complicated.

The analysis of benefits and costs is about the utility of the Single Global Currency and not its political feasibility which is covered in Chapter 7.

1. ELIMINATE THE COSTS OF FOREIGN EXCHANGE TRANSACTIONS

It was estimated earlier in this book that the annual cost of the multicurrency foreign exchange system is \$400 billion, and that some saved reduction of that cost will come to every country which joins a monetary union. However, each such reduction still leaves the large overhead infrastructure in place in banks, corporations, and international organizations. Upon the implementation of a Single Global Currency, and the gradual disappearance of the foreign exchange market, the infrastructure can be dismantled and utilized for other purposes. It's the difference between seeing several foreign exchange booths at airports with many employees, then seeing fewer and fewer upon the implementation of several monetary unions, and then seeing none.

Included in the \$400 billion are the barely quantifiable costs of all the contract provisions for hedging and for denominating a currency for payment, and the legal time spent in preparing and negotiating such contracts.

2. INCREASE THE VALUE OF THE WORLD'S ASSETS BY \$36 TRILLION, AND TRIGGER ADDITIONAL \$9 TRILLION GDP ACTIVITY

The phenomenon explored by John Edmunds and John Marthinsen—an increase in asset values caused by the reduction of currency risk through the formation of a monetary union—would continue with the implementation of the Global Monetary Union. The amount of the increase will be approximately inversely proportional to the level of previous currency risk. The one-time increase in global asset values will occur most dramatically in those remaining countries where there is significant currency risk and/or high inflation, such as in Africa and South America.

The total worldwide increase in financial asset values, attributable to the runup to the Single Global Currency, is estimated to be \$36 trillion. The IMF recently estimated the total value of financial assets in 2004 at \$144 trillion, or approximately 3.5 times the world's GDP.³⁹ With the elimination of worldwide currency risk, that average multiple will move closer to the 4.0 asset/GDP multiple in the developed world. Applying that 4.0 multiple to the projected world GDP in 2006 of \$45 trillion would bring the value of financial assets to \$180 trillion, an increase of \$36 trillion.

Using the same multiplier in reverse, the increased annual GDP activity to be expected from the \$36 trillion increase in asset values is \$9 trillion. Subsequently, annual percentage increases in GDP will bring continued benefits from that one-time increase in asset values. For example, if the 3-G world emerges as hoped by 2024, with a \$9 trillion boost (in 2005 dollars) to worldwide GDP, a hypothetical 3 percent GDP increase in 2025 would mean that \$270 billion, (9 X 3), of the increase would be attributable to the implementation-caused asset value increases. And in 2026, with another three percent increase, there would be an additional \$278 billion increase, thanks to the

miracle of compounding. And so on, *ad infinitum*.

Such amounts of money boggle the mind, and readers are invited to do further research and calculations. What is your estimate of the one-time gain and further annual GDP gains to come from the lowering of inflation and the elimination of currency risk, worldwide?

3. ELIMINATE THE NEED TO MAINTAIN FOREIGN EXCHANGE RESERVES

With no need to defend an exchange rate and no need to thwart an externally sourced currency crisis and no need to defend against speculators, there would be no need for the Global Central Bank to maintain foreign exchange reserves. By definition, in a 3-G world there will cease to be international reserves, as there would be no substantial international currency exchange. In 1999, US Federal Reserve Chair Alan Greenspan made a similar observation, saying, "One way to address the issue of the management of foreign exchange reserves is to start with an economic system in which no reserves are required. There are two. The first is the obvious case of a single world currency."⁴⁰

In 1992 the European Commission estimated that by joining together, the future Eurozone members might be able to reduce their total international reserves by one-half or \$200 billion.⁴¹

When developing countries acquire foreign exchange reserves in the form of low-interest bearing bonds from other countries, they often have to borrow at higher interest rates to finance such borrowing. Professor Dani Rodrik estimates that such a cost could amount to one percent of GDP of such countries.⁴² That's a substantial cost, and it will be eliminated upon the adoption of a Single Global Currency by such countries. For example, one percent of Angola's \$20.1 billion GDP⁴³ is \$201 million, which is equivalent to about 40 percent of all the foreign aid received by Angola in 2004.⁴⁴ In a 3-G world without

the need for foreign exchange reserves, such costs will not be borne by developing countries.

With the elimination of foreign exchange reserves would go also all the analyses by economists of such reserves, and all the reporting and tracking of the values of those reserves and their composition.⁴⁵ Another reason to discard the fifth wheel.

However, to the extent that some international currencies remain in use alongside the Single Global Currency, some foreign exchange reserves would be needed. Even facing such an option might encourage some planners to reconsider the need for those extra currencies and seek to remove them, for the same reasons that the legacy currencies in the Eurozone were removed.

The Global Central Bank would still maintain domestic reserves of units of the Single Global Currency to protect banking liquidity, as would any currency area central bank.

When the conversion is made to a Single Global Currency, decisionmakers would need to develop a plan of how to deal with the existing reserves of international currency, and with the gold in the vaults. In March 2005, the central banks of the world had international reserves worth 2.609 trillion IMF SDRs [\$3.712 trillion].⁴⁶

A major question for the establishment of the Global Central Bank will be the future role for gold, whether as money or as a reserve commodity or simply as a prized metal.⁴⁷ Its use will be a political question, rather than economic, and gold has many, vocal advocates.⁴⁸

4. ELIMINATE THE RISKS OF EXCESSIVE CAPITAL FLOWS AMONG CURRENCIES AND COUNTRIES

Kavaljit Singh argues in *Taming Global Financial Flows-A Citizen's Guide* that "it is increasingly being accepted that capital controls are necessary and desirable."⁴⁹ However, in that book he didn't

consider the large benefits and small costs of a Single Global Currency as the preferred method of coping with capital flows, compared to the small benefits and large costs of capital controls.

In a 3-G world, there will be no need for capital controls among nations.

5. REDUCE THE COST OF OPERATING AN ENTIRELY SEPARATE MONETARY SYSTEM

Thanks to economies of scale, it costs less per capita to administer foreign exchange monetary policy for a monetary union than for its individual country members, and the economies of scale increase as the monetary union expands. As the number of currencies decreases, the cost of administering the multicurrency foreign exchange system also will decrease until it reaches the logical end point of zero—with a fully implemented Single Global Currency.

6. ELIMINATE THE BALANCE OF PAYMENTS/CURRENT ACCOUNT PROBLEM FOR EVERY COUNTRY OR MONETARY UNION

The balance of payments is the sword of Damocles⁵⁰ hanging over every central bank because a lingering current account imbalance threatens a lowering of the value of a currency, and even possibly a currency crisis. Rodrigo de Rato, head of the IMF, makes the point that current account imbalances are not only a problem for the United States and China. He said, “Many countries need to share the burden of reducing global imbalances and sustaining growth. Furthermore, since these imbalances will eventually be corrected, one way or another, it is worth bearing in mind that a disorderly adjustment of global imbalances would harm all countries.”⁵¹ Conversely, an orderly adjustment or transition to a Single Global Currency will help all countries.

Regarding balances of trade, there still will be some concern in a 3-G world about whether countries are frequent net importers of goods and services, as that imbalance may lead to a general decline in a country's overall wealth. No one in net exporting countries will worry. However, such imbalances will not lead to devaluation of the currency, nor to a currency crisis.

There will continue to be concerns about the quality of trade and such issues as whether a country is exporting raw materials and importing high technology products, or the reverse. In any case, the balance of payments aspect of such considerations will disappear for countries participating in the Global Monetary Union. A trade deficit is not a serious problem unless there is foreign exchange involved and thus becomes a currency problem. As Benn Steil and Robert Litan wryly observed, "It's the Currency, Stupid,"⁵² paraphrasing the political mantra of the political campaigns for US President Bill Clinton, "It's the economy, stupid."

7. SEPARATE THE VALUE OF MONEY FROM THE VALUE OF A PARTICULAR COUNTRY

Since the establishment of modern states, their citizens have struggled to determine what functions ought to be performed by directly elected government bodies and what functions by semi-public and private organizations. Laws are created by elected officials, but they are enforced by judges who are usually appointed. Airports are often run by appointed authorities. Local banks are typically owned by their shareholders.

The concept of the state controlling the peoples' money is relatively new, as currencies previously were issued by private banks or other organizations.

A recent shift has seen the increased independence of central banks so they are not perceived as being appendages of governments. The movement of the responsibility for money away

from national central banks and toward monetary union central banks represents a further shift. Even in those countries with independent national central banks, they are still perceived as being part of the governments, due to the numerous links between them. In the United States, the seven members of the Board of Governors of the Federal Reserve are all appointed by the President, and then confirmed by the Senate. Another indication of the close relationship of the central bank to the US Government is the multi-billion dollar Exchange Stabilization Fund (ESF) which is managed by the US Treasury to intervene in the foreign exchange markets to support the US dollar or support currency stabilization efforts by other countries.⁵³ The Federal Reserve Board also intervenes in the foreign exchange markets.

Governments come and go, as does the confidence held in those governments. Governments are responsible for fiscal policy, and they assess taxes and spend funds on education, defense, and health care. Sometimes their budgets are balanced and sometimes they are not. Sometimes those countries are hit by natural disasters or their boundaries change. Such non-monetary volatility should not affect the value of the peoples' money, just as it should not affect the length of a meter nor the weight of a gram.

Moving responsibility for the value of money to a regional monetary union achieves some separation from national governments, and the logical end of that movement is to the Global Monetary Union.

8. ELIMINATE NATIONAL CURRENCY CRISES FOR MEMBER COUNTRIES OF THE GLOBAL MONETARY UNION

Almost by definition, a currency crisis occurs when holders of a currency, or securities or contracts denominated in a currency, flee that currency to refuge in another currency. With a Single

Global Currency, there would be no realistic “other currency.”

While there has been considerable debate about the precise causes of the currency crises of the 1990s, two general causes emerge: expectations and currency mismatches. Kenneth Kasa wrote, “a consensus has emerged that expectations are at the heart of the matter.”⁵⁴ Some economists look at expectations about monetary and fiscal policies and others at what is happening in the overall economy, but the overall expectation is that a currency crisis IS a possibility in every existing currency in the multicurrency foreign exchange system. In a Single Global Currency world, such a crisis will NOT be the expectation.

Benn Steil and Robert Litan note that a currency mismatch is at the root of every recent currency crisis, and they arise in part because 97 percent of all securities sold in the international markets are denominated in only five currencies: US dollar, euro, yen, UK pound, and Swiss franc. When the securities of those five currency areas are excluded, the percentage is still a high 85 percent.⁵⁵ A typical currency mismatch might occur as in Russia in 1998, where large loans were denominated in dollars and payment became difficult when the ruble lost value. There were insufficient dollar reserves in the central bank to repay all the loans denominated in dollars, and then panic selling of the ruble occurred. With a Single Global Currency, there can be no currency mismatch because there is no other large currency, and loans will be denominated in the Single Global Currency.

One outcome of currency crises, and even for those facing the risk of currency crises, is that people with the ability to send money or wealth out of the country at risk will do so. The middle class and the poor do not have that option, and will suffer the consequences of that risk. While there still will be other types of risk in member countries of a Global Monetary Union, currency risk will no longer be a factor to consider. This change

will hopefully contribute to keeping funds in developing countries at home where they can be invested, rather than being sent to Geneva, London, Miami, or Singapore.

While it's possible for confidence to decline in a global currency if it's mismanaged, it would not occur for the reasons we currently attribute to the causes of recent international currency crises, i.e., because speculators and others are converting vast amounts of the Single Global Currency into other currencies. By definition, there would be no other currency which could absorb such transfers. Also, what would such a decline in confidence mean in a Global Monetary Union? Every member country government would be accepting, and usually requiring, the Single Global Currency as the means of payment of taxes and other debts. Thus, the effect of declining confidence might translate into inflationary expectations where prices would be raised through fear that a currency would be less valuable.

9. ELIMINATE THE POSSIBILITY OF CURRENCY EXCHANGE RATE MANIPULATION AND INTERVENTION BY COUNTRIES

A significant source of tension among countries has been the concern that other countries manipulate the exchange rates of their currencies to their own advantage by buying and selling massive amounts of currency in the foreign exchange markets. Curiously, this concern always has seemed to mean that a country would intervene to devalue its currency rather than revalue; but this is something that economists will no longer need to study.

Despite its record-setting trade and budget deficits, the US government continues to point fingers at others for such currency manipulation. For example, following the G-7 Finance Minister meeting in London in December 2005, US Secretary of the Treasury John Snow stated, "even with the change of July

21, China's new exchange rate system has operated with too much rigidity. This rigidity constrains exchange rate flexibility in the region and thus poses risks to China's economy and the global economy. The G7 noted that further flexible implementation of China's currency system would improve the functioning and stability of the global economy and the international monetary system."⁵⁶ While Secretary Snow's press release indicated that representatives from China were at that meeting, it's questionable whether he will make a similar statement when China's legitimate status as a member of the G-7 is affirmed. With its GDP already larger than Italy's, which had held the No. 6 rank, China was expected to overtake France and Britain in 2005 and to assume the No. 4 spot behind the United States, Japan, and Germany.⁵⁷

Not all agree that China has been manipulating its currency by pegging it constantly for about ten years to the US dollar. Junning Cai argues that countries that intentionally do not prudently manage their current account balances are guilty of trade manipulation, which is just as serious as currency manipulation.⁵⁸

While acknowledging the responsibility of the United States for most of the world's financial imbalances, Mr. Snow's under secretary for international affairs, Tim Adams, continues to view the exchange rate as a major means to the end of eliminating those imbalances. He urged the IMF in 2006 to strengthen its surveillance of exchange rates to ensure that the "right" exchange rate equilibrium is reached.⁵⁹

However, such a "right" exchange rate, like "manipulation," can only exist in the eyes of the beholder, since there will never be an acceptable objective validation of exchange rates in the multicurrency foreign exchange world. Even if the United States were more successful in jawboning China to increase the exchange rate of the yuan to the US dollar, it's not clear that

such a strategy will be in China's or the US's interest. Ronald McKinnon writes that the overvaluation of the yen in the 1990s, resulting from US pressure, contributed to the destabilization of the Japanese financial system and subsequent economic problems though the 2000s.⁶⁰

The largest known example of recent central bank intervention was by the central bank of Japan in the years 2003-04 when it sold trillions of yen, and purchased billions of US dollars in order to keep the value of the yen down against the dollar. On thirty-four trading days in the first six months of 2003, the Bank of Japan sold about 9 trillion yen and purchased about \$75 billion, but the yen still rose in value.⁶¹

10. ELIMINATE THE FLUCTUATIONS OF CURRENCY VALUES

It is a truism that stability is a cornerstone of a sound, worldwide financial system. While the necessary partner to investment is risk, it is safe to say that investors seek to minimize risk. Currency fluctuations are risky. No one wants to work hard for a year and hope for a return on an investment of work or money and find that currency fluctuation eliminated the return, or, worse, created a loss.

With a Single Global Currency, there shall be no currency fluctuations, without regard to the fundamentals of that currency, i.e., what it could actually purchase. Such fluctuations in values make uncertain the decisions of billions of people who trade their goods and services every day. There will be no fluctuations. Period.

11. ELIMINATE CURRENCY SPECULATION

The value of money should not be subject to the needs and greed of speculators. There are no speculators in the future length of a meter or the weight of a gram and there need be none for currencies. However, the way to eliminate speculation

is not to ban it, but to eliminate the basis for its existence.

To eliminate illicit gambling, many governments have established legal opportunities for wagering, such as lotteries and bingo, and most people who choose to gamble can do so legally and safely. The Single Global Currency will present a different choice for speculators: if they wish to speculate, they will need to choose another commodity, as the peoples' money will no longer be for sale.

12. REDUCE WORLDWIDE INFLATION, THEREBY ENSURING LOW, REASONABLE AND STABLE INTEREST RATES

Thanks to better techniques of central banks' management of money, including the more widely used strategy of "inflation targeting," worldwide inflation has declined over the past several years.

With a Single Global Currency, and no need to modify interest rates in order to cope with an outflow of money due to an unfavorable exchange rate, interest rates are likely to be even more stable and lower within a Global Monetary Union.

The European Central Bank has made stable prices a major—and public—goal and has kept its interest rates low and stable. Whether such interest rate stability is an inherent aspect of a large monetary union or whether for other reasons, the euro's stability has been impressive. Compare that to the US Federal Reserve's fourteen recent interest rate hikes since June 2004.⁶²

13. INCREASE TRADE

In the previous chapter of this book, the positive effects of monetary union on trade were discussed. In a Global Monetary Union, the effect would be continued. As Robert Mundell has written, "The benefits from a world currency would be enormous. Prices all over the world would be denominated in the

same unit and would be kept equal in different parts of the world to the extent that the law of one price was allowed to work itself out. Apart from tariffs and controls, trade between countries would be as easy as it is between states of the United States. It would lead to an enormous increase in the gains from trade and real incomes of all countries including the United States."⁶³ The Single Global Currency would stimulate trade the most in those developing countries where inflation and currency risk have been high. As with other aspects of the 3-G world, the subject of worldwide trade growth has seen little research. In an article about the effect of the EMU on Swedish trade, Andrew Rose did note that international trade would increase by 10 percent with a Global Monetary Union, but that estimate is surely understated.⁶⁴

14. ACTUALIZE A FUNDAMENTAL HUMAN RIGHT TO A STABLE CURRENCY

The world has made considerable progress in identifying fundamental human rights, such as the right to own property. Article 17, of the Universal Declaration of Human Rights, adopted in 1948, states:

1. Everyone has the right to own property alone as well as in association with others.
2. No one shall be arbitrarily deprived of his property.⁶⁵

This right to property should be interpreted to include a fundamental human right to a stable currency, where people have the ability to earn, save, invest, and spend stable money. With respect to money, the right to be free from arbitrary deprivation of property includes the right to be free from state-induced inflation and devaluations, and from fluctuations in the multicurrency foreign exchange system that the world

has deliberately left in place.

Former German Prime Minister Ludwig Erhard declared that monetary stability was a basic human right.⁶⁶

This human right would not require government expenditures to protect, but it would require government and central bank practices which keep inflation to a low level, such as 2 percent. Allowing inflation to rise above 4 percent could be said to violate the human right to a stable currency, as it deprives many people of their property without just compensation.

Of course, declaring a human right is not the same as enforcing it, but it's a start. Zimbabwe is the latest example of a mismanaged monetary system, leading to hyperinflation, through no fault of its 12.7 million citizens who struggle with low per capita incomes. *The New York Times* reported that in February 2006, a new 50,000 ZWD (Zimbabwean dollar) note was worth about one-half a US dollar, compared to its value of about \$900 if it had been issued in 2000.⁶⁷ The International Monetary Fund has imposed sanctions on Zimbabwe.⁶⁸ Fixing such a major destruction of people's savings on the scale of Germany in the 1920s and later in Argentina and Russia is not an easy task, and it's a good example of how a troy ounce of prevention may be worth a pound of cure. In a 3-G world, such destruction of property would not occur.

Establishing a Single Global Currency, with a Global Central Bank with a representative governing structure, is the only way to ensure the people's fundamental human right to a stable currency.

15. MAKE THE INTERNATIONAL FINANCIAL SYSTEM MORE FAIR AMONG NATIONS AND PEOPLE

Since Bretton Woods, the US dollar has been designated, formally and in practice, as the primary international reserve currency. This status survived the 1971 collapse of the gold-reserve

basis for the dollar. Such a status may have its costs, such as the international pressure on what might be said to be internal monetary policy, but its major benefit to the United States is that it gets, in the words of Basil Moore “a perpetual free lunch.”⁶⁹ Moore continues, “The US has been the sole country that was not seriously forced to compromise its internal balance considerations for the sake of maintaining external balance. It alone has been able to lower its domestic short term rate towards zero in response to increases in unemployment rates with no concern for the ensuing current account deficit. It has felt sufficiently confident in the position of the US dollar as a ‘safe haven’ as to actively encourage a fall in the external value of the dollar, in order to reduce its current account deficit. In contrast, most countries must attempt to stabilize their dollar exchange rate, by holding their domestic bank rate significantly above the level of the US federal funds rate.”⁷⁰

The issuer of the world’s primary reserve currency benefits from the seigniorage, i.e., the value of the issued cash minus the costs of production, and such benefit should be shared with the world. The US Federal Reserve has received such a seigniorage benefit from all the cash which is now in circulation in the United States, and the hundreds of billions throughout the world.

Such a one nation/world reserve currency system is “simply not fair,” as any school child would recognize. As the euro, and perhaps other monetary union currencies, gain in stature and are counted among the international reserves of central banks, the world will become less tolerant of a single national currency which benefits from its exalted status, but whose sponsoring nation ignores its part of the bargain, which is to maintain monetary and fiscal stability. For the US dollar, it is the credibility of the US government which provides confidence and stability, while for the euro, it’s the credibility of the Euro-

pean Central Bank. Monetary stability is the primary mission of a monetary union's central bank, whereas such stability is only one of many goals of a national government.

By analogy, the United States took a lead role in developing the Internet, but as it has become a worldwide phenomenon, other countries are no longer content that it be managed entirely by the United States. The US is not the world's electronic overseer, and the world is taking notice.⁷¹ Soon, the governance of the Internet will become more globally representative, as it must. It's common cents/sense.

Similarly, the responsibility for money must become more representative. With a Single Global Currency, the seigniorage would accrue to the Global Central Bank and would likely be used to fund its operations. If there is an excess seigniorage benefit, it could go to fund global social and economic programs to be determined by the bank's representative governing council. The European Commission study *One Market, One Currency* estimated that the one-time gains to the European Community from having its currency circulated in the world as one of the major international currencies, "would develop, gradually accumulating perhaps to around \$35 billion."⁷²

In addition to eliminating the need for a single pre-eminent country to be the issuer of the international reserve currency, a Single Global Currency will also be more fair among the second- and third-tier countries. This was one of the three criteria by which the European Commission measured the value of the euro, "Equity as between countries and regions: opportunities and risks for all regions, and not a priority balance of relative advantage for the original or newer Member States. The least-favoured regions have a real opportunity for rapid catch-up."⁷³ The other criteria were microeconomic efficiency and macroeconomic stability.

The problem of fairness extends to individual people as

well. Recently, a friend described to me how he had purchased a home in France when the euro was \$.87 and a few years later, and for non-speculative reasons, he chose to sell it for the same number of euros, but when a euro was worth \$1.26, an increase of 44.8 percent. Assuming that his home cost him €300,000, his cost in US dollars would have been \$261,000 and when returning to the United States with the proceeds of his sale, he would have converted that into \$378,000, a windfall gain of \$117,000. Such an undeserved gain is unfair, although my friend is blameless for his good fortune. It must be remembered that for every such person for whom the timing was exquisitely lucky, there is another person for whom the timing is exquisitely poor and who lost the same amounts. Just because such windfalls and losses have been occurring daily for 2,500 years doesn't make them fair or right.

There are macro-ethics concerns to consider regarding the Single Global Currency, as well as micro-ethics. Peter Singer, in his book, *One World*, urges that all decisions be viewed with one reality in mind: "the idea that we all live in one world."⁷⁴ It is unethical and even unconscionable to continue to tolerate the multicurrency foreign exchange system, while knowing its costs and risks, and the potential benefit to treating the world of money as "one world." Such a one-world view is made more realistic by human space travel, accelerated by President John Kennedy's ambitious goal to put a man on the moon in the 1960s, whereby the earth is put into real perspective.

16. THE WORLD'S PRIVATE, BUSINESS AND PUBLIC ECONOMIC DATA WOULD BE MORE ACCURATE

All business and trade transactions depend upon the accuracy of information. In the multicurrency foreign exchange world, every analysis of an international economic problem, and every annual report of an international corporation must adjust for

exchange rate variations. Soon after printing, every adjustment became outdated and uncertain.

The International Accounting Standards Board, based in London, “is committed to developing a single set of high quality, understandable and enforceable global accounting standards....”⁷⁵ However, in a world where the values of money fluctuate from minute to minute and day to day, the accounting goals of precision and stability are frustrated. With a Single Global Currency, a reliable global accounting standard can be developed. A recent paper by Ratnam Alagiah, “A Single Global Currency and its Impact on Accounting” presents the view that “*Only* on this basis will comparable financial reports be attained.”⁷⁶

With every analysis of the inequality among the people of the world, there is an inherent fuzziness when exchange rates are factored into the numbers. One can write, as Branko Milanovic and Peter Singer do, that the world contains unacceptable inequality,⁷⁷ but when poverty in China is measured in yuan and poverty in Tanzania is measured in Tanzanian shillings, there is an element of disbelief, after foreign exchange conversion, that the poverty could be so extreme. There are many ways that one can present the gross inequalities. Here are two:

- The richest 50 individuals in the world have a combined income greater than that of the poorest 416 million; and
- The 2.5 billion people living on less than \$2 a day—40 percent of the world’s population—receive only 5 percent of global income, while 54 percent of global income goes to the richest 10 percent of the world’s population.⁷⁸

Those numbers are staggering, but within a multicurrency foreign exchange world, we always have the emotional escape

that it cannot be that grossly bad; so, we reason or feel, the exchange rates must explain some of the discrepancy.

With a Single Global Currency, such a psychological escape would no longer be possible. Would it really matter? That's hard to say. In the United States, it did make a difference in 1962 when Michael Harrington published *The Other America* and showed Americans that there was inexcusable poverty within their own country. Whether the world would respond sufficiently to a similar exposure of the true facts of the world's inequalities is unknown.

Not only would the world's financial data be more accurate, but there would be enormous savings from the reduction of data to be reported. In a world of exploding amounts of information, this is one area where there will be a reduction. Saved will be the vast amount of reporting to governments of foreign exchange trading which then is used in reports of national current accounts, international reserves, and of foreign exchange trading itself. For a sampling of such reports see the US Treasury's "Treasury International Capital System."⁷⁹

17. ELIMINATE THE ILLOGICAL RESULTS OF THE EXISTING SYSTEM
Why should the value of money change when the fortunes of a government change, or even the fortunes of an economy? Here are excerpts from a typical news report about foreign exchange from Reuters news service:

Aussie Slides as Commodities Fall, USD Rises

Friday, April 15, 2005 The Australian dollar languished below 77 US cents on Friday, hurt by weak commodity prices and significant selling by institutional investors against the U.S. dollar...

Billionaire investor Warren Buffett wagered \$21.4 billion against the US dollar last year. Since early Wednesday,

traders in New York have said rumours that Buffett may be reducing his short-dollar position have boosted the dollar....

Commodity prices also undermined the Aussie with the Reuters CRB index .CRB falling 0.48 percent to 299.38, breaching the 300 points threshold for the first time since late February....

Base metals were notable losers, with New York copper futures just off two-month lows at Thursday's close and gold at two-month lows in Asian trading....

The Aussie's slide began in the wake of a confidence survey on Wednesday which showed evidence of weakening economic circumstances. Such evidence could persuade the Reserve Bank of Australia to leave rates on hold for a second consecutive month at their May meeting....⁸⁰

(Note that the referenced "slide" was to \$.77 for an Australian dollar, from the high for the year on 8 March of \$.80.)⁸¹

Why should the unit of account change when other factors change? Is it logical that an Australian worker should be paid tomorrow in a currency that is worth less than yesterday on the international markets because commodity prices dropped? It is not, and it does not make cents/sense.

Is it logical that the value of the US dollar should increase because of rumors about Warren Buffett's currency strategy? It is not, and it does not make cents/sense.

Another illustration of the illogical multicurrency foreign exchange system is that the importance of a national currency in the world system has little to do with the country's importance or the size of its economy. For example, with .5 percent of the world's GDP and .12 percent of the population, Switzerland's franc is usually among the five most traded currencies in the foreign exchange markets. The Swiss franc is more impor-

tant to world trade and finances than the currencies of such countries as Brazil, China, Korea, Russia, or South Africa. Such a disproportional use of a small country's currency can be called one of the imbalances in the current multicurrency foreign exchange system.

Consistent with the themes of this book, such a result indicates that the value of money is not necessarily related to the size or economic power of the issuing country. It should not be related to either. Instead, the value of money is more logically related to the soundness of the management of the money and that's what the Global Central Bank will do well for the Single Global Currency.

During December 2005, the value of the Brazilian real dropped by 6.06 percent compared to the US dollar, but in January and February 2006, it increased by 5.19 and 4.58 percent, for a total swing of 15.83 percent.⁸² With the seventeenth largest economy in the world, nearing \$2 trillion, there is no logical explanation for an 15.83 percent two-month fluctuation in the value of the Brazilian currency.

Similarly, the US dollar declined 2.6 percent against the euro during the first week of 2006.⁸³ That's an annual rate of decline of 135.2 percent for the world's largest currency, as compared to the second largest, which doesn't seem logical, either.

Finally, the foreign exchange market sometimes functions like the tail wagging the dog. Let's assume that the total value of US financial assets was \$50 trillion⁸⁴ on 1 September 2005. On that day, the Bank of Canada rate for the dollar to the euro was €0.80, so, in theory, the Europeans could have purchased all the financial assets in the United States for €40 trillion on that day. Two months later the exchange rate was €0.84, which means that the euro was 5 percent less valuable, compared, at least, to the US dollar. Thus, on 1 November 2005, Europeans seeking to purchase the entire United States would have to pay 5 percent

more euros, or €42.0 trillion/\$42.5 trillion. In two months, the value of the United States financial assets could have increased by €2.0 trillion or \$2.5 trillion?

Over the same period, the value of the dollar rose from \$1.25 for a euro to \$1.19, an increase of 4.8 percent. If the total value of the financial assets in the European Union was also €40 trillion/\$50 trillion on 1 September 2005, then its value would have dropped to €38.1 trillion/\$47.6 trillion by 1 November.

These enormous shifts in wealth could have occurred because traders of dollars and euros on the foreign exchange markets had moved the price of euros down by 5 percent according to the law of supply and demand. It defies common cents/sense. The same valuation reasoning can be applied to any United States or European asset over the same period, thus making a very real difference in the investment calculations of people in both countries.

Aligning currencies with national borders is illogical because the world's economic stage has many players which are larger than most countries. Lester Thurow noted that in 2002, twenty-nine of the hundred largest economies of the world were companies, and that Exxon, for example, had revenue that was about the same as the GDP of the forty-fifth largest country, Pakistan.⁸⁵

Further, there are many individuals with a personal wealth larger than that of several countries. For example, according to the *Forbes* magazine rankings of the world's richest people, the third ranked person is Carlos Slim Helu of Mexico with a personal worth of \$30 billion. Calculating the wealth of countries as a 3.5 multiple of GDP, that \$30 billion is larger than the total asset value of the bottom 10 countries of a 165-country list.⁸⁶ Those ten countries have a total population of 22 million.⁸⁷

18. THE SINGLE GLOBAL CURRENCY HAS THE PROSPECT OF BEING A PERMANENT SOLUTION

Previous solutions to the multicurrency foreign exchange trading system have been short term solutions. For all the nostalgic respect for the Bretton Woods currency solution, it lasted only twenty-six years, from 1945 to 1971. Bretton Woods still deserves considerable deference, however, because it's where the World Bank and International Monetary Fund were established.

Monetary unions can have staying power, especially when they are combined with a measure of political union. The best example is the European Monetary Union, whose relatively young age is balanced by its prospects for significant growth over the next several years, and beyond.

The Central and West African Monetary unions have continued since 1994, and were preceded by currency boards inherited from the French African Empire. The Singapore-Brunei monetary union has continued since 1967. The Eastern Caribbean Currency Authority was formed in 1965.

19. THE VALUE OF MONEY SHOULD BE AN INTERNATIONAL STANDARD AND NOT DETERMINED BY THE SUPPLY AND DEMAND OF THE MARKETPLACE

Increasingly, the world is standardizing its measurements and identifications to assist international trade and reporting. The world uses the same calendar, the same measure of a day, week, and month and the same computer protocols. Most of the world uses the metric system, and nearly all international trade uses it. Even US citizens take their medicines in grams and their soft drinks in liter bottles. Why should money be different? Perhaps the value of currency should become part of the work of the International Standards Organization (ISO) and related organizations. The 2005 World Trade Report "identifies ISO and its

partners, the IEC (International Electrotechnical Commission) and the ITU (International Telecommunication Union), as 'the most important' of the 49 international standardizing bodies, and comments, 'The expansion of membership in both ISO and IEC over recent decades reflects the growing importance of international standards.'"⁸⁸

Another vehicle for standardizing the values of money is the Statistics Division of the United Nations Department of Economic and Social Affairs which maintains the international standards for reporting gross economic statistics. First developed in 1953, the System of National Accounts (SNA) "consists of a coherent, consistent, and integrated set of macroeconomic accounts, balance sheets, and tables based on a set of internationally agreed concepts, definitions, classifications, and accounting rules. It provides a comprehensive accounting framework within which economic data can be compiled and presented in a format that is designed for purposes of economic analysis, decision-making and policy-making."⁸⁹ It's time for the standardization of financial reporting around the world, now fifty years old, to be supplemented by standard values of money.

Looking at standards from another viewpoint, and the view by some economists that countries should retain the ability to devalue/revalue their currencies, what sense would it make to reduce the length of a meter in order to boost the annual statistics on sales of meters of rope? Why not reduce the weight of a kilogram to increase the statistics on steel production? The ideas are absurd, as is the idea that money should be devalued in order to increase exports. Ingemar Bengtsson has written, "Just like it is inconvenient that some countries have not fully adopted the meter system, it is inconvenient that we do not have a single measure for value."⁹⁰

Money should have a predictable standard value around the

world. That doesn't mean that prices will be the same everywhere, just as they are not uniform within large currency areas. Nonetheless, there will be some stability of knowing what the Single Global Currency will buy around the world, and thus, there will still be a place for a Big Mac Index, but it will compare actual prices and not prices filtered through the fog of the multicurrency foreign exchange system.

Remembering the three-part definition of money as a medium of exchange, a unit of account and a store of value, the marketplace is not the place to ensure adherence to the definition. The price that a Brazilian pays to purchase Vietnamese shoes should not depend upon foreign exchange brokers in Sydney, Singapore, London, or New York.

20. THE IDEA OF THE SINGLE GLOBAL CURRENCY HAS AN ELEGANT AND UNDERSTANDABLE SIMPLICITY TO IT

There is one earth, and one human race. As Paul Volcker has written, "A global economy requires a global currency."⁹¹ Similarly, "One market requires one money."⁹²

Foreign exchange trading began 2,500 years ago as metal coins became standardized in the Indian, Turkish, and Chinese currency areas. Now most money changes hands electronically through wires, cables, laser beams, and electronic waves in the air. "To put it in succinct and current terms, money's destiny is to become digital."⁹³ As money is becoming increasingly digital, then it makes little cents/sense for the electrons to continue to be scrambled as they cross the boundaries of currency areas.

There is no magic to money, and there should be less mystery than there is now with the multicurrency foreign exchange system. Money is made by human beings and used by all of them and should, therefore, be understood by everyone.

BENEFITS AND COSTS OF THE SINGLE GLOBAL CURRENCY—COSTS

If there were no perceived costs to the implementation of a Single Global Currency, it could have occurred long ago. Below are described these perceived costs.

1. SOVEREIGNTY THEORY OF MONEY

Before the rise of nation states and before the time when coins and bills featured national themes and the images of national heroes, the users of money felt no loyalty to money, except the desire that it not lose value. When nation states began issuing of money, the bills and coins became symbols of their history and power. Some people are tempted to view such symbols as they do their flags and national constitutional documents, and the loss of such symbols can be considered a national loss. However, money is different from flags.

Given the extent and growth of monetary unions, it is now apparent that people care more about the value and stability of their money than they do about whose image is stamped and printed on their coins and bills. Stated Jose Cordeiro of Venezuela, "In Africa, Latin America, and parts of Asia—which is to say, most of the world—people would love to give up their national currency and replace it with the dollar, or the euro, or the yen, because they don't trust their own national currency."⁹⁴

Is it always a cost when a country abandons the ability to act or pursue a goal? Was it a cost when most of the UN members abandoned the use of anti-personnel land mines?⁹⁵ Was it a cost when most of the UN members abandoned the ability to develop nuclear weapons?⁹⁶ In each case, the signing countries perceived that abandonment was less costly than pursuit of a heretofore sovereign right.

Still, the feelings for nationalism remain very strong in the world, and they are hard to overcome.

2. NEED FOR INDEPENDENT MONETARY AUTHORITY TO DEAL WITH LOCAL ECONOMIC NEEDS WHICH MAY REQUIRE ADJUSTMENTS OF INTEREST RATES OR MONEY SUPPLY OR EXCHANGE RATES

As previously discussed, a major concern of many international economists is their view that nations need the flexibility to be able to adjust interest rates to heat up or cool down an economy and to influence exchange rates to achieve the same goals. It is very difficult to evaluate the true value of the cost of losing that ability, if it is a cost at all. One recent study, "And If One Size Fits All, After All?" concluded "that the ECB did a far better stabilization job for Eurozone countries than national central banks would have done."⁹⁷

As Robert Mundell has stated, "another dimension of the benefits from a world currency would be a great improvement in the internal monetary policies of perhaps two-thirds of the countries of the world. The benefits to each country from a stable currency that is also a universal currency would be enormous."⁹⁸

Without the ability to tailor monetary policy to the separate needs of nations, then other politically acceptable means of ameliorating regional economic differences can be developed. Germany has the strongest system of regional "Revenue Equalization," according to a formula based on tax revenues.⁹⁹ Worldwide, but on a smaller per capita scale, there are foreign aid programs.

In a world where inflation and interest rates are low, the loss of the ability to lower interest rates in order to stimulate investment is not as powerful tool as in high-interest rate economies.

3. EMPLOYMENT FOR THOSE MAINTAINING THE CURRENT MULTICURRENCY FOREIGN EXCHANGE SYSTEM

There are approximately 200,000 full-time foreign exchange

traders in the world, and they are all very bright people. With the movement to a Single Global Currency, they will either move to trade other commodities or stocks and bonds or retire or move into some other kind of work.

In 2005, the number of people working in Europe's central banks fell below 50,000 for the first time, to 49,558 people, which was an 11.5 percent reduction from the 56,000 level in 2000. In Germany, Spain, Belgium, and Finland, the reductions exceeded 18 percent. Such reductions make sense, in view of the adoption of the euro and the elimination of the foreign exchange responsibilities for the twelve member central banks. However, the Eurozone still has 16.1 central bankers per 100,000 inhabitants, compared to 6.8 in the United States and 3.1 in the United Kingdom.¹⁰⁰

THE SINGLE GLOBAL CURRENCY IN CULTURE: RELIGION, LITERATURE, MOVIES, AND MUSEUMS

Money or currency is part of the larger culture which interprets its other meanings and utility. While money, wealth, and poverty are the subjects of countless songs, books, and movies, the subject of the governance of money is less prevalent. As the number of countries within monetary unions increases, perhaps we will see more such references.

Religion: The concept of a Single Global Currency has aroused the suspicion of some Christian groups who associate it with the end of the world as prophesied in the *Bible*.¹⁰¹

On the other hand, the Baha'i religion embraces the concept of a Single Global Currency as an indication of strengthening world human values. In one article, "One World, One Currency," it was stated, "A global currency would also be an important step in promoting economic justice in the world, removing the advantage of a few favored countries whose cur-

rency is seen as stronger or more secure, and preventing the poor from being hurt by the impacts of currency fluctuations.... Ultimately, technical solutions to economic problems will only work effectively if a new spirit permeates economic life and a new economic system is evolved based on the application of spiritual principles."¹⁰²

Literature: One of the most popular current science fiction series in the United States is the *Left Behind* saga. The Single Global Currency plays a role in this long-running, eleven-volume science fiction saga by Tim LeHaye and Jerry Jenkins. A recent review of the latest book in the series, *Armageddon*, stated "Meanwhile, the rising Antichrist is Nicolae Carpathia, a handsome, urbane and lethally devious Romanian national who started his ascent to power as Secretary General of the United Nations (a longstanding object of fundamentalist wrath). Before long, Carpathia establishes himself as a global dictator and foists onto a gullible population a totalitarian, one-world government, a Single Global Currency and a syncretic universal religion that combines Catholic-style pomp with New Age rhetoric."¹⁰³

In Curtis Sittenfeld's *Prep*, protagonist Lee Fiora muses about life after her prep school years at Ault School, "I've never since Ault been in a place where everyone wants the same things; minus a universal currency, it's not always clear to me what I myself want."¹⁰⁴

Movies: Called a "religious thriller," the 1999 film, *The Omega Code* was surprisingly popular. In a review, Steve Rhodes wrote, "Described as a Buddha-like figure, Chairman Stone Alexander (Michael York) presents himself as a world savior. Responsible for world peace and for skyrocketing stock markets due to his revolutionary idea of a Single Global Currency, Chairman

Alexander will, nevertheless, prove to have some serious character flaws. As a clue to his true identity perhaps I should mention that strange bombings, food shortages, and epidemics have recently been striking the planet...."¹⁰⁵

Museums: There are a number of money museums in the world, which feature exhibits of the coins and bills of the past.¹⁰⁶ Someday, there will be a section for exchange rates, because visitors will have long since forgotten what they were.

SUMMARY

The entire world, with 6.5 billion people is *the* Optimum Currency Area, but not only as measured by the pioneering criteria of Robert Mundell's articles. The world is the optimum currency area for ALL the reasons listed above which can be summarized as follows: A stable Single Global Currency will benefit the people of the world—period. It will give them what they have wanted since the beginnings of the use of money—monetary stability. One is optimal, and one size does fit all.

However, it cannot be expected that the Single Global Currency will solve all the world's financial problems, as disappointment would be certain. Where there is discontent with the euro, it may be that excessive expectations were more responsible than its actual performance. This brings to mind the social equation: $H = E - R$, or Happiness Equals Expectations Minus Reality.¹⁰⁷

Banding together to solve the exchange rate problem is not the same as having countries join together to solve some other kind of problem, such as world hunger or global warming. With all its wealth, or former wealth, the US has not successfully eradicated hunger even within its borders. It was not the national boundaries which caused the hunger, nor the climate change, but agricultural, industrial, and governmental practices

within and among countries. In the case of the multicurrency foreign exchange rate problem, the borders ARE the problem. If a Single Global Currency can be developed which can cross all borders and be legal tender within each, then the problem is solved.

John Stuart Mill and Robert Mundell both noted above that money should be convenient, and it can be added that people will pay for convenience, as they do in other contexts such as express shipping. However, we are all now paying for INconvenience. The world pays at least \$400 billion annually to maintain a system that makes international trade and travel INconvenient. It's argued above that the benefits of a 3-G world would greatly outweigh the costs, but even if a 3-G world brought a net cost, it's likely that the people of the world would still be willing to implement it, due to the obvious convenience.

Implementing the Single Global Currency shows common cents/sense, but most international economists do not yet agree that the 3-Gs will be useful to the world, and even if useful, that they will be feasible to implement within a reasonable time. Chapter 6 presents some of those views.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

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79. United States Treasury, "Treasury International Capital System," at <http://www.treas.gov/tic/forms.html>

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82. "International Market Summary," *Currency Trader* magazine, Chicago, IL: January 2006, p. 40 and February 2006, p. 44, and March 2006, p. 36.

83. Joshua Krongold and Michael McDonald, "Dollar Has Biggest Weekly

Decline in 3 Years Versus the Euro,” Bloomberg.com, 7 January 2006, at http://www.bloomberg.com/apps/news?pid=10000087&sid=ae7moluhCCbo&refer=top_world_news#

84.. Estimating the national wealth of the United States is a task subject to much definition. The \$50 trillion estimate is used in the example because it’s a round number, and because that was the estimate given by Warren Buffett in his 26 October 2003 *Fortune* magazine article, “Why I’m Not Buying the US Dollar” at http://www.pbs.org/wsw/news/fortunearticle20031026_03.html. Another estimate of \$45 trillion comes from William B. Bonvillian’s fall 2004 article in *Issues in Science and Technology Online*, “Meeting the New Challenge to US Economic Competitiveness,” at <http://www.issues.org/issues/21.1/bonvillian.html>. See also “Global Financial Stability Report,” International Monetary Fund, Table 3 in Statistical Appendix, at p. 171, at <http://www.imf.org/External/Pubs/FT/GFSR/2005/02/pdf/statappx.pdf>

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86. J.W. Elphinstone, “Update 1: Number of Billionaires Up to Record 793,” *Forbes.com*, 9 March 2006, at <http://www.forbes.com/business/feeds/ap/2006/03/09/ap2584652.html>, and “Rank Order—GDP by Official Exchange Rate: The World Factbook,” United States Central Intelligence Agency, at <http://www.cia.gov/cia/publications/factbook/rankorder/2195rank.html>. The ten countries in descending order of GDP size are: Eritrea, Sierra Leone, Cape Verde, Belize, Guyana, Burundi, Seychelles, The Gambia, Comoros, and Guinea-Bissau.

87. “Rank Order—Population: The World Factbook,” United States Central Intelligence Agency, at <http://www.cia.gov/cia/publications/factbook/rankorder/2119rank.html>. See the list of ten countries above.

88. International Organization for Standards (ISO), “World Trade Report 2005 Highlights ISOs Key Role,” at <http://www.iso.org/iso/en/commcentre/pressreleases/2005/Ref965.html>

89. “Introduction: The SNA as a System,” United Nations Statistics Division, United Nations, at <http://unstats.un.org/unsd/sna1993/tocLev8.asp?L1=1&L2=1>

90. Ingemar Bengtsson in email to author, 27 June 2005.

91. A call to the office of Mr. Volcker in 2004 confirmed that he stands behind this statement, even if the exact quote does not have a definite initial attribution of publication. The statement, “A global economy requires a global currency” is similar to his statement in 2004 that “in a globalized world, we should have an international currency,” as reported in “Calling for a Global Currency” by Joan Veon at http://worldnetdaily.com/news/article.asp?ARTICLE_ID=45085 on 1 July 2005. Similarly, on 31 January 2000, Volcker wrote the column, “Toward a Single World Cur-

rency to Level the Playing Field” in the *International Herald Tribune* where he stated, “...if we are to have a truly globalized economy, a single world currency makes sense,” at <http://www.iht.com/articles/2000/01/31/edpaul.2.t.0.php>

92. Willem Buitter, Richard Layard, Christopher Huhne, Will Hutton, Peter Kenen, and Adair Turner, with a foreword by Paul Volcker, “Why Britain Should Join the Euro,” 1 August 2002, p. 8, at <http://cep.lse.ac.uk/layard/RL334D.pdf>

93. “Executive Summary,” *The Future of Money*. Paris: Organization for Economic Co-Operation and Development, 2002, p. 7.

94. Marco Visscher, “Everyone Should Pay in Mondos,” *ODE Magazine*, Netherlands, November 2005, an interview with Jose Cordeiro, an economist in Venezuela, at <http://www.odemagazine.com/article.php?aID=4214>.

95. See International Campaign to Ban Landmines, with headquarters in Belgium, at <http://www.icbl.org/>. The full name of the 1997 treaty is the “Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction.”

96. See “Treaty on the Non-Proliferation of Nuclear Weapons,” at <http://www.un.org/Depts/dda/WMD/treaty/>. As of 2002, 187 countries had signed that treaty.

97. Jerome Hericourt, “And If One Size Fits All, After All?—A Counterfactual Examination of the ECB—Monetary Policy under Duisenberg Presidency,” November 2005 version, at <http://ideas.repec.org/p/mse/wpsorb/bla04004a.html>. The title functions as a response to a previous paper by Otmar Issing, “The Single Monetary Policy of the European Central Bank: One Size Fits All,” *International Finance*, March 2001, at <http://ideas.repec.org/a/bla/intfin/v4y2001i3p441-62.html> and referenced by Issing in his May, 2004 lecture, “The ECB and the Euro - the First Five Years” at the City University Business School, London, at http://www.ecb.int/press/key/date/2004/html/sp040512_1.en.html

98. Robert A. Mundell, “The Works of Robert A. Mundell—World Currency” at his website, op. cit.

99. See 1999 changes to 1999 Revenue Equalization Implementation Act, at <http://www.sachsen-anhalt.de/LPSA/index.php?id=pgoqpyuibgr0>

100. “Newsmakers-Central Bankers in the News,” a newsletter from Central Banking Publications, www.centralbanking.com. 10 January 2006. The referenced data came from the 2006 edition of the *Morgan Stanley Central Bank Directory*, which is compiled by Central Banking Publications.

101. The Book of Revelation in the Bible is cited thusly, “Setting The Stage for the Prophesied Global Currency and Economy—In Revelation 13:16-17, we see that the economy of the world must have become global, with unprecedented dictatorial control, and that the money must have become

cashless. Listen to the prophecy. 'And he causeth all, both small and great, rich and poor, free and bond, to receive a mark in their right hand, or in their foreheads: And that no man might buy or sell, save he that had the mark, or the name of the beast, or the number of his name,' " and "Bible scholars have long maintained that the only way in which verses 16-17 could be fulfilled was for three distinct events to have occurred...

1. The individual economies of the world had to have become global by this point in world history,...

2. The currency in this new global system had to have become global as well...

3. The currency had to have become cashless by this point in history...." Cutting Edge Ministries, Lexington, South Carolina, at <http://www.cuttingedge.org/news/n1169.cfm>

102. "Perspective: One World, One Currency," *One Country*, the Online Newsletter of the Baha'i Community, Volume 10, Issue 4, January-March 1999, at <http://www.onecountry.org/e104/e10402as.htm>

103. Melani McAlister, "An Empire of Their Own," in *The Nation*, 22 September 2003, at <http://www.thenation.com/doc/20030922/mcalister>. See also Craig Unger, "American Rapture," December, 2005, *Vanity Fair*, about the United States evangelical movement and politics in the United States, at <http://www.vanityfair.com/commentary/content/printables/051128roco02?print=true/>

104. Curtis Sittenfeld, *Prep*. New York, NY: Random House, 2005, p. 400.

105. Steve Rhodes, review of "The Omega Code," 1999, at <http://67.19.164.40/o/theomegacode/reviews/car.html>

106. See the money museum in Zurich, Switzerland, at http://www.moneymuseum.com/index_english.html and the American Numismatic Association Money Museum, Colorado Springs, Colorado, United States, at <http://www.money.org>

107. As my friends and relatives know, and sometimes to their consternation, I've been using this expression, $H = E - R$ for about twenty years. I do not know its origin, and was surprised to see that there were only three Google "results" for the expression.

ECONOMISTS VIEW THE SINGLE GLOBAL CURRENCY

THERE ARE THOUSANDS OF ECONOMISTS in the world who specialize in “international economics,” but few of them have explored the Single Global Currency. Some books which purport to explore the future for the world economy say nothing about the Single Global Currency.¹ There are some economists who support the idea, and their work has been represented earlier in this book. Others are skeptical of its utility and even more are doubtful of its political feasibility, and their views are presented in this chapter.

SCHOOLS OF ECONOMIC THOUGHT

Among economists, ideas ripple through the discipline and some center around a university or major economist and become known as a “school” or group. There is the “Chicago school” which became known in the late twentieth century for its free market beliefs, and there are the “Keynesians” and “post-Keynesians,” who continue to research and promote the work of John Maynard Keynes.

There is yet no “school” of economists who are promoting or even researching the Single Global Currency. There is not yet an identifiable school nor center even for the more general concept of monetary unions. As John Edmunds of Babson College, Massachusetts, has pointed out, it takes time for economists’

views and focus to change, like the proverbial supertanker changing course. There is no academic journal specifically devoted to monetary unions, although the Single Global Currency Association is initiating a *Single Global Currency Journal*.²

So many books and articles have been written, and so many Ph.D.s have trained to master the uncertainties of foreign exchange, that moving forward to analyze and support a world financial system completely without exchange rates is understandably difficult. It requires thinking outside the box or what Charles Kindleberger referred to as “artistic” thinking.

Many economists seem glued to the analysis of what IS and what WAS rather than what WILL BE. Of the 106 doctoral dissertations granted by US universities between July 2004 and June 2005 in the category of *International Economics*, 20 had titles which were explicitly about exchange rates, and several others were about currency crises, currency boards, and other subjects related to the multicurrency foreign exchange world. None was explicitly, by their titles, about monetary unions nor any aspect of the 3-G world.³ At the January 2006, annual meeting of the American Economic Association there were no presentations about the Single Global Currency. Of those relating to currency, most were about exchange rates, and the yuan; and a few about monetary unions and the euro.⁴

Even for experts on monetary unions, most still do not explore the connection between monetary unions and the prospect of a Global Monetary Union. In 1999, Hazel Yuen tantalizingly began her article on East Asian monetary union with, “Picture the world with a single currency,” but the rest of the article focused on East Asia.⁵ In 2005, MIT Press published the book, *Prospects for Monetary Unions after the Euro*,⁶ edited by Paul De Grauwe and Jacques Melitz, and one would have expected some exploration of the obvious next step after the euro, or the step after that. They only wrote, “One outstanding result of

monetary union in Europe is a fresh impetus to thinking about monetary unions in other parts of the world.”⁷ In DeGrauwe’s *Economics of Monetary Union*, also published in 2005, he wrote, “Where should the process of monetary integration stop? Should there be one currency for just twelve countries of the present EMU, or for the EU, or for the whole of Europe, or maybe for the whole world?”⁸ However, there was no further discussion in either book of the 3-Gs: a Global Monetary Union with a Single Global Currency and a Global Central Bank. In the Introduction to *Prospects*, the editors correctly noted, “The introduction of the euro is a milestone in the history of international monetary relations.”⁹ But a milestone on the journey to where?

They continued, “One of the more remarkable aspects of the process of monetary integration in Europe is that it started at the end of the 1980s at a time of widespread skepticism, if not hostility, about the project among economists.”¹⁰ It is the hope of *this* book that the widespread skepticism, if not opposition, by economists to the Single Global Currency will someday be regarded as similarly “remarkable”—and wrong.

UTILITY AND FEASIBILITY OF THE SINGLE GLOBAL CURRENCY

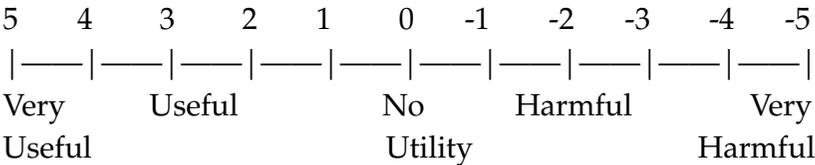
Since its formation, the Single Global Currency Association (SGCA) has been sending emails to economists who research and write about subjects related to the multicurrency foreign exchange world to ask them about their views of the utility and feasibility of the Single Global Currency. The results are on the SGCA website.¹¹ The distinction is echoed in Martin Wolf’s 3 August 2004, column, “We Need A Global Currency,” in the *Financial Times*, when he wrote “I am well aware of the economic and political objections to this idea,”¹² (a.k.a. utility and feasibility).

In some responses from the economists, it was not clear whether the support or non-support is about the utility or fea-

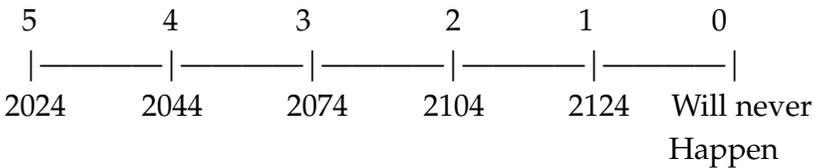
sibility or both, as with Andrew Rose’s response to an SGCA inquiry, “I’m afraid I’m not in favor of a Single Global Currency....”¹³ This response came despite his findings of the substantial increase in trade for countries joining a monetary union.

Attached to the SGCA emails, and appearing on the SGCA website, are the two scales below for Utility, with a range from -5 (“very harmful”) to +5 (“very useful”), and for Feasibility, with a range from 0 (“will never happen”) to 5 (“2024”—the SGCA goal).

UTILITY



FEASABILITY—Start Planning Now for the Single Global Currency in...



Of the 1,430 economists to whom such emails have been sent through 10 November 2005, 88 responded with a comment, most of which are positive. We have numerical ratings for only 28, and even a few of those are assumed, given their other responses. The low response rate can be attributed to many factors, including:

- The rush of working in a world with too many emails and too much information;
- The unwillingness to respond to questionnaires generally;

- The unfamiliarity with the source, i.e., the SGCA;
- The unwillingness to say something negative; and
- The unwillingness to make a commitment to evaluate the SGC.

For a discipline that has been able to quantify a substantial amount of human behavior, the reluctance to assign numerical ratings to the Single Global Currency seems ironic. As the waves of research and public interest encounter the super-tanker, 3-G, it is hoped that the thinking about the Single Global Currency will shift and more economists can be expected to respond in the future, and respond positively.

On the positive side, Matt Polasek of Flinders University in Australia wrote, "I do not think that any economist who has given the matter any thought would deny that on your Utility Scale of Rating the project merits a +4 or +5, for the simple reason that the benefits of a common currency area are in direct proportion to its size, and hence the optimum of any such system is an arrangement that comprises the whole world."¹⁴ His rating of the SGC was 4-5 ("very helpful") for Utility and 1-2 (between 2104 and 2124, i.e., at least one hundred years) for Feasibility.

Similarly, Basil Moore of South Africa forwarded a draft of several chapters in his upcoming book, where he wrote, "Most economists would agree that a world central bank and a world currency are the logical final future solution to the problems of the global trading system, and at some distant date will probably materialize."¹⁵

The discussion below is broken into those two categories: utility and feasibility. Sometimes the distinction is unclear, as some economists addressed both issues. Economists are most qualified to address the utility issue, as feasibility is a political question.

UTILITY OF THE SINGLE GLOBAL CURRENCY

By virtue of the title of his 2001 article, "On Why Not a Global Currency."¹⁶ and by virtue of his former position as chief economist at the IMF, Harvard Professor Kenneth Rogoff has posed the most visible academic challenge to the idea of a Single Global Currency.

As with Richard Cooper and Robert Mundell, Rogoff focused on what he called the "core currencies" of the major economic powers.

He begins by agreeing that it's likely that the number of currencies in the world will "decline sharply" over the next two decades and that exchange rates will fluctuate "almost as wildly as stock prices," although the effect of such gyrations to the overall economies is not clear. "Thus, the mere fact that exchange rates between the yen, the euro, and the dollar fluctuate wildly does not provide a *prima facie* case that we should permanently fix them." He continues that the increase in trade within the Eurozone since the euro may not indicate a causal relationship, as other changes within the European Union have been made as well.

Professor Rogoff uses an analogy:

There is a good analogy in the old fable of nail soup: A beggar, trying to talk his way in out of the cold, claims that he can make a most delicious soup with only a nail. The farmer lets him in, and the beggar stirs the soup, saying how good it will taste, but how it would be even better if he could add a leek. After similarly convincing his host to contribute a chicken and all sorts of other good things, the beggar pulls out the magic nail and, indeed, the soup is delicious. The euro is the nail.¹⁷

If the soup could be considered as the broth of financial sta-

bility into which is stirred all the \$400 billion transactions savings and asset value increases plus the sweetness of life without currency crises, together with the iron-rich Single Global Currency nail, the world would gladly drink it—indefinitely.

Professor Rogoff wrote that “One could bypass many of the objections I have raised by adopting a world currency pegged to a commodity basket (or just, say, to gold).” However, none of the major currencies, including the common currency euro, is now pegged to any commodity nor gold, nor to each other, so a monetary union of the G-3, 4, 5, or 6 or whatever, would not need such support either.

He concluded his brief article, “I have argued here that, into the foreseeable future, it would not be desirable to aim for a single world currency, and that from an economic point of view, it would be preferable to retain at least, say, three to four currencies if not n currencies.”¹⁸

If Professor Rogoff sees utility for a common currency within each of three or four or n currency areas, then there is surely utility for everyone being in a single currency. If, for example, if we had a three-currency world today, there could be approximately 2.2 billion people in each of the currency areas. That’s more people than the entire population of the world in 1940. Thus, a single currency could have supported all the people of the world in 1940. Why not all the people of the world in 2005? Is there a qualitative difference between a common currency for 2.2 billion people and 6.6 billion people?

In a 1999 *Slate* article, “Monomoney Mania,” Paul Krugman describes the “current enthusiasm for currency unification” as “an intellectual fad, not a deep insight. I say let a hundred currencies bloom. Well, maybe 20 or 30.”¹⁹

It is hard to see a reason for efficiencies which justify consolidating currencies from 191 to 147 to 100 to 50 to 40 to Paul Krugman’s 30 to 20, and then stopping at Kenneth Rogoff’s 4 to

3 or n (presumably 2). Whatever merit can be found in the competition among currencies, it cannot possibly justify the huge transaction and currency risk costs of having more than one global currency. If the world can progress to such a small number of currencies, why stop at four, three or n ?²⁰ Why doesn't $n = 1$, and only 1? Moving to one is common cents/sense.

Professor Rogoff refers to several “puzzles” in international economics which have befuddled economists, such as the Purchasing Power Parity Puzzle which explores why price fluctuations correlate to exchange rate changes more weakly than economic theory predicts. While he notes that solutions to those puzzles might come if one incorporates the costs of trade, which seems to illustrate common sense, he does not examine those puzzles in the context of a Single Global Currency. Indeed, several of the puzzles would disappear entirely or require substantial redefinition in a 3-G world.²¹

Together with Maurice Obstfeld, Kenneth Rogoff examined in 2000 the value of cooperation among central banks in such areas as the setting of interest rates, and found that cooperation had no empirical advantage over non-cooperation. Thus, the existing system has their support, and “should give pause to the many economists who presume that the current monetary system is vastly suboptimal and must someday give way to something like a world euro standard.”²²

“Impossible Trinity”

Economists cite the “Impossible Trinity” as a reason why a Single Global Currency will not work. It is “the impossibility of combining all three of the following: monetary independence, exchange rate stability, and full financial market integration.”²³ Richard Cooper defines “incompatible triangle” as “fixed exchange rates, independent monetary policy, and freedom of capital movements.”²⁴ Benn Steil and Robert Litan state the

problem even more strongly for two of the three legs of the trinity, “It is not possible simultaneously to target the inflation rate and the exchange rate.”²⁵

This doctrinal certainty has been cited as the reason why the Single Global Currency will not work, but the “Impossible Trinity” does not apply in a Global Monetary Union because there will be either zero or 100 percent “monetary independence” as there will be only one monetary authority, the Global Central Bank. Also, there will be zero or 100 percent “exchange rate stability” because there are no exchange rates, although some economists would argue that within a monetary union, exchange rates are fixed. Without the other two legs of the trinity, it follows that “full financial market integration” is neither required, nor impossible, in a Global Monetary Union.

Within the 3-G world, the “impossible trinity” can become the “possible unity” or even “certain unity” or “certainty,” for short.

Related to the “Impossible Trinity” is the “Unholy Trinity” about rapid spreads of currency or financial crises: “(i) they follow a large surge in capital flows; (ii) they come as a surprise; and (iii) they involve a leveraged common creditor.”²⁶ With a Single Global Currency, there would be little risk of a surge in capital flows, currently thought of as being risky cross-currency capital flows, leading to a currency crisis. Within a Global Monetary Union, a surge in capital going *from* one region would be equal to a surge *into* other regions and thus balance out. Steil and Litan make the point strongly, “We know of no economist who questions the wisdom of free capital flows between the continental United States and the commonwealth of Puerto Rico; or dollarized Panama, Ecuador, and El Salvador, for that matter.”²⁷

FEASIBILITY OF THE SINGLE GLOBAL CURRENCY

It appears that economists permit their doubts about the political feasibility to cloud their views about the utility. Ralph Bryant wrote in *Turbulent Waters—Cross Border Finance and International Governance* that “Our grandchildren’s grandchildren, for example, might well be discussing the possible evolution of a world central bank and the political independence of that bank from supranational federalist institutions and from national governments.”²⁸ Former Assistant Secretary of the US Treasury Edwin Truman said in 1999, “Although I can imagine convergence toward such a monetary regime at some point in the twenty-first century, I doubt it is a realistic possibility in the next few decades.”²⁹

Even Robert Mundell has occasionally seemed to retreat from the full potential of his earlier writings, i.e., a Single Global Currency for everyone. Instead, he has sometimes focused on interim steps, such as monetary union among Europe, Japan, and the United States.

Professor Mundell wrote, “...nor would I propose scrapping all national currencies in favor of the dollar or world currency.”³⁰ Here, he is concerned not about the economic utility of scrapping obsolete currencies, but expressing his belief that such a requirement would not be politically feasible. Such scrapping of vestigial currencies is not required in the proposal of the Single Global Currency Association, but is an option. If a country participating in the Global Monetary Union seeks to retain a local or national currency, that might well be that country’s option, just as it was the option for the EMU members. For reasons of efficiency, the EMU countries chose to abandon their old currencies, and it is assumed here that such scrapping of the legacy currencies will be part of the adoption of the euro by the ten New Member States.

The focus of “A Theory of Optimum Currency Areas” was

to explore the maximum effectiveness of flexible exchange rates, and not a Single Global Currency for the world. Mundell wrote, "The second question concerns how the world should be divided into currency areas. We have argued that the stabilization argument for flexible exchange rates is valid only if it is based on regional currency areas. If the world can be divided into regions within each of which there is factor mobility and between which there is factor immobility, then each of these regions should have a separate currency which fluctuates relative to all other currencies. This carries the argument for flexible exchange rates to its logical conclusion."³¹ He did not speculate on the possible number of such optimum currency areas, but said there was an upper limit.

When discussing the idea of a Single Global Currency, Nobel Laureate James Tobin believed that it would need to be accompanied by worldwide fiscal coordination, thus making it impracticable. So he pressed on with his second recommendation, the "Tobin Tax" on currency transactions.³² He wrote, "There are two ways to go. One is toward a common currency, common monetary and fiscal policy, and economic integration. The other is toward greater financial segmentation between nations or currency areas, permitting their central banks and governments greater autonomy in policies tailored to their specific economic institutions and objectives. The first direction, however appealing, is clearly not a viable option in the foreseeable future, i.e., the twentieth century. I therefore regretfully recommend the second, and my proposal is to throw some sand in the wheels of our excessively efficient international money markets."³³ The "Tobin Tax" was to be the "sand."

Richard Cooper proposed a single currency for the industrialized democracies in the fall 1984 issue of *Foreign Affairs*. While that broke new ground, he had no illusions about how long it might take. "The idea of a single currency is so far from being

politically feasible at present—in its call for a pooling of monetary sovereignty—that it will require many years of consideration before people become accustomed to the idea.”³⁴ Note that only eight years later, the fifteen member European Union’s Maastricht Treaty was signed and twelve of the fifteen subsequently abandoned their monetary sovereignty.

Cooper wrote, “But there is serious question about whether one world money is either necessary or desirable. And it is certainly not feasible, even within our generous 25-year time-frame.”³⁵

Cooper is quite definite on distinguishing between a Single Global Currency and a common currency among the major democracies. He wrote to the association in 2003, “...since I do not support a global currency, I cannot think of a way to manage it that would command legitimacy. My proposal of some years ago, which I have repeated more recently in the August 2000 issue of *International Finance*, is for a common currency among the major industrial democracies, i.e., Europe, USA, and Japan.”³⁶

Professor Rogoff also addressed the feasibility question in his “On Why Not a Global Currency” article in the section, “Other Reasons to be Cautious About Adopting a Single World Currency.” He stated that it is unlikely that a central bank could be established for the world with as much credibility as the US Federal Reserve or the European Central Bank. Also, “political problems could make it difficult to choose top-notch central bankers.”³⁷ However, with a Single Global Currency, the work of the central bankers at the Global Central Bank and the work of the national and monetary union central banks would be easier.

Presently, most of them have to face the “Impossible Trinity” and juggle exchange rates AND internal interest rates. There often occurs the impossible challenge of needing to raise inter-

est rates in order to keep currency within the currency area boundaries, but needing to keep interest rates low in order to encourage economic growth. Finally, Professor Rogoff argued that “through a number of channels, global currency competition provides a check on inflation,” and cited his own 1985 article to support that proposition.³⁸ This was seventeen years before a common currency was introduced to the people of the Eurozone who can now easily compare prices across twelve, and soon-to-be twenty-two, nations. This ability to compare prices, along with the ECB’s careful inflation targeting, has helped to dampen inflation, and a similar effect will be seen with a Single Global Currency. We do not need currency competition to achieve low inflation.

One Global Central Bank, with open governance, and whose every decision is exposed to the Internet eyes of billions of people, will not likely exhibit the price-raising characteristics of monopolistic corporations. Having one standard-setter often enhances competition at a different level, such as the standardizing work of the World Trade Organization. It will “level the playing field,” which is now contoured and subject to earth-splitting monetary earthquakes. With one worldwide interest rate, national banks would be forced to compete more on the basis of service than is currently the case. Nations would compete for investment dollars without the complicating factor of exchange rates, which presently clouds such competition.

One overly cautious assumption made by economists is that a Single Global Currency will not work unless there is a global government or global trading system, or both. Even supporters of the Single Global Currency can take this view as they consider the feasibility of the SGC. Wrote SGC supporter, Basil Moore, “Unfortunately in the foreseeable future it is inconceivable that the world could unite into a single global trading federation, with a single central bank and a single currency.”

Similarly, regarding a central bank, “it is unfortunately inconceivable that such an entity could be created in the foreseeable future. If by some fortuitous miracle it were somehow imposed it would soon dissolve in widespread alienation, dissatisfaction, and policy failure. There is a very serious question whether a world government and world central bank will ever become feasible.”³⁹

While a common currency is obviously more feasible and easier to administer within a political entity with free trade among its regions, there is no requirement for either a common government or a free trade zone for a successful common currency. Fariborz Moshirian writes of the need for a Single Global Currency in the context of a “New International Financial Architecture,”⁴⁰ but a common government is not a requirement. There is no common government among the countries of the Eastern Caribbean Monetary Union, nor among the countries of the Central African Monetary Community and West African Monetary Union. Within the European Union, there is a European Parliament and Commission, but their powers are limited and their boundaries are not the same as the European Monetary Union.

However, as the Eurozone is within the European Union, it might appear that an economic union or common market is a requirement, but suppose France were to announce trade quotas or tariffs on some goods within the EU. Apart from EU trade agreements, could France do that and remain a part of the Eurozone? Yes. Suppose France merely established a tax of one euro per person or per 100 kilograms on all people and goods traveling into the country. It would surely be harmful to France, but not to its participation as a member of the Eurozone, or European Monetary Union.

Richard Cooper wrote that the link between free trade and a common currency was not required, “Free trade is a natural but

not entirely necessary complement to these macroeconomic arrangements."⁴¹

In January 2001, several prominent international economists gathered at the World Economic Forum to respond to the question, "Does the Global Economy Need a Global Currency?" The answer was summarized, "As attractive as the idea may sound...a Single Global Currency is not a viable alternative to the world's existing mix of fixed and floating exchange rates."⁴² That is, it's useful for the world but not yet politically feasible.

Volker Nitsch analyzed about 245 examples of dissolutions of monetary unions, for such reasons as differential inflation and the end of a colonial regime.⁴³ However, he did not conclude from his study that monetary unions were impossible or doomed. Indeed, his research reminds one of the legendary Thomas Edison who experimented with thousands of filaments in 1878 and 1879 before perfecting the longer-life electric lightbulb. The EMU is the lightbulb lighting the way to Global Monetary Union.

Benjamin Cohen's criticisms of monetary unions naturally lead to his view of the Single Global Currency. He writes, "...neither is it likely that competition will drive the number (of currencies) down toward the 'odd figure less than three' favored by Robert Mundell."⁴⁴ Of the Global Central Bank, he writes, "As a response to the challenge of money's new geography, the approach has the merit of being parsimonious and even elegant. Regrettably, it is also flawed and hopelessly unrealistic."⁴⁵ Cohen dismisses a Single Global Currency as "utopian."⁴⁶ However, as Paul De Grauwe has observed, most economists felt the same way about the European Central Bank and the euro.

The strongest written statement against the Single Global Currency is by Professor Nouriel Roubini of the Stern School of Business at New York University, New York. He wrote on his

website on 23 August 2004, the article, "A Single Global Currency? Not Any Time Soon Nor in the Long Run in Which We Are All Dead."⁴⁷ He addresses the utility and the feasibility of the Single Global Currency and his comments are presented in their entirety. Some endnoted references were weblinked in the original online essay.

Roubini writes:

The usually sharp Martin Wolf of the FT has recently come out in favor of a Single Global Currency for all countries:

'We Need a Global Currency

'Last month was the sixtieth anniversary of the conference at Bretton Woods, New Hampshire, that inaugurated the post-second world war international economic order. The flood of analysis that this occasion brought forth has concentrated on that meeting's institutional progeny: the International Monetary Fund and the World Bank. But a bigger question needs to be addressed. It is whether floating exchange rates have proved to be the ideal replacement for the unsustainable adjustable exchange-rate pegs of the Bretton Woods monetary regime. The answer is: no....

'A world in which borrowing abroad is hugely dangerous for most relatively poor countries is undesirable. A world that compels the anchor currency country to run huge current account deficits looks unstable. We should seek to lift these constraints. The simplest way to do so would be to add a global currency to a global economy. For emerging market economies, at least, this would be a huge boon.

'I am well aware of the economic and political objections to this idea. But if the global market economy is to thrive over the decades ahead, a global currency seems the logical concomitant. In its absence, the world of free capital flows will never work as well as it might. This is a world I am

unlikely ever to see. But maybe my children or grandchildren will do so.⁴⁸

Responding to Wolf's article, Roubini wrote:

His case in favor of a global currency is a combination of different arguments.

First, he is concerned about the United States running large current account deficits and accumulating debt.

Second, he is concerned about emerging market economies having to borrow in foreign currency (as they suffer of "original sin" or "liability dollarization"⁴⁹ as in the celebrated arguments of Hausman and Eichengreen)⁵⁰ and thus being vulnerable to highly disruptive financial crises when capital reversals and sudden stops occur and currencies collapse.

Third, he is concerned about the excessive and inefficient accumulation of forex reserves by Asian and other emerging market economies. All these phenomena, he argues, are explained by currency instability that would be eliminated by a Single Global Currency.

These arguments, however, do not make a compelling case for a Single Global Currency. Spending time with Robert Mundell—a great supporter of a global currency—in the Tuscany hills may impair one's better judgment about the benefits of a Single Global Currency. There are many arguments against such Single Global Currency.

First, as forcefully argued in a recent monograph by Goldstein and Turner,⁵¹ liability dollarization is not as widespread as claimed by Hausman & Co.; also, countries are not bound to remain in "liability dollarization" hell forever; "original sin" may not be really eternal and may rather be a purgatory from which you can graduate (and start issuing

local currency debt) if you follow sound economic policies for a while.

Second, even if emerging markets were to suffer of “original sin” it is not obvious that they are good candidates for formal dollarization. As has been discussed in previous papers of mine, the conditions for a country being a good candidate for adopting a foreign currency (formal dollarization) are very stringent and very few do satisfy them. Even an originally gung-ho⁵² supporter of dollarization for many emerging market economies such as Hausmann has recently come around in favor of flexible exchange rates and in favor of resolving “original sin” via institutional changes in international financial markets so as to allow emerging market economies to borrow abroad in their own currency.

Third, a Single Global Currency would prevent currency crises but would not necessarily prevent debt and financial crises. Take the case of Panama: it dollarized a century ago but it has been in a fiscal mess for the last three decades, has been the most prolonged user of IMF resources and it defaulted on its external debt in the 1980s and eventually reduced it with a Brady bond deal. So, eliminating currency risk does not lead to economic virtue, as the recent case of Ecuador also suggests. Liquidity runs can still occur (and they are even more dangerous as domestic lender of last resort support tools are much more limited with a Single Global Currency) and debt crises can also occur with grave severity.

Fourth, would a Single Global Currency prevent large global current account imbalances such as those currently observed? Not necessarily as currency misalignment is only one of the ways that such imbalances are created and persist over time. Since the current account balance is equal to savings-investment balance, the recent large US current account

deficit—driven by fiscal deficits—would have been almost as large as it is now even with a Single Global Currency. Indeed, the US fiscal deficit would have led to a current account deficit (twin deficits) even in the absence of currency movements: real appreciation and depreciation can occur via changes in nominal prices rather than currency values when domestic currencies are pegged or non-existent. Yes, saving-investment imbalances driven by factors such as fiscal imbalances may be exacerbated by the currency misalignments that such imbalances create; but eliminating currency movements does not prevent large current account imbalances from emerging in the first place. If anything, lack of currency risk may make the financing of such large imbalances easier, as there is not risk of capital losses on US dollar assets held abroad if the dollar does not exist and cannot depreciate. Thus, lack of currency volatility may cause imbalances to persist longer and thus cause a more severe—and in long run unsustainable—accumulation of external debt.

Fifth, if we had a Single Global Currency, we would need a single Global Central Bank that would set the single global short term policy interest rate (the global Fed Funds rate). But, if business cycles of major regions—US, Europe, Japan/Asia and other emerging markets—are not highly synchronized to begin with, a common world interest rate would not be optimal; it could be outright dangerous and destabilizing instead.

Sixth, if there was a Single Global Currency someone would have to provide lender of last resort support in the case of bank runs and banking crises. But how would a Global Central Bank decide whether to “bail out” or provide liquidity to a particular country banking system but not to another one? Which criteria would be used? A Single Global

Currency requires also a single global supervisor and regulator of the banking and financial system; otherwise moral hazard distortions from potential lender of last support could be severe. But are we ready to accept a single global financial regulator?

Seventh, the reason why Asian and other emerging market economies are accumulating foreign reserves is not anymore their concern about the risk of a liquidity run (as in 1997-98); in fact, the accumulation of such a war chest of reserves is now well in excess of what is required to avoid a liquidity run. The Asians are accumulating reserves because they want to prevent an appreciation of their currencies relative to the US dollar (a variant of this argument is the Garber, Folkerts-Landau, and Dooley argument of the restoration of a Bretton Woods 2 regime of global fixed exchange rates). But we are really not in a new BW2 regime (as argued in a forthcoming paper of mine with Brad Setser). Also, Asian countries' desire to follow a low-consumption, high-savings, high export and large current account surplus growth model could be partially achieved even in a world of a single currency. If your economic policies repress consumption and stimulate savings, your excess of national saving relative to investment will lead to current account surpluses and export-led growth. Yes, maintaining an artificially cheap currency can help but such global current account imbalances depend more on saving and investment imbalances than on exogenous currency misalignments that may cause such imbalances. After all, currency misalignment is in large part a product of such macro savings-investment imbalances in the first place.

Finally, monetary unions have been historically associated with political unions; and, indeed, EMU emerged as a stage of a drive towards political union in Europe. Monetary

Unions without political unions have historically failed, as did the Latin Monetary Union of the nineteenth century. So, a Single Global Currency will require something closer to a single political union in the world. And chances of having a single global government are nil, to say the least.

In summary, not only is the likelihood that we will see a Single Global Currency in our lifetimes slim; it is also a bad idea to begin with. It is still possible that, in twenty to thirty years, the number of national currencies may be significantly smaller. If, and that is a big if, the Euro/EMU experiment is successful, most of an integrated greater Europe would eventually be under a single currency. In the Americas, a few more countries (on top of the recently dollarized Ecuador and El Salvador) may also decide to unilaterally dollarize. A NAMU (North American Monetary Union) including the USA, Canada, and Mexico would make some economic sense but it is politically unlikely to come alive. So, the process of monetary unification in the Americas will be slow at best and based on unilateral dollarizations rather than formal Monetary Unions as in the EMU.

Finally, in the Asian region the desire for some currency stability may lead to more formal currency arrangements. At first, like in Europe, the Asians could go for a loose form of ERM/EMS (or better, AMS) with wide but narrowing bands. A formal AMU (Asian Monetary Union) is quite unlikely for two main reasons: 1) in Europe EMS led to EMU because Europe was integrating politically, not just economically; 2) any monetary union requires an implicit strong anchor currency as an intermediate step to a MU (the US dollar for the Americas' unilateral dollarizations; the German Mark for the Europe and the EMS to EMU process). But in Asia, it is not clear which currency would be the anchor of such AMU. Japan, and its currency the Yen, used to be the

leading economic power. But now, the emergence of China as the major regional economy implies that Asians' currency policies and managed floats are driven more by China's currency policy than by Japan's. But China and its currency do not have yet the economic/financial and political status to become the true anchors of an AMU.

Thus, while it is not far fetched to believe that in thirty-plus or so years, there may be three broad currency blocs with the world, one in the Americas anchored around the US dollar, one in Eurasia anchored around the Euro and one on Asia anchored around the Yen or the Yuan, we could expect, at most three global currencies in our lifetimes, certainly not a Single Global Currency. And even this process towards three main global currencies is likely to be bumpy and highly uncertain: unilateral dollarizations in the Americas may have little appeal to most Latin economies if they do not imply a road to a symmetric monetary union, an idea that is a politically toxic in the US. In Europe, the EMU has still to prove itself before it can become the currency of all the EU fifteen, now twenty-five, and soon thirty to forty-plus members. And in Asia, monetary and currency stability may depend on the resolution of the question of who will be the political and economic hegemon of the region: Japan, now China, or maybe India in some future?

So, for the time being a Single Global Currency in the next two decades? Not a fat chance of that happening and/or being desirable!⁵³

This book can be considered a response to Professor Roubini's comments.

SUMMARY

The interplay between utility/economics and feasibility/politics has been a constant dynamic in the consideration of changes to the economic system. Commenting on the euro, Ben Bernanke noted that “Robert Mundell argued that, ideally, economic similarity, not political boundaries, should define the geographical area spanned by a common currency” and also wrote that “political factors, rather than economic ones have played the dominant role” in the establishment of the euro.⁵⁴ So it may be for the Single Global Currency.

Right up to the day that the Single Global Currency is implemented, there will be economists who will argue that it will not work, or that implementation is premature. Even afterwards, there will be some who forecast its demise. For those who have opposed it so far, one wonders whose statement will be remembered in the same vein as those who have, in the past, made sweeping negative predictions about the future, e.g., an 1876 Western Union internal memo: “This ‘telephone’ has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.”⁵⁵

The 3-G world will come with the support of some economists, and they will either join with, or be led by, the people of the world who want convenient, stable money.

We must move ahead, despite the reservations of many economists. Next are considered, in Chapter 7 the means to the ends of a 3-G world.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. See, e.g., C. Fred Bergsten and the Institute for International Economics, *The United States and the World Economy: Foreign Economic Policy for the Next Decade*, Washington, DC: Institute for International Economics, 2005.

The book's final chapter, "The International Financial Architecture" by Morris Goldstein, makes no mention of the Single Global Currency nor Robert Mundell nor the euro nor monetary unions.

2. For more information about the *Single Global Currency Journal*, see <http://www.singleglobalcurrency.org/journal.html>

3. "Doctoral Dissertations in Economics, One-Hundred-Second Annual List," *Journal of Economic Literature*, American Economic Association, December 2005, Number 4, pp. 1196-99.

4. "Preliminary Announcement of the Program." Annual meeting of the American Economic Association, 6-8 January 2006, Boston, Massachusetts, at <http://www.vanderbilt.edu/AEA/assa06.htm>

5. Hazel Yuen, "Globalization and Single Currency: The Prospects of Monetary Integration in East Asia," September 1999 ("Preliminary Draft") at <http://econ.tu.ac.th/iccg/papers/hazel.doc>

6. Paul De Grauwe and Jacques Melitz, editors, *Prospects for Monetary Unions after the Euro*. Cambridge, MA: MIT Press, 2005.

7. Paul De Grauwe and Jacques Melitz, editors, *ibid.*, p. 4.

8. Paul De Grauwe, *Economics of Monetary Union*. Oxford, UK: Oxford University Press, 2005, 6th edition, p. 1.

9. Paul De Grauwe and Jacques Melitz, editors, *op. cit.*, p. 1.

10. Paul De Grauwe and Jacques Melitz, editors, *ibid.*

11. See the economists' comments and ratings for the Utility and Feasibility of the Single Global Currency at http://www.singleglobalcurrency.org/economists_ratings_system.html

12. Martin Wolf, "We Need a Global Currency," *Financial Times*, 3 August 2004, at <http://courses.wcupa.edu/rbove/eco338/040Trade-debt/Currency/040804global.txt>

13. Email from Professor Andrew Rose to the author, 15 August 2004.

14. Matt Polasek, Honorary Fellow, Flinders University, Adelaide, Australia, in email to the author, 11 November 2005.

15. Basil Moore, "Using a Common Currency in International Transactions: The Post Keynesian Case for No Exchange Rates," p. 8 of Chapter 19 of book, *Shaking the Invisible Hand: Complexity, Endogenous Money and Exogenous Interest Rates*. London, UK: Palgrave MacMillan, 2006.

16. Kenneth Rogoff, "On Why Not a Global Currency," 8 January 2001, presented to the American Economic Association Meeting on "Exchange Rates and Choice of Monetary Regimes," published in the *American Economic Review*, Vol. 91(2), 2001, pp. 243-47 and on the web at <http://www.economics.harvard.edu/~krogoff/AER-May01.pdf>

17. *Ibid.*, at p. 6.

18. *Ibid.*, at p. 9.

19. Paul Krugman, "Monomoney Mania," *Slate Magazine*, 16 April 1999, at <http://www.slate.com/id/25210/>

20. In the tradition of polite expressions of disagreement, Professor

Rogoff wrote to the author upon the establishment of the Single Global Currency Association, "Congratulations on your ambitious enterprise." Email, 28 July 2003.

21. See also, Maurice Obstfeld and Kenneth Rogoff, "The Six Major Puzzles in International Macroeconomics: Is There a Common Cause?" 2000. Posted at the eScholarship Repository, University of California, at <http://repositories.cdlib.org/iber/cider/C00-112/>

22. Maurice Obstfeld and Kenneth Rogoff, "Do We Really Need a New Global Monetary Compact?" in *Currency Unions*, Edited by Alberto Alesina and Robert J. Barro. Stanford, CA: Hoover Institution Press, 2001, p. 81.

23. Deardorff's Glossary of International Economics, at <http://www-personal.umich.edu/~alandear/glossary/>

24. Richard Cooper, "Toward A Common Currency?" June 2000, p. 17, presented at the conference on the Future of Monetary Policy and Banking, organized by the IMF and the World Bank, at <http://www.worldbank.org/research/interest/confs/upcoming/papersjuly11/cooper.pdf>

25. Benn Steil and Robert E. Litan, *Financial Statecraft*. London and New Haven, CT: Yale University Press, 2006, p. 104.

26. Graciella Kaminsky, Carmen Reinhart, and Carlos A. Vegh, "The Unholy Trinity of Financial Contagion," *Journal of Economic Perspectives*, 2003, v17(4, Fall), pp. 51-74. at <http://www.nber.org/papers/W10061>

27. Benn Steil and Robert E. Litan, *Financial Statecraft*. London and New Haven, CT: Yale University Press, 2006, p. 108.

28. Ralph Bryant, *Turbulent Waters—Cross Border Finance and International Governance*. Washington, DC: Brookings Institution Press, 2003 at p. 414.

29. Edwin Truman, "The Evolution of the International Financial System," remarks at the Institute for International Monetary Affairs Eighth Symposium, Tokyo, 6 December 1999, at <http://www.treas.gov/press/releases/ls276.htm>

30. Milton Friedman and Robert Mundell, "One World, One Money? A Debate," *Policy Options/Options Politiques* (May): 10-30, as quoted in Benjamin J. Cohen, *The Future of Money*. Princeton, NJ: Princeton University Press, 2004, p. 214.

31. Robert Mundell, "A Theory of Optimum Currency Areas," *American Economic Review*, May 1961, pp. 657-65 at p. 663, and as Chapter 12 in his book, *International Economics*, pp. 177-86, at <http://www.columbia.edu/~ram15/ie/ie-12.html>

32. Recognizing the vast amounts of money which might be generated, a loose worldwide network of Tobin Tax supporters (and spenders!) has arisen. See "Tobin Tax Initiative" at <http://www.ceedweb.org/iirp/>

33. James Tobin, "A Proposal for Monetary Reform," *Eastern Economic Journal*, July/October 1978, pp. 153-59, at <http://www.globalpolicy.org/soecon/glntax/currtax/original.htm>

34. Richard Cooper, "A Monetary System for the Future," *Foreign Affairs*, Fall 1984, pp. 182.
35. Richard Cooper, *ibid.*, p. 184.
36. Richard Cooper, email to the author, 18 July 2003. The referenced article is in the July 2000 issue of *International Finance*, "Toward A Common Currency?" at pp. 287-308, at <http://www.ingentaconnect.com/content/bpl/infi/2000/00000003/00000002/art00053>. The article is similar to his "Toward A Common Currency?" June 2000, presented at the conference on the Future of Monetary Policy and Banking, organized by the IMF and the World Bank, at <http://www.worldbank.org/research/interest/confs/upcoming/papersjuly11/cooper.pdf>
37. Kenneth Rogoff, "On Why Not a Global Currency," 8 January 2001, presented to the American Economic Association Meeting on "Exchange Rates and Choice of Monetary Regimes," published in the *American Economic Review*, Vol. 91(2) pp. 1243-247 and on the web at <http://www.economics.harvard.edu/~krogoff/AER-May01.pdf>
38. *Ibid.* The 1985 article he referenced was his "Can International Monetary Policy be Counterproductive?" in *Journal of International Economics*, May 1985, pp. 199-217.
39. Basil Moore, "Using a Common Currency in International Transactions: The Post Keynesian Case for No Exchange Rates," pp. 8-9 of Chapter 19 of book, *Shaking the Invisible Hand: Complexity, Endogenous Money and Exogenous Interest Rates*, London, UK: Palgrave MacMillan, 2006.
40. Fariborz Moshirian, "New International Financial Architecture," presented at First Single Global Currency Conference, Bretton Woods, July 2004 at <http://www.singleglobalcurrency.org/documents/NewinternationalfinancialarchitecturebyFariborzMoshirian.doc>. Also published in the *Journal of Multinational Financial Management*, October-December 2002, at <http://www.sciencedirect.com/science?ob=ArticleURL&udi=B6VGV-460DNXY-2&coverDate=12%20percent2F31%20percent2F2002&alid=347596192&rdoc=1&fmt=&orig=search&qd=1&cdi=6048&sort=d&view=c&acct=C000050221&version=1&urlVersion=0&userid=10&md5=12dab61202c69def4dee840d42880679>
41. Richard Cooper, "A Monetary System for the Future," *Foreign Affairs*, Fall 1984, pp. 166.
42. Annual Meeting, World Economic Forum, with contributors: Martin Feldstein, Jeffrey Frankel, Jacob Frenkel, Otmar Issing, Haruhiko Kuroda, Robert Mundell, Jean-Pierre Roth, and Federico Sturzenegger, "Does the Global Economy Need a Global Currency?" 26 January 2001, at [http://72.14.203.104/search?q=cache:UlUyLeQ7qccj:www.weforum.org/site/knowledgenavigator.nsf/Content/Does%20the%20Global%20Economy%20Need%20a%20Global%20Currency%20open&topicid="+Global+Pipe+Dream+"&hl=en&gl=us&ct=clnk&cd=3](http://72.14.203.104/search?q=cache:UlUyLeQ7qccj:www.weforum.org/site/knowledgenavigator.nsf/Content/Does%20the%20Global%20Economy%20Need%20a%20Global%20Currency%20open&topicid=)

43. Volker Nitsch, "Have a Break, Have a . . . National Currency: When Do Monetary Unions Fall Apart?" Chapter 12, in Paul De Grauwe and Jacques Melitz, editors, *Prospects for Monetary Unions after the Euro*. Cambridge, MA: MIT Press, 2005.

44. Benjamin J. Cohen, *The Future of Money*. op.cit., p. 192. Note that Cohen observed that Mundell's characterization of the number 1 was said in jest, at p. 213. See also, International Monetary Fund, *IMF Survey*, "Conference Examines US Economic Uncertainties, Exchange Rate Choices, and Globalization," 22 January 2001, p. 27, "Mundell recommended a move toward a single world currency area in the future; he said the optimum number of currencies for the world, like the optimum number of gods, 'should be an odd number, preferably less than three.'" At <http://www.imf.org/external/pubs/ft/survey/2001/012201.pdf>

45. Benjamin J. Cohen, *The Future of Money*, op.cit., p. 211.

46. Benjamin J. Cohen, *The Future of Money*, *ibid.*, p. 214. I don't know about references to currency and money in the classic utopian works, including Thomas More's *Utopia*, (online at <http://www.d-holliday.com/tmore/utopia.htm>) but Edward Bellamy's 1915 *Looking Backward*, presented a 2000 world "in which money was unknown and without conceivable use," Chapter 28, online at <http://xroads.virginia.edu/~HYPER/BELLAMY/ch28.html>

Myron Frankman wrote in 1990 "A Vision of the New Order," which was a look at the 1999 economy by a 1999 observer, who told of its "single world currency—not a centrally created reserve asset like the SDR, but a circulating currency which would replace all national monies," at *The Trumpeter, Journal of Ecosophy*, Volume 7.3, 1990, at <http://trumpeter.athabascau.ca/content/v7.3/frankman.html>

47. This phrase comes from the oft-quoted statement from John Maynard Keynes, "In the long run we are all dead." Wikiquote gives context to his meaning: "The long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is past the ocean is flat again." John Maynard Keynes, *A Tract on Monetary Reform*, 1923, Ch. 3.

From Wikiquote comes this observation: "Many thought this meant Keynes supported short terms gains against long term economic performance. Keynes on the other hand wanted to criticize those who believed that inflation will control itself without government intervention," at http://en.wikiquote.org/wiki/John_Maynard_Keynes

48. Martin Wolf, "We Need a Global Currency," *Financial Times*, 3 August 2004, at <http://courses.wcupa.edu/rbove/eco338/040Trade-debt/Currency/040804global.txt>

49. As noted in Chapter 3, "original sin" refers to the practical requirement that when countries with risky or soft currencies borrow money

- internationally, that repayment be denominated in hard currencies such as the US dollar. "Liability dollarization" describes the status of having debt or liabilities denominated in those hard currencies. See Ricardo Hausmann and Ugo Panizza, "The Mystery of Original Sin," 16 July 2002, at http://ksghome.harvard.edu/~rhausma/paper/mistery_march3.pdf
50. Barry Eichengreen, Ricardo Hausmann, and Ugo Panizza, "The Mystery of Original Sin," August 2003 at <http://emlab.berkeley.edu/users/eichengr/research/osmysteryaug21-03.pdf>
51. Morris Goldstein and Philip Turner, "Currency Mismatches at Center of Financial Crises in Emerging Economies," 22 April 2004, Institute for International Economics, Washington, DC, at <http://www.iie.com/publications/newsreleases/newsrelease.cfm?id=99>
52. The term "gung-ho" is slang in English for "enthusiastic," and also used as the title of a 1986 US movie directed by Ron Howard. See Wikipedia at <http://en.wikipedia.org/wiki/Gung-ho>
53. Nouriel Roubini, "A Single Global Currency? Not Any Time Soon Nor in the Long Run in Which We Are All Dead." Blog at <http://www.rge-monitor.com/blog/roubini/91155/>
54. Adam S. Posen, Editor, *The Euro at Five: Ready for a Global Role?* Washington, DC: 2005, Institute for International Economics, Chapter 8 by Ben S. Bernanke, "The Euro at Five: An Assessment," at p. 179.
55. Western Union internal memo, 1876, as quoted in "Some interesting and bad predictions, courtesy of Susan Nicholas...." at <http://www.techonfile.org/technofile/Quotes/famous.words.txt>

HOW TO GET THERE FROM HERE¹

THANKS TO THE SUCCESS of the European and other monetary unions, we now know how to create and maintain the 3-Gs: a Global Monetary Union, with a Global Central Bank and a Single Global Currency. Given the preponderance of benefits over the costs of that solution, the costs of continuing the current system, and the risk of a serious world financial crisis if the problem is not fixed, the world must move forward and start planning now.

The task can be stated quite simply: how to move from the current 147 currencies to 1. Developing the political will to overcome the residual strength of nationalism is the major challenge for the movement to a 3-G world. As with the implementation of the euro, the economics and politics of monetary union are inextricably bound together; and the logic of both point toward the 3-G world.

The question now is not whether the world will adopt a Single Global Currency but *When?* and *How smooth, inexpensive, and planful OR rough, costly and chaotic will the journey be?*

WHEN?

Some of the earlier predictions now seem timely. *The Economist* magazine's predicted 2018 date for implementation of a global currency, to be called the "Phoenix,"² is only twelve years away.

Richard Cooper's 1984 proposal for a common currency among the industrialized democracies anticipated implementation by 2009, only three years away. What takes time is the work required for the establishment of the goal and the date for implementation. By comparison, actual implementation will take little time.

The twenty-first century began with 159 currencies among 189 UN members. By 2005, the number of currencies had declined to 147,³ a drop of 12 over 5 years of 7.5 percent. At that rate of 12 every 5 years, the journey to 1 will take 62 years until 2067, the 200th anniversary of the 1867 Paris International Monetary Conference. If the decline continued at the 7.5 percent annual percentage rate, it would take until approximately 2224.⁴

In contrast, if the political decisions were made by just a few major countries to proceed with the project, the implementation could be accomplished in less than five years. Bryan Taylor wrote in 1998, "Once the transition to a single currency for Europe and the United States was made, the transition to a single currency for the entire world could come with a speed that might surprise many. The world might easily move from having almost 200 currencies today to having one within a decade, and twenty-five years from now, historians would wonder why it took so long to eliminate the Babel of currencies which existed in the twentieth century."⁵

Paul De Grauwe and Jacques Melitz wrote of the shift of view during the runup to the euro, "However, at some point monetary union began to be seen as something inevitable, as something that was written in the stars. At that point, professional opinion largely rallied in its favor. There can be no doubt that the mere existence of European Monetary Union has changed economists' outlook about monetary union."⁶ If Slovenia is successful in its application to join the Eurozone on 1 Jan-

uary 2007, it will have taken that country only two-and-a-half years from its 2004 admission into the European Union.

The remaining questions are only when the political decisions will be made and the level of commitment which will be given to the project.

Even if there is no formal decision to plan for a 3-G world, we are moving toward a smaller number of currencies, to achieve related goals. Benn Steil and Robert Litan urge that the IMF promote the “ridding of the world of nontradable currencies” and promote “currency consolidation.”⁷ As noted earlier, Benjamin Cohen called the process the “Contraction Contention.”

In this chapter are described steps to move the world more rapidly toward the 3-G goals. Unless the calls for the Single Global Currency take serious root, the pace may remain dangerously glacial. Robert Mundell wrote, “It looks as if we are a long way from that position [a world currency] now. Yet it is surprising how quickly moods can change and producers of statecraft can escape the old modes of thought.”⁸

If, however, there is a currency crisis, and especially if such a crisis involves the US dollar, pressure for reform likely will increase dramatically. The world is unlikely to tolerate continued dependence upon one nation for worldwide financial liquidity and stability. Robert Mundell also wrote, “The next big crisis might be the occasion for a reconvening of a Bretton Woods type conference to establish the conditions for a new international monetary system.”⁹

By 2035, the GDP of China is predicted to overtake that of the United States, and such a moment will dramatize the relative decline of the US dollar and its role in the multicurrency foreign exchange system, which will have already occurred.¹⁰ By that time the world will have decided whether to anoint another currency as the primary international reserve currency

or whether to cancel the competition and join together with a Single Global Currency.

The annual benefit from the implementation of a Single Global Currency has been estimated conservatively here to be \$670 billion, from the \$400 billion in saved transaction costs and \$270 billion in annual GDP increase. Also predicted is a one-time \$36 trillion increase in worldwide asset values, together with a one-time associated GDP increase of \$9 trillion. Every year of delay will postpone those savings, plus the achievement of the other substantial benefits of a Single Global Currency.

HOW SMOOTH, INEXPENSIVE, AND PLANFUL OR ROUGH, COSTLY, AND CHAOTIC WILL THE JOURNEY BE?

Whether or not the world chooses to begin planning for the inevitable Single Global Currency, large and risky changes are very likely to occur in the foreign exchange markets. Planning now for a Single Global Currency would help assure a soft landing. If currency traders and all their customers knew that the future will bring a Single Global Currency, and not a chaotic struggle for currency supremacy by an uncertain victor, the journey might be smoother.

A major and unknown consideration is the potential cost of future currency and financial crises which will likely occur in the obsolete multicurrency foreign exchange world if no change in direction is made. That cost could be trillions of dollars or euros and untold harm to the people of the world.

WHAT CAN BE DONE?

There is no single required path to the Single Global Currency. The goal will likely be achieved through some combination of the feasible steps described below, and not necessarily in the order presented. There are other possible interim steps to achieve some of the goals of the Single Global Currency, such as

the Tobin Tax, but the effort required to implement and continually maintain such a tax could exceed the effort required to simply implement the Single Global Currency itself. Similarly, Robert Guttman's 1994 suggestion that a new kind of money, "supranational credit money (SNCM)," be created and circulated domestically, would require as much effort as the implementation of the Single Global Currency.

He wrote, "Rather than reaching for the most difficult and utopian version, the introduction of a single currency for the entire world economy, it would be much more realistic to conceive of this new form of world money [the SNCM] as used only in international transactions between countries. This kind of arrangement allows national currencies to exist but confines them to strictly domestic circulation for transactions within their countries of issue. This was precisely the basic idea behind the plan Keynes put forward at the Bretton Woods Conference. But, unlike his Bancor proposal, the supranational credit-money (SNCM) of the future should function fully as money."¹¹

Taking the steps proposed below will all lead toward the best solution: the 3-G world:

- Increase Public and Governmental Awareness of the Need for a Single Global Currency, and Encourage Political Support;
- Conduct Public/Private Large-Scale Research into the Single Global Currency;
- Establish a Single Global Currency Institute;
- Establish the Goal and Date, and Give the New Currency a Name;
- Ize to Anchor Currencies;
- Expand Existing Monetary Unions;
- Establish New Monetary Unions;
- Establish a prototype Global Central Bank and a Global Monetary Union;

- Ensure that Currency Area Competition is Constructive;
- Convene International Monetary Convention(s); and
- Mobilize Stakeholders to Encourage the Tasks Above and the Implementation of the Single Global Currency.

INCREASE PUBLIC AND GOVERNMENTAL AWARENESS OF THE NEED FOR A SINGLE GLOBAL CURRENCY, AND ENCOURAGE POLITICAL SUPPORT

The 3-G world will come when the people of the world either lead their leaders in that direction or indicate their willingness to be led. It takes time to mobilize support for an idea that affects every human being on the earth. The Kyoto Protocol¹² regarding air pollution is an example of the large-scale efforts that are needed to achieve global political change.

Public support of the 3-G world is critical, just as it was critical for the implementation of the euro. Robert Mundell implicitly noted the need for public support of a monetary system when he cited Sir Roy Harrod as observing that the nineteenth-century “bimetallism was a ‘high-brow’ standard, too complicated for the average person to understand....”¹³

CONDUCT PUBLIC/PRIVATE LARGE-SCALE RESEARCH INTO THE SINGLE GLOBAL CURRENCY

This is one step that does not require government action, but as the governments of the world have access to large resources, government involvement would be helpful. In the meantime, however, foundations, universities, and individuals can initiate this step.

Thousands of economists continue to study the ups and downs of the multicurrency foreign exchange trading world, perhaps looking for the Holy Grail explanation, but it is not to be found. Even within the European Central Bank, where the concern about exchange rates was reduced for member coun-

tries by the euro, economists are still studying what is—rather than what can be.¹⁴

Instead, economists could self-impose a moratorium on the Sisyphean search for the explanation of exchange rate ups and downs the mythical hill, and turn their energies to explore the 3-G world. Continuing the extensive exploration of the existing multicurrency foreign exchange world is like devoting large research efforts to exploring how to make carburetors work better in the age of fuel-injection, or how to improve the performance of vacuum tubes in the age of semi-conductors.

Economists could study economic phenomena that heretofore have been considered to be complicated by exchange rate movements; and consider those same phenomena in a 3-G world. For example, economists have studied the “Dutch Disease,”¹⁵ (not to be confused with Dutch Elm Disease), which describes how the discovery of abundant natural resources in a country may actually decrease economic growth. As the Dutch Disease, and the resulting inflation, has previously been studied in affected countries with their own currencies, economists could study the effects of exploitation of new natural resources in prospective countries within the Global Monetary Union. We predict the Dutch Disease will not exist in the 3-G world, or at least that its effect will be substantially reduced.

Similarly, what will be the meaning of Purchasing Power Parity in a 3-G world? What will be the effect on developing nations of the elimination of “Original Sin?” How many exchange rate puzzles will be solved or simply rendered moot in a 3-G world? How many will remain and how will the search for the answers be affected by the Single Global Currency?

To our knowledge, among the thousands of economists working at the World Bank, International Monetary Fund, Bank for International Settlements, and all the central banks and uni-

versities, none is working full-time on 3-G issues. None? None. No one.

ESTABLISH A SINGLE GLOBAL CURRENCY INSTITUTE

There are many international economics institutes,¹⁶ such as the Institute for International Economics in Washington, DC, the Institute for International Economic Studies in Stockholm, the Kiel Institute for World Economics, and the Vienna Institute for International Economic Studies. However, none is yet dedicated to exploring the issue of the Single Global Currency. One model for such a goal-directed Single Global Currency Institute could be the US National Cancer Institute, which is dedicated to solving the puzzles of cancer.

With such an institute, attention could be focused on the 3-G goals. There would not be a monopoly of such research at that institute, but it would increase recognition for the issue.

A Single Global Currency Institute could be located within a foundation, a government, a non-governmental organization, an international organization such as the IMF or Bank for International Settlements, or a university, or it could stand alone. In this cyber age, it could be located anywhere in the world. Wherever located, it will bring credit unto itself and its associated organization; and will help the world focus on the work that needs to be done.

ESTABLISH THE GOAL AND DATE, AND GIVE THE NEW CURRENCY A NAME

Goal

The G-7 or G-8 countries meet regularly and they issue statements about their views of the needs of the world and their role in their solution. In June 2005, the *Financial Times'* Martin Wolf asked his readers for recommendations that might be passed on

to the G-8 meeting in July in Scotland, and the Single Global Currency Association recommended that he urge the G-8 to begin planning for the Single Global Currency.¹⁷ Such planning would effectively be the statement, if not otherwise stated: “We seek a Single Global Currency,” or even “We are exploring whether we should seek a Single Global Currency.”

Even if one member of the G-8 made such an announcement, the research agendas for many economists would shift in that direction.

In June 2001, Malaysian Prime Minister Mahathir Mohamad “proposed the creation of a single international currency that would anchor global trade. The currency, in which banking reserves would be held, should belong ‘to no one country.’” He also stated that currencies “must never be traded as commodities.”¹⁸ Such vision from a single controversial national leader is not enough, but it’s a start.

Setting a goal has a way of focusing people’s attention on what really matters, and all existing work can be reviewed as to whether it supports that goal. For example, the IMF still conducts Article IV consultations with the Eurozone countries even though the purposes of the IMF are about foreign exchange rates. See, for example, the January 2006 report of consultation with Germany¹⁹ where the IMF continued to measure Germany’s balance of payments, even though Germany has no currency of its own, and therefore zero current account and zero balance of payments. Another example of residual measurement of monetary factors is the Article IV consultation with Ecuador where the IMF tracked the “real effective exchange rate” for the years after Ecuadorized to the US dollar.²⁰

As the goal of a 3-G world is extremely measurable and highly visible to the people, it will be a more specific motivator than a goal more generally stated. For example, the goal of placing a man on the moon by the end of the 1960s was similarly

visible and it was explicitly achieved, as was the elimination of smallpox. In contrast, some goals are more general and less measurable, and therefore less motivating, such as reducing poverty.

Date

Setting a date also would be an important step, and it will raise the expectations of the people of the world that the efforts toward implementation are serious.

An example used in this book is President John Kennedy's 1962 goal of a human moon landing before 1970. In January 1994, the Europeans established January 1999 as the inauguration date for the euro, with bill and coins to be distributed three or four years later.²¹ Both goals were dramatic and fortunately, both were successfully achieved.

Name

In 1995, the European Council gave the name "euro" to the planned currency, and that was surely influential in assuring people of the reality of the planned change.

One way to increase public support, and to raise expectations for the Single Global Currency, is to conduct a multi-stage worldwide polling effort to determine the name of the new currency. The first stage might begin with 100, more or less, possible names which might come from an international nominating committee, with broad representation among all the peoples of the world. Suggestions would be solicited by newspapers, the Internet, and every other possible communications medium.

Then the 100, plus or minus, could be narrowed down to a smaller selection in one polling and then down to one. Perhaps the representatives of the 191 UN members could have a role in the decision process, but the foundation principle for the poll should be one person-one vote.

While it's possible that the world will select the word "dollar" to denote the Single Global Currency, it's unlikely. The word "dollar" is unalterably now affixed to the currency of the United States, even if used by other countries such as Australia and Canada. The term "dollar" is weighted too heavily with the politics and the reputation of the United States.²² A fresh start with a fresh non-national name is likely to be preferred. The euro would have faced difficulty if it had been named the "mark" or the "lira."

Apparently, the term "euro" has escaped the European heritage of colonialism, warfare, and the Holocaust. Instead, Europe now stands for cooperation and negotiation, and countries are joining the European Union and the European Monetary Union because they want to be part of the New Europe.²³

IZE TO ANCHOR CURRENCIES

Willem Buiter defines "dollarization" as "unilateral adoption by a country of the currency of another nation as the only legal tender." He also referred to it as "asymmetric monetary union,"²⁴ because the governors of the anchor currency give no representation to the izing currency and no share of the seigniorage. Regardless of the high utility of such a monetary union, it's not a feasible solution for most countries, except for the very small, because their expectations of having a meaningful representative voice in the management of a large currency are necessarily low. For larger countries, it's almost as unacceptable a method of monetary union as accepting political domination or military conquest. Napoleon's francs were accepted throughout his empire, as was the ruble in the Soviet Union, but monetary policy at the end of a gun is not a welcome process.

It may be that some interim stages might be developed between pure ization, with its lack of political representation

and lack of seigniorage, and monetary union. For example, something like an “associate” membership in the EMU might be established for ized countries or monetary unions, where they might share a single vote, just as do groups of countries represented on the Executive Board of the IMF. Similarly, some formulas might be developed for the European Central Bank to allocate seigniorage to associate member countries, just as the International Monetary Stability Act of 2000 sought to do for izers to the US dollar. Perhaps such seigniorage could be included as part of international foreign aid programs, which might be appropriate for an associate membership in the EMU for the African monetary unions. Foreign aid could be conditioned upon joining a monetary union.

Benn Steil and Robert Litan report that the EMU is hostile to euroization because it evades the Maastricht criteria for officially joining the Eurozone.²⁵ Perhaps, however, the ECB’s concerns will subside as the euro’s place in the world financial system is further solidified and the strength of the euro is seen as based upon the credibility of the bank rather than of the incoming or the existing member states.

When countries are coming out of a political or economic crisis, it might be a good time to consider joining a monetary union or izing with a solid anchor country. After the 2003 Iraq war, there was some consideration given to izing Iraq to the euro or US dollar, but the decision was made to resurrect the Iraqi dinar.²⁶ An additional choice might have been to join the planning for the Gulf Cooperation Council’s common currency. Similarly, Zimbabwe, currently the worst example of hyperinflation, might consider ization to the South African rand or another stable currency.

The pace of launching new countries has declined to nearly zero since the end of the European and Soviet colonial eras, but more will still come. A challenge for the world monetary system

will be to replace the lingering habit of planning a new currency with the choice of whether to join a monetary union and then, which one. One of the next countries to be launched will be Palestine, and planning for a new currency has begun.²⁷ Currently on the West Bank and Gaza, the currencies are the Jordanian dinar and the Israeli shekel. One commentator suggested that both Palestine and Israel tie to the US dollar.²⁸ However, a monetary union with Israel seems politically infeasible, but Palestine could consider joining with the financial powerhouse of Lebanon or with Jordan or with the Gulf Cooperation Council countries. Establishing a new currency for Palestine would be a step in the wrong direction, in relation to the movement toward a Single Global Currency.

EXPAND EXISTING MONETARY UNIONS

As noted earlier, the EMU is entirely within the European Union, at least so far, and it's committed to expand to twenty-two countries. The first of the ten New Member States to join the euro will likely be Slovenia on 1 January 2007, and that will re-ignite the publicly visible forward momentum of the euro. John Edmunds and John Marthinsen wrote in 2003, "Once a currency union is formed, we predict that it will exert a force of attraction on countries that have not joined...."²⁹

Beyond the twenty-two, the potential for further additions to the EMU will grow as the EU grows. Already scheduled is the admission to the EU of Bulgaria and Romania for 2007, and preliminary negotiations have begun with Croatia, Macedonia and Turkey. Ukraine is a potential member, as are the remaining Balkan states, Serbia/Montenegro and Bosnia/Herzegovina.³⁰ With those named countries, the EU would grow to thirty-three, and with EU accession would come monetary union with at least thirty, if the three initial holdouts—Denmark, Sweden and UK—remain outside.

If the United Nations membership stays at 191, a Eurozone membership of thirty would bring its percentage to 16 percent of the nations of the world. If the euroized UN members (Andorra, Liechtenstein, Monaco and San Marino) are included, that would bring the number to thirty-four or 18 percent.

At some point, Russia will join, as it is Europe's largest country with about one-third of Europe's landmass to the Urals. Also, there are Belarus and Georgia and other former states of the Soviet Union, which may create their own monetary union, before joining it to the EMU. Once Russia joins as a European member, the euro will extend to the Pacific Ocean, and five more Asian countries will then border the Eurozone: Kazakstan, Afghanistan, Mongolia, China, and North Korea.

Maybe Israel or Iceland will be considered, thereby further breaking the symbolic barrier of continental contiguity. Canada, with its longstanding interest in monetary union, but averse to digestion by its giant neighbor to the south, might consider joining, as might Caribbean countries and former European colonies in South America.

Even without accepting the goal of a Single Global Currency, it's widely recognized that the euro's role in international finance is increasing, as that of the dollar is declining. Jeffrey Frankel and Menzie Chinn write that the euro may surpass the dollar as the international reserve currency by 2022.³¹ As the euro's international role increases and that of the dollar declines, the next option will not be merely the ascension of the newest monetary power, but to ask whether it is time to stop the competition and declare a new winner: the Single Global Currency, and the trophy can be retired.

Similarly, other monetary unions will likely expand, now that such a solution to the exchange rate puzzles has emerged and endured. The Eastern Caribbean Monetary Union could expand³² to include all of the Caribbean, and the West and

Central African monetary unions can merge and expand.

If the European Central Bank were to set for itself the goal of becoming the Global Central Bank, it could likely do so. A change in name for the bank and the currency would be helpful and symbolic. There would need to be significant indications that the doors are open to those who wish to join in the movement toward a 3-G world. For such an invitation to be successful, it would have to go beyond the accommodation of izing, and toward real, even if minor, participation in ECB monetary decisionmaking.

ESTABLISH NEW MONETARY UNIONS

As described in Chapter 4, there are growing movements to establish regional monetary unions in the Arabian Gulf (GCC), East Asia, South Asia, South Africa, West Africa, all of Africa, South America, North America, and across regions, such as for G-2, G-3, etc.

Richard Cooper recommended in 1984 that “the proposal should be undertaken in the first instance by the US, Japan, and the members of the European Economic Community. This group represents the core of the monetary system at present and for some time to come.”³³

Robert Mundell’s proposals on the next step of creating a super-monetary union among the larger economies are referenced extensively here. He wrote in 2000:

A G-2 Monetary Union? I want to emphasize, however, that achieving price stability and fixed exchange rates among the G-3 is much easier to achieve—from at least a technical point of view—than people generally think. It might be hard to think of a currency union of the three currency areas at the same time. But in fact a union of any two would be sufficient to set the trend. The three currency areas have mone-

tary masses more or less corresponding to their respective GDPs, the ratio of about \$9.5 trillion, \$7.0 trillion, and \$5 trillion respectively, together making up perhaps 60 per cent of world GDP. A monetary union of any two of the areas would make it the dominant currency area and thus make it very attractive for the third area to join because the alternatives would be worse. Any one of the three could opt out and accept the number two position.”³⁴

However, perhaps because he was apprehensive about the political feasibility of EMU-like monetary union of the G-3, he wrote that the union could be a currency area, where the value of the three currencies would be irrevocably fixed to each other. “My ideal and equilibrium solution would be a world currency (but not a single world currency) in which each country would produce its own unit that exchanges at par with the world unit.”³⁵ Further, he wrote:

Everything would be priced in terms of intors, and a committee—in my view, say, a G3 open market committee designated by the Board of Governors of the International Monetary Fund—would determine how many intors produced each year would be consistent with price stability.”³⁶ (As noted in Chapter 5, one of Mundell’s proposed names for the G-3 currency is “intor,” combining “International” and “or,” from the French word for gold.³⁷)

How would monetary union between two of the G-3 countries come about? The clue is provided by what the EU-11 did. To do that, they had to have a common agreement on 1) the targeted inflation rate; 2) a common way of measuring the inflation rate (Eurostat’s harmonized index of consumer prices, HICP); 3) redistribution of the seigniorage (in proportion to equity in the ECB); 4) locked exchange rates;

and 5) a centralized monetary policy. Europe did that. Why would it be more difficult to do it between, say, the dollar and the euro, or the dollar and the yen, or the yen and the euro? The rate of inflation is close enough, the inflation target is about the same, why not just lock exchange rates and organize a common monetary policy? It would be administratively and institutionally easy and the politics would not be more difficult than, say, the organization of D-Day.”³⁸

Such a step toward a 3-G world by the G-3 would be very helpful.

In 2005, Professor Mundell further clarified his vision of the transition, and concern about the feasibility, with an interim stage of coordination of currencies, with the DEY, for Dollar/Euro/Yen:

My approach is rather to start out with arrangements for stabilizing exchange rates, and move from there to a global currency. It would start off from the situation as it is at present and gradually move it toward the desired solution. We could start off with the three big currencies in the world, the dollar, euro, and yen, and with specified weights, make a basket of them into a unit that could be called the DEY. Bearing in mind that there is no important inflation in the DEY area, I would propose that the three DEY central banks undertake to minimize currency fluctuations, using a combination of unsterilized currency intervention and monetary policies. The DEY could then become the platform on which to build a global currency, which I shall call the INTOR.³⁹

Mundell continued

Let us make a leap of the imagination and consider the pos-

sibilities of a monetary union of the FRB, ECB, and BOJ, i.e., a G-3 monetary union. Of course the argument will be made that these areas are too different to have a monetary union. But in terms of economic reality, they are much more similar than the twelve countries that now make up the EMU and a different magnitude from the diversity of the twenty-five countries that now make up the European union and which will probably at some future date all be members of the same currency area.

The first point it is necessary to make is that the G-3 monetary union I am thinking about is not a single-currency monetary union. I am not proposing that the United States give up the dollar, that Europe give up the euro or that Japan give up the yen. It is rather a multi-currency monetary union, a fixed exchange rate area with a common monetary policy.

Formation of a monetary union for members of either a closed economy or an open economy with flexible exchange rates requires five conditions:

1. Consensus on an inflation target (e.g., 1–3 percent);
2. Construction of a common index for measuring inflation (e.g., euro area's harmonized index of consumer prices [HICP]);
3. Locking of exchange rates, as EMU did in July 1998;
4. Establishment of the DEY central bank to determine monetary policy as the ECB did in 1999–2002; and
5. Mechanism for distributing seigniorage (in EMU it is proportionate to equity in ECB).

The duty of the DEY central bank would be to pursue monetary stability in the DEY area, which represents nearly two-thirds of the world economy. Successful monetary unions need some arrangement to prevent free-rider fiscal policies.⁴⁰ The problems should not be insurmountable in an

arrangement with three central banks. There would be a great increase in efficiency and the gains from exchange and payments once the huge gyrations of exchange rates are removed and an enormous gain to the rest of the world. The DEY unit should become the platform on which to base a multilateral world currency in which every country would have a share.⁴¹

Mundell continued:

A strong case can be made for making provisions for widening, extending and generalizing the monetary union to other countries. First, the other countries would benefit from stability of exchange rates among the three largest currency areas because it would serve as a more stable anchor for their own currencies. Second, all countries would benefit from the adoption and use of a global unit of account. Third, countries outside the G-3 (especially the larger countries) might resent trilateral dominance in money matters in which they have no voice. Fourth, a world currency is in the nature of a social contract in which every country has a juridical stake in proportion to its economic size.

The board of governors of the IMF, composed of the finance ministers or central bank governors of each member country, represents a broad-based international monetary authority in which all countries have votes. The adoption of an international currency with a name like INTOR, sanctioned by the board of governors of the IMF, freely convertible into dollars, euros, yen and DEY, would mark a great advance in the creation of an international financial architecture.

The board of governors of the International Monetary Fund could make whatever changes are necessary in the

IMF articles of agreement. Instead of emphasizing the necessity of flexible exchange rates to its clients, the IMF executive board would be asked to stress the advantages of achieving stable exchange rates to an INTOR that is stable in terms of the main world currencies.

The process could start bilaterally between the United States and Europe, Europe and Japan, or United States and Japan, or simultaneously, with all three. The core basket of the three DEY currencies would not be fixed for all time and it could be altered at the discretion of the board of governors. As the economies in the basket expand or contract in relative terms, weights in the basket would be duly adjusted.

Consideration could also be given to the changes in the currencies in the basket. At the present time, Britain's pound and China's yuan represent, respectively, the fourth and fifth largest currency areas and consideration could be given to those two areas, allowing for the possibility that Britain might join the euro, and that China's currency might become convertible.

The basic plan for the world currency could be implemented in three stages:

- Stage I: Transition to stable exchange rates;
- Stage II: The G-3 monetary union based on the DEY; and
- Stage III: Creation of the INTOR.

Stage I would be inaugurated with steps preparatory to the G-3 monetary union. A gradual process could start with ceilings and floors on the G-3 currencies.

Stage II would involve the steps outlined above: the fixing of an inflation target and definition of the price level in terms of the DEY; the locking of exchange rates; the establishment of the joint monetary policy committee; and the arrangement for the division of seigniorage.

Stage III would begin after Stage II has been completed. It would involve the selection of a definitive name and value of the currency, the mechanism and agency by which it will be introduced, the system and criterion for controlling its quantity, its backing in terms of currency or commodity reserves, and the location of its central authority.⁴²

The largest problem with Professor Mundell's interim step of a monetary union using fixed rates among the major G-currencies is that their currencies will still be in the foreign exchange marketplace and will require central bank intervention to achieve stability, where they will be subject to intense pressure from speculators, and large capital flows.

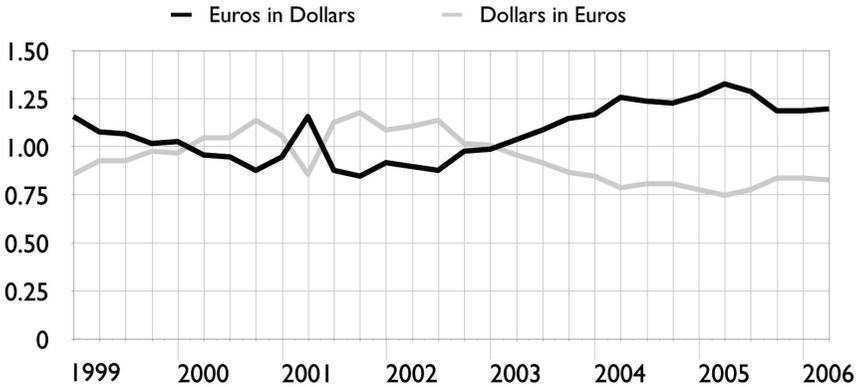
Another problem with the interim steps is that public support would be needed and the concept of fixing exchange rates among currencies is far more difficult to understand than the concept of a single currency. People around the world understand the concept of the euro, but not the complications of fixing exchange rates. As the amount of public support necessary for a G-3 multicurrency monetary union would be nearly the same as for a single currency, why not skip the interim steps?

The idea of a monetary union between the dollar and the euro was also addressed by Bryan Taylor, who proposed in 1998, before the adoption of the euro, a "eurodollar" combination with the dollar, to be managed by a "Global Reserve Bank."⁴³ He argued that the best exchange rate for such a union would be at parity, i.e., 1:1, but foresaw that the union could be successful even if the pre-union exchange rate was not at parity. At the time of the October 1988 article, it was known that the euro was to begin its life at the rate of \$1.16. Since the 1 January 1999 adoption of the euro in the ledgers of Europe, that magical 1:1 parity point has been crossed on 19 trading days, eight of which were on the journey "down" against the dollar in 1999

and 2000 and 10 of which on the return journey “up” against the dollar.⁴⁴

Below is a graph of the US dollar and the Euro, each from the perspective of the other currency.

**THE EURO/US DOLLAR EXCHANGE RATES 1999-2006,
BY QUARTER⁴⁵**



For the sake of simplicity, 1:1 parity has great appeal for a G-2 union, and also for the timing of a union between Canada and the United States. The difficulty is that artificially closing the gap among currencies can be expensive, and even if parity is reached by market forces, it’s never known when it will happen—until it does. Decimal simplicity can also come with a 1:100 parity for the euro or US dollar and the yen.

However, fixing exchange rates among the currencies of independent countries can be very difficult as the pre-existing currencies still exist and are subject to the currency markets and speculation. The European Commission report *One Market, One Money* explicitly chose to pursue a single currency, rather than a monetary union of fixed exchange rates, and used six criteria to support that decision: transaction costs, transparency of prices, economies of scale, currency credibility, visibility, and external benefits (of having one).⁴⁶

C. Fred Bergsten has also proposed a "Finance G-2" between the euro and the dollar, noting, that such an association "will inevitably become a necessary feature of the international monetary policy of both and thus a central element of the global monetary system of the twenty-first century."⁴⁷

While a G-2 or G-3 monetary union would, by itself, create the critical mass to thrust the world rapidly toward a Single Global Currency, other new monetary unions can be established as well. We can expect to hear soon of such developments in Africa, Asia, and South America.

Another monetary union route for the United States is to join with Canada and Mexico as has been proposed. The timing will likely come when the currency competition with the euro becomes more intense and the United States, like any modern and threatened global corporation, will look for merger partners to bolster "market share." At that point, the United States will be more willing to give other countries a voice on the Federal Reserve decision making committees.

ESTABLISH A PROTOTYPE GLOBAL CENTRAL BANK AND A GLOBAL MONETARY UNION

Several economists have written that small countries should abandon their currencies, for which the maintenance of an independent monetary policy is not worth the operating cost and certainly not worth the risk of a currency crisis. But where to go? There has been much discussion of izing, but there are political disadvantages to that route, the most serious of which is the choice of anchor. As a common currency, the euro would seem the safest politically, but the European Central Bank is intent on getting its own, growing, house in order without taking on challenges beyond its original charter.

In the meantime, the IMF, the Bank for International Settlements, the United Nations or other suitable international organ-

ization could establish an explicitly named “Global Central Bank,” to be run initially by the founding organization, but later by its cooperative members, which would, by definition, become members of what could be explicitly called a “Global Monetary Union.” Robert Mundell has suggested that such a Global Central Bank could issue credible currency which could be “an international asset backed by reserves of dollars, yen, euros, and gold.”⁴⁸

The name of the currency of the GCB could be picked through a large international search, as described above, or through a less cumbersome process. Eventually, when the work of this GCB is merged with that of other monetary unions and currency areas, the name of the currency could be changed through the larger selection process, if desired. This GCB currency could be explicitly defined as a basket of the major currencies, such as the euro, US dollar, yen, and yuan, and it could be backed by the resources of the IMF, and operate as a currency board.

The GCB could begin its work when just one country decides to SGCize to the GCB currency. Then a second country would join and a third, and so on. As part of the IMF’s Article IV consultation, it could recommend to countries that they join the new GCB/GMU.

Allocation of seigniorage would be a simple matter, comparable to current levels of foreign aid.

Just as a level of trade or other economic integration is not required for ization, it would not be required for countries joining the GCB/GMU. For example, the existence of an economic relationship between Grenada and Tonga would not be required.

The total GDP of the smallest one-hundred nations was \$432 billion in 2004, which is less than the GDP of the sixteenth ranked country, the Netherlands.⁴⁹ The total GDP for the fifty

smallest was \$56 billion, which was less than the GDP of Bangladesh, the fifty-fourth largest. Thus, to develop a Global Central Bank to provide monetary services for most of the countries of the world would be a project of manageable size.

Borrowing from a well-known saying made popular in the US film, *Field of Dreams*: if the GCB is built, the members will come.⁵⁰

ENSURE THAT CURRENCY AREA COMPETITION IS HEALTHY

In his "On Why Not a Global Currency," Kenneth Rogoff wrote of the benefits of having competition among a few major currencies, such as encouraging monetary innovation. He envisioned those currencies vying for the No. 1 spot and perhaps to become the major foreign reserve currency.⁵¹ As growth is usually a major measurement of success in organizations, another focus of such competition would be to see which currency will take the lead toward a Single Global Currency. Two can merge to become larger than the third, or one can find other merger partners to move ahead. When a leader of the sponsoring country or central bank of one of the major currencies announces a goal of becoming THE Single Global Currency and looks for partners, a seismic shift will occur.

Given the head start of the Eurozone in the dynamics of currency area growth, it may be hard for the United States or Japan or China to catch up. That is, Europe has shown how nations can work together for the common good on the issue of a common currency. Joseph Nye's "soft power"⁵² might be just the right mix of economics and politics that will transform the euro into the Single Global Currency. At least in monetary terms, Mark Leonard's book, *Why Europe will run the 21st Century*, may be entirely on the money.⁵³ He focused on the European model of negotiation and consensus and voluntary agreements. Titles of books can sometimes be misleading, and Leonard really

means that the techniques of cooperation developed by the post-World War II Europeans have become very successful and those techniques will dominate the world in the twenty-first century, but not the “hard” power of the European nations.

Whether the managers of the US dollar or the euro or the yen or yuan work together for the stability of the world’s financial system, or whether they view the power, influence, and success of their own currency as the sole goal, will help determine not only the eventual outcome of the journey to the Single Global Currency, which is certain, but how we will all get there—cooperatively and proactively, or competitively and reactively.

It’s not known how the central bankers *really* view their roles as custodians of the currency. If they were oriented solely toward the power of their own currency, then why, even if retired, would former US Federal Reserve Governor Paul Volcker strongly support a global currency? Perhaps he was thinking of transforming the dollar into that pre-eminent global currency; but there is no evidence for that view.

Charles Wyplosz hinted at the motives of currency competition when he wrote in 1997, “The international role of the euro is the hidden agenda of Europe’s adoption of a single currency.”⁵⁴ There are many in Europe, thus, who appreciate US support during the two World Wars and the Cold War, but who resent the US influence in the world, including the omnipresence of the US dollar. Included in that resentment is surely the view that the ability to live above the requirements to balance its payments is undeserved, and that the US hubris deserves its comeuppance. A problem with that view is that the comeuppance may endanger financial stability for the world. Thus, the international currency competition should focus on the larger goal of worldwide financial stability rather than relative ranking for a currency.

One champion of North American monetary union, Herbert Grubel, argues monetary union consolidation should stop at the point of regional monetary unions so that currency competition could continue to generate monetary innovation. He wrote, "As Hayek noted, there are no substitutes for competition as a process for discovery of successful innovations in markets and, by extension, economic policies."⁵⁵

When that competition reduces the number of currencies to "three to four if not *n*," as Kenneth Rogoff might say, it will then be apparent whether the competition should continue or whether the monetary system should finally become a unitary system, like the worldwide calendar/time system or the worldwide metric system.

CONVENE INTERNATIONAL CONFERENCE(S)

Prior to the 1944 Bretton Woods International Monetary Conference, the 1867 Conference in Paris was the best known, but a series of conferences called to plan and implement a Single Global Currency would become the best known of all.

Such a conference cannot be scheduled in a vacuum. As Todd Sandler has noted in *Global Collective Action*, there would need to be sufficient preconditions and incentives for a successful conference.⁵⁶

The first such named conference might be held to initiate the process to determine a name for the currency, and to establish a goal date and a schedule for implementation.

The legal foundation for such a conference could be the Articles of Agreement of the IMF which provide for their amendment upon approval by the Board of Governors. The Articles also provide for the establishment of a special Council to consider such amendments, upon approval of 85 percent of the voting power of the Board of Governors.⁵⁷

MOBILIZE STAKEHOLDERS TO ENCOURAGE THE TASKS ABOVE AND THE IMPLEMENTATION OF THE SINGLE GLOBAL CURRENCY

Fundamental to any political effort is the need to mobilize stakeholder groups such as those in the partial list presented below: consumers, economists, accountants, investors, international corporations, travel and trade organizations, international bankers, central bankers, nations, international humanitarian organizations, international finance organizations (IMF, World Bank, WTO, Bank for International Settlements). In short, everybody in the world can be mobilized. Individuals can work through groups, and can consider other options as presented in Appendix B, "What Citizens of the World Can Do." Even some of the currency traders and speculators can be mobilized as they know that the current system needs to be replaced by a Single Global Currency. George Soros knows that the world needs a Single Global Currency managed by a Global Central Bank.

Consumers

Of the earth's 6.5 billion people, a substantial proportion are consumers of internationally traded goods and services, and therefore have an interest in monetary and price stability and low prices. Consumers International, headquartered in London, "defends the rights of all consumers, particularly the poor and marginalized, through empowering national consumer groups and campaigning at the international level. CI represents 234 organizations in 113 countries."⁵⁸

Another organization for consumers, and business too, and as described in the previous chapter, is the International Organization for Standardization (ISO), in Geneva. It "is the world's largest developer of standards. Although ISO's principal activity is the development of technical standards, its standards also have important economic and social repercussions. ISO stan-

dards make a positive difference, not just to engineers and manufacturers for whom they solve basic problems in production and distribution, but to society as a whole."⁵⁹ It has subcommittees for world trade and financial services which should have an interest in standardizing money.

Economists

While most international economists have not publicly stated their views about the Single Global Currency, and while most of those who have made statements have been cautious about the utility and/or the feasibility, the world will change due to the actions and thinking of a few.

Robert Mundell has written extensively about the Single Global Currency and has conducted several annual panel discussions at his Tuscan home, Santa Columba.

During the run-up to the euro, German economist Peter Bofinger "organized economists to speak out publicly in support of the euro."⁶⁰

Andrew Rose has urged similar activism in support of monetary union, though not to the global level, and has written:

At this point, academics should be persuading policymakers to lower the perceived political benefits of national money. Any debate on monetary union must leave the ivory tower of the academy; policymakers must raise it publicly if the discussion is to be serious. Succinctly, academics should be trying to get policy-makers to raise monetary union to the level of national debate.⁶¹

It's time for such economists to present the case for the Single Global Currency, especially its economic utility. Let the people and the politicians worry about the political feasibility. In 2003, several economists endorsed a letter to the finance minis-

ters of the OECD countries urging them to begin planning for the Single Global Currency.⁶² As was seen with the euro, it was the people and the politicians who led the effort, and now most economists support the euro.

Accountants

Accounting for the international trade and investments of individuals and corporations will continue to be a challenge even with a Single Global Currency. Without it, the task will remain obviously more difficult. Through their multi-billion dollar/euro losses, the corporate scandals of Enron and Worldcom in the United States and Parmalat in Italy have reminded the world of the importance of careful, accurate accounting. International accountants, through their employers or through national and international accounting organizations, have a natural motivation to work for the implementation of a Single Global Currency.

There are international standards about how to account for fluctuations of currency values, but they still lead to arbitrary calculations, due to currency value fluctuations.

Investors, Investment Companies and Investment Funds

As individuals and as participants in their mutual funds, retirement funds, and other grouped funds, investors seek a return and/or growth for their investments. They also favor stability over instability and knowledge over ignorance.

In the United States, mutual funds and retirement funds have become more active in the management of the companies in which they hold stock. The California Public Employee Retirement System (CALPERS), with nearly \$200 billion in assets, has an international reputation for pressing its interests in good governance.⁶³

With trillions of dollars in assets increasingly invested inter-

nationally, this industry can accelerate the movement toward the Single Global Currency by actively pursuing its interest in international financial stability.

International Corporations and their Associations

European corporations and their associations supported the planning for the euro and its implementation.

Guidliemo Carchedi explained the lobbying efforts for the euro in some detail in his book, *For Another Europe*:

Perhaps the most influential of all these groups is the European Roundtable of Industrialists (ERT), which was founded in 1983 by Umberto Agnelli of Fiat, Wisse Dekker of Philips and Pehr Gyllenhammer of Volvo. The ERT has dramatically increased contacts among European corporations. Its members are forty-five 'captains of industry,' that is, the Chief Executive Officers of the most important European oligopolies, also called transnational corporations, which in 1997 had a combined turnover of ECU 5,501m and three million employees world-wide. The ERT has some ten working groups covering major areas of interest (e.g., competition, education)....

This new alliance between the European Commission and the ERT played a crucial role during preparations for the Internal Market. In 1985, ERT chairman Wisse Dekker launched his proposal and timetable for the removal of all obstacles to trade within the European Economic Community. The European Commission was easily convinced. This pressure from industrial leaders for unification of European markets was precisely the momentum towards further European integration that the Commission was seeking.... Alongside the ERT, there is also the Union of Industrial and Employers' Confederation of Europe (UNICE). While the

ERT influences the general criteria informing European legislation, UNICE reacts to specific pieces of legislation and makes sure that they are tailored to business's interests....

In the autumn of 1993 the ERT prepared its report 'Beating the Crisis'. In December 1993, the Delors 'White Paper on Growth, Competitiveness and Employment' was released. The two reports were prepared in close co-operation between the ERT and the Commission and 'are strikingly uniform in their calls for deregulation, flexible labour markets and transport infrastructure investments'.... As early as 1985, the ERT had argued that the Internal Market must be completed with a single currency. The EMU continued to be a leading ERT demand in its 1991 report *Reshaping Europe*. This report also presented a timetable for EMU implementation which bears remarkable similarity to the one incorporated in the Maastricht Treaty a few months later. However, the main work preparing the ground for the EMU was not done by the ERT, but rather by (one of its offsprings) the Association for the Monetary Union of Europe (AMUE). The AMUE was founded in 1987 by five transnational corporations, each of which was also represented in the ERT. The AMUE enjoys the same privileged access to high decision-making bodies as the ERT and its co-operation with European oligopolies and the EU is close. The Commission not only provides financial support to the AMUE but also frequently consults it on monetary questions. The AMUE also has close contacts with the European Central Bank.⁶⁴

The ERT and AMUE model could be useful for international corporations as they join together in support of the Single Global Currency.

In Switzerland, the chief economist of the Swiss National

Bank, Ulrich Kohili, noted in a 2003 speech lauding the European Monetary Union, and while urging Swiss abstinence, that there was pressure in his country from industry and the unions to join the euro because the strong Swiss franc was hurting exports, especially to the Eurozone.⁶⁵

For the campaign for the Single Global Currency, worldwide business and trade organizations, such as the International Chamber of Commerce,⁶⁶ will need to be mobilized. Even such support as the publication of articles in business association publications will help generate momentum for the 3-G world. In 1996, the American Chamber of Commerce in Belgium published in its *AmCham* magazine, "The Case for a Single Global Currency" by Brian Warburton.⁶⁷

Even for corporations whose self-interest would appear to be damaged by a common currency, there is often a silver lining. At a recent annual meeting of the Directors of HSBC Malta, the Maltese subsidiary of the international HSBC bank, CEO Shaun Wallis was asked about the effect of the upcoming implementation of the euro, and he replied, "Yes, we will have lower foreign exchange profits, that's true. But the introduction of the common currency will create more trading opportunities. It will provide stability because 60 percent of Malta's trade is done within European Union borders."⁶⁸

Finally, corporations do not all have to be "international" in order to support the implementation of a Single Global Currency. In Ecuador in 2000, the Chamber of Commerce supported the dollarization in order to achieve financial stability.⁶⁹

Labor and Labor Unions

Around the world, labor has an interest in fair pay for its work, worldwide. Noam Chomsky makes the point that labor unions often label themselves as "international."⁷⁰ Depending upon the country or region, that interest works in favor of a Single Global

Currency. Chinese workers are interested in being paid a wage closer to the world average, and Western workers are interested in a fair representation of the actual wages paid to workers around the world, without the fog of exchange rates, real exchange rates, or Purchasing Power Parity.

In testimony on 23 April 2004 before an Australian legislative committee, Dr Geoff Pain testified on behalf of Scientists for Labor, to the Joint Standing Committee on Treaties at its meeting in Perth, "But something this Committee might like to consider in terms of improving Australia's trade position is my proposal for a Single Global Currency.

"Many of Australia's problems come from the absurd obsession with the 'value' of the dollar against various currencies. A Single Global Currency would end unproductive gambling through hedging and futures markets."⁷¹

Writing two years previously in the online Australian labor magazine, *Workers Online*, Dick Bryan, a professor at the University of Sydney, wrote in an article otherwise questioning Australianization to the US dollar, "There is, for accumulation, a clear logic in having a Single Global Currency. Multiple currencies are as sensible as different rail gauges and different power sockets—they are an anachronistic inconvenience and costly."⁷²

In 2002, Philippe Van Parijs, Secretary of BIEN (Basic Income Network), stated at a meeting in Geneva, "More worth exploring, in my view, is the idea of combining the move to one Single Global Currency, as advocated, e.g., by Myron Frankman, 'Beyond the Tobin Tax: Global Democracy and a Global Currency,' *The Annals* 581, 62-73, and the use of the seigneurage rights associated with this currency for funding a modest non-inflationary basic income at the level of the annual growth of the world GDP, along the lines developed by Joseph Huber at our Berlin congress."⁷³

While not addressing the issue of the Single Global Currency directly, Barbara Shailor of the US AFL-CIO wrote in 2003 that currency crises and currency speculation are not in the interests of working people.⁷⁴

Maybe it will be around the issue of the Single Global Currency that workers of the world can truly unite. As Bryan Taylor suggested, their slogan might be, "Currencies of the World Unite."⁷⁵

Travel and Trade Organizations and Corporations

The people who travel and trade have the most obvious interest in making international trade and travel more convenient and less expensive. This group includes the hotel chains, the airlines and passenger liner companies, and the shipping and forwarding companies.

World exports in 2005 were predicted to be about \$9.5 trillion and worldwide trade in commercial services was predicted to total \$2.3 trillion.⁷⁶ Every product and service in those totals went through a currency change transaction, except those which began and ended within the same currency area.

International Bankers

While the banking industry earns billions from the trading of currencies for their customers and for themselves, they also stand to gain from international financial stability. Currency crises are not good for banks, nor their customers. Banking used to be a conservative business where risks were avoided where possible.

Central Bankers

Paul DeGrauwe and Jacques Melitz wrote that a major reason for the adoption of the euro was that the central bankers of Europe became convinced in the 1970s and 1980s that the tools

of their trade, exchange rate interventions, were not as effective as once thought,⁷⁷ and even “that countries that engaged in such monetary activism would experience an inflation bias and macroeconomic instability.

From the perch of this new theoretical outlook, relinquishing one’s own monetary policy instrument did not seem so costly as before.”⁷⁸

Former Turkish central banker Gazi Ercel supports a Single Global Currency,⁷⁹ and has participated in Robert Mundell’s conferences at Santa Columba.

Another former central banker who supports the Single Global Currency is Paul Volcker, former Chair of the US Federal Reserve Bank, and the source of the aphorism, “A Global Economy Requires A Global Currency.”⁸⁰

In New Zealand, a non-executive director of the board of the New Zealand Central Bank, Arthur Grimes, wrote in support of a Single Global Currency before taking his current position.

Benjamin J. Cohen views central bankers as stuck in currency competition and unable to see a cooperative future. He writes, “As the future unfolds, therefore, the worldwide competition among currencies appears destined to grow more intense, not less. Central banks must confront not just one another in an oligopolistic struggle for market share.”⁸¹ He seems to view the goal of central bankers as to “exercise independent and autonomous monetary policy”⁸² which is really a traditional means to the overriding goal which is stable money.

On the other hand, Richard Cooper has written that “central bank cooperation has grown extensively, if fitfully and sporadically, since the birth of the BIS [Bank for International Settlements] and the inauguration of monthly meetings of central bankers in 1930,” and notes that technology has enabled far more cooperation since then.⁸³

The examples of the establishment of the euro and the movement of the New Member States into the Eurozone show that central bankers are more interested in stable money for the citizens of their countries than they are in competing for some kind of competitive advantage for their own central bank or country.

Non-Governmental Organizations

With the large demonstrations at recent meetings of the World Trade Organization at Seattle and Hong Kong, it's plain to see that there is a large movement of people in the world concerned about economic fairness.

In arguing for capital controls, Kavaljit Singh urged that "peoples' movements, therefore, have to be galvanized for devising new tools of analysis and action to ensure that global finance capital serves the interests of citizens and democratic states and not the avarice of owners and managers of capital."⁸⁴

While there is no guarantee that the billions/trillions to be saved through the elimination of transactions charges and currency risk will go to the poorer people of the world, there is a guarantee that worldwide financial stability will help the poor.

Establishing a 3-G world where people are able to save their earnings, without loss to ruinous inflation or foreign exchange fluctuations, is like giving every person in the world an implicit micro-loan. In the past, inflation and currency crises had the reverse effects, which could never be outweighed by inadequate foreign aid programs.

As Raymond Baker notes in *Capitalism's Achilles Heel: Dirty Money and How to Renew the Free-Market System*, there is not much that can be said for an international system which provides about \$50 billion annually in foreign aid to the poor countries of the world, but which watches the export of \$500 billion a year from those same countries to the financially safer coun-

tries and investment centers of the world.⁸⁵ Even in a Single Global Currency world, people in countries with fewer investment opportunities or with political instability will seek safer havens for their money. However, to the extent that currency risk is a reason for money flight, that money will be more likely to remain in those countries upon the introduction of a Single Global Currency with zero currency risk, and be available to the citizens of those countries.

Nations

From one perspective, the Single Global Currency is a political project and will be achieved when a sufficient number of governments in the world embark upon the goal of a Single Global Currency.

Again (and again, and again), one can look at the establishment of the euro for guidance. De Grauwe and Melitz noted, "Remarkably, though, politicians pushed through the whole process of monetary integration against the advice of most experts."⁸⁶

Increasingly, nations are seeing that it is in their interest to join a stable monetary union and when the real prospect of a Global Monetary Union emerges, they will seek its membership.

International Monetary/Trade Organizations (IMF, World Bank, WTO, Bank for International Settlements)

The roles of these three organizations will change upon the implementation of a Single Global Currency, and most severely the IMF. That's one reason why the IMF should lead the effort for such implementation, and seek to transform itself, perhaps into the Global Central Bank. Ramon Tamames and the author have written separately to IMF Director Rodrigo de Rato to urge him to adopt the Single Global Currency as an IMF proj-

ect.⁸⁷ Although the IMF, through Rodrigo de Rato, has shown increasing interest in the effects of its policies upon the poorer people of the world, it has not yet focused upon the Single Global Currency as a means to that end, nor for any reasons.⁸⁸

POLITICAL ACTION TO ENCOURAGE IMPLEMENTATION OF THE SINGLE GLOBAL CURRENCY

It takes time and hard work to change the world. The movement toward a Single Global Currency began long before this book and that movement will continue inexorably. It will be achieved through the efforts of hundreds of thousands of people working individually and through their affiliated groups, nations, and non-governmental organizations. The efforts of the Single Global Currency Association and the publication of this book are only a small part of the movement. If these efforts can accelerate the implementation of the Single Global Currency by only one month, i.e., by December 2023 instead of January 2024, then these efforts will have saved the world \$33 billion, and accelerated \$trillions in asset and world GDP growth, plus help accelerate all the other benefits of the Single Global Currency. If the cost of *ALL* the non-governmental efforts over the next eighteen years to implement a 3-G world cost approximately \$33 million, which is surely an optimistic guess, then the “return” to the world on that investment will be at least 100,000 percent. That sounds like a good investment, and even common cents/sense.

The political challenges are to seek acceleration of that implementation and to ensure that the transition goes smoothly. Presented here are a few examples of the work to be done by groups and organizations. Options for action by individuals are presented in Appendix B, “What Citizens of the World Can Do.”

Public Opinion Polls

Sometimes just asking questions can provoke consideration of ideas previously thought unthinkable.

Zogby International has polled US citizens about their support of a Single Global Currency. They were asked:

Some financial leaders have proposed using a Single Global Currency, where all of the people in the world would use the same money. They argue that this would eliminate currency trading costs, currency risks, currency misalignments, and currency crises; thereby substantially boosting world prosperity. Would you strongly favor, somewhat favor, somewhat oppose, or strongly oppose a Single Global Currency, where all the people of the world would use the same money?

The question has been asked in three separate polls since 2003, and the answers have been substantially consistent as seen below:

	<u>Dec. 2004</u>	<u>April 2004</u>	<u>Nov. 2003</u>
Strongly Favor	11	9	9
Somewhat Favor	14	16	19
Not Sure	9	10	12
Somewhat Oppose	18	19	17
Strongly Oppose	48	47	42

As with representative politics, expectations are a big part of primary elections and elections. In this case, although a majority in the USA opposes a Single Global Currency, the level of support is higher than expected.⁸⁹ Such polling should be done internationally, and ask other questions or assertions from this book. Is it true, for example, that citizens of the world desire their money to be stable? If given a choice, would they prefer a stable common currency to their own national, but less

stable, currency?

The Single Global Currency Association sponsors an online poll on its website with the same question as above and the results have been pulled from time to time. The sample of voters, from visitors to the SGCA website, is not a random sample, and it is very small, but the results seem to be consistent over time.

	<i>Feb. 2006</i>	<i>July 2005</i>	<i>Dec. 2004</i>
Strongly Favor	33%	33%	31%
Somewhat Favor	13%	14%	15%
Not Sure	5%	5%	6%
Somewhat Oppose	5%	5%	5%
Strongly Oppose	44%	43%	44%
Total Votes to date	1,513	1,133	741

A type of poll is ongoing on a website of the Long Bets Foundation, which contains predictions for the future and visitors vote positively or negatively, and can even offer “bets” to back up their votes. Perhaps befitting the wagering dynamics of foreign exchange, the SGCA placed a prediction, #226, with the Long Bets Foundation at www.longbets.org that the 3-Gs will be achieved by 2024. It states: “By the end of 2024 there will be a Single Global Currency managed by a Global Central Bank within a Global Monetary Union (3-Gs). This currency will be legal tender in countries which comprise at least 51 percent of the world’s GDP.” By 13 April 2006, ten visitors to the site had voted against the prediction and none supported it.

Two other predictions relate to currency changes, but they were not clearly in support of a Single Global Currency. Ninety-two percent of the 83 voters agreed with Prediction #77 that “By 2050, at least two pan-regional currencies, modeled on the Euro, will be used in the world.” Prediction #122 is “There will be

only three significant currencies used in the world by 2063, and that more than 95 percent of the countries in the world will use one of them.” and 61 percent of 71 voters agreed with it.⁹⁰

When a critical mass of political support is achieved, and when people and countries accept the inevitability of the Single Global Currency, then the movement to join will accelerate. That point will likely come when even less than 51 percent of the world’s population supports the idea.

As with all polling, the wording of the questions matters. In 1988, a Gallup poll in the United Kingdom found that 77 percent of the British people opposed the immediate adoption of the euro, but 80 percent believed that Britain would join eventually.⁹¹

Group Resolutions

Every governmental and non-governmental group can indicate its support of the Single Global Currency by passing a resolution. While it’s tempting to think that the only legislative bodies which can vote are those which will establish the Global Central Bank, that’s not the case. Every group, such as neighborhood groups, labor unions, fraternal organizations and student groups, can have an opinion and those opinions will count.

Below is sample resolution:

RESOLUTION PROPOSED FOR ADOPTION BY GOVERNMENT AND NON-GOVERNMENT ORGANIZATIONS

WHEREAS the world’s monetary system is characterized by multiple currencies which fluctuate in value compared to one another, and

WHEREAS these currencies are subject to manipulation, speculation, international imbalance, and currency crisis thereby causing severe and widespread economic hardship

around the world, and

WHEREAS the total annual transaction costs of maintaining such a system are measured in the hundreds of billions of dollars/euros, and

WHEREAS the currency risks among the currencies cause artificially diminished asset values which are measured in the trillions of dollars/euros, and

WHEREAS the implementation of a Single Global Currency will save the world hundreds of billions of dollars in transaction costs, and

WHEREAS the implementation of a Single Global Currency will eliminate the risk of currency crises and the balance of payments problems for every country, and

WHEREAS the implementation of a Single Global Currency will increase the values of assets in those countries in inverse proportion to the level of the existing currency risk.

THEREFORE BE IT RESOLVED that [name of group] supports the implementation of a Single Global Currency as soon as possible.

The idea of a Single Global Currency can be proposed in different settings, including *ad hoc* academic forums. In 2004, the Copenhagen Consensus project brought together eight distinguished economists to whom were brought proposals for solutions to problems in ten areas, such as “Climate Change,” “Conflicts,” and “Financial Instability.”⁹² The eight were asked, “What would be the best ways of advancing global welfare, and particularly the welfare of developing countries, supposing that an additional \$50 billion of resources were at governments’ disposal?”

The eight economists considered thirty proposals from ten papers written by others. Barry Eichengreen presented four proposals for “Financial Instability” including “Option 3: Estab-

lish a common currency."⁹³ He focused only on the benefit to developing countries of eliminating currency crises, and found an annual net benefit of \$91 billion. Unfortunately, the eight economist panel did not apply their rankings of "Very Good, Good, Fair, and Bad," to any of the four "Financial Instability" recommendations among the seventeen projects due to "the complexities and uncertainties in this area."⁹⁴ If endorsed, this one proposal could have contributed a sum almost double the hypothetical \$50 billion which then could have been used to solve other world problems. Too complex and uncertain, they said.

OTHER ISSUES ON THE ROAD TO A 3-G WORLD, WITH A SINGLE GLOBAL CURRENCY, MANAGED BY A GLOBAL CENTRAL BANK, WITHIN A GLOBAL MONETARY UNION

Eligibility Criteria for Joining a Global Monetary Union?

The sole criterion for a country joining the GMU should be whether there has been a political decision to use the Global Monetary Union currency as legal tender. Once that decision has been made, then the remaining questions would concern the level of participation in the monetary union. In the European Monetary Union, the eligibility criteria have been used as a way to ensure willingness and ability to comply with the terms of the Growth and Stability Pact.

Hugo Narrillos Roux, a strong supporter of the Single Global Currency, argues that there should be "deep economic integration" among nations joining such a Global Monetary Union.⁹⁵ However, the endogeneity found by Andrew Rose and Jeffrey Frankel for smaller monetary unions is likely to be found for a Global Monetary Union as well. Thus, Roux's integration will likely be found after Global Monetary Union, so why insist upon it beforehand? Instead, the level of willingness and ability

to adhere to fiscal and monetary standards can be used to determine not whether the Single Global Currency can be used as legal tender within a country, but to determine the level of participation in that monetary union.

A major difference between the commitment to join the Global Monetary Union and current and past decisions to join monetary unions is that the Global Monetary Union will be larger, by definition, and large enough that any new country's addition will not make an appreciable difference to the overall confidence in the Single Global Currency.

If a country's fiscal management is not sufficiently prudent, then a new country can use the Single Global Currency through SGC-ization, just as Ecuador and El Salvador have ized to the US dollar.

If a new country wishes to utilize the full services of the Global Central Bank and wishes to have a vote on decisions on money supply, inflation and interest rates, then further conditions may be required, perhaps in the nature of a Global Growth and Stability Pact.

With such an approach, every willing, responsible, country could use the Single Global Currency as legal tender, but only countries meeting certain criteria could participate on the decision making committees to manage it.

Timetable of Movement to a Single Global Currency.

At its 2003 formation, the Single Global Currency Association set a goal of 2024 for achieving a Single Global Currency. As with many such goals, it's arbitrary and could have been 2023 or 2025 or 2034; but 2024 was used as it's the eightieth anniversary of the 1944 Bretton Woods agreements.

The 2024 date was established twenty-one years in advance, not because the mechanics of establishing a Single Global Currency would take that long, but because it's estimated that it

would take most of those years to develop the political will to formally establish the goal. If a serious international currency crisis occurs in the meantime, the political will might be developed more rapidly.

Once the goal is formally accepted by the governments of the participating countries, whether they be G-2, G-7, G-11, or all 191 countries, the actual implementation could be quite rapid. When an increasing number of commodities are priced in the SGC, or whatever its future name, and as worldwide financial transactions, including World Bank loans, are conducted in that new currency, the incentive to all countries to join the SGC-area, if not the Global Monetary Union, will be overpowering. What incentive would remain to stay out?

In several respects, the EMU is an exceedingly realistic test-site as it provides real data about how to establish, maintain, and expand a large monetary union. As noted before, not all monetary unions are alike, and there is no necessity that the Global Monetary Union must look exactly like any of them. Nonetheless, with the accession of the ten New Member States, the EMU will be large and contain a wide variety of economies, and can be considered as simply a smaller version of the coming Global Monetary Union. From several key vantage points, a few of which are listed below, the organizers of the Global Monetary Union can learn much from the EMU:

- The formation process for the EMU;
- The creation of the European Central Bank;
- Setting the exchange rate for all participating currencies to the euro
- Introducing the new currency;
- Adding new countries/currency areas to the existing EMU;⁹⁶

- Managing inflation; and
- Managing international reserves.

Below is a table showing the dates of euro implementation and proposed dates of implementation for the Single Global Currency.

<i>Task</i>	<i>Euro</i>	<i>Single Global Currency</i>
Estab. implement. date	January 1994	January 2016*
Adopt name for currency ⁹⁷	16 Dec. 1995	16 Dec. 2017*
Announce exchange rates	May 1998	open timing
Establish central bank	1 June 1998	1 June 2020*
Convert to new currency	1 January 1999	1 January 2021*
Coins & bills to public	1 January 2002	1 January 2024*
Old currencies stop (optional)	1 March 2002	1 March 2024

*or earlier

If it can be done for 11 countries, and 303 million people, why not 20 or 30 or 50 or 150 countries, and 6.5 billion people?

Another aspect of timing is the stage of development of countries joining the Global Monetary Union. Because the EU countries passed through a fifty-year transition from the Coal and Steel Pact to Common Market to monetary union, it's commonly thought that such trade-oriented steps are pre-requisites to participation in the Global Monetary Union, but that need not be the case. As Edmunds and Marthinsen stated, "A monetary union can be formed at any stage of economic development, and it can be formed with other nations that may be at different stages of development. It is not necessary for the nations unifying their currencies to have previously integrated their economies in other ways."⁹⁸

The Mechanics of Implementation

By 3 January 2002, two days after the distribution of euro cash, 96 percent of all automated teller machines were dispensing the new euro currency. By 8 January, 50 percent of all cash transactions were being conducted with euro coins and bills.⁹⁹ By the end of February 2002, more than 6 billion legacy currency banknotes and 30 billion coins had been withdrawn from circulation. This process went extraordinarily smoothly, to the surprise of some. As with other aspects of the EMU, the process is a good model for future implementation of the Single Global Currency.

Assure the Public that Prices Will Not Increase During a Changeover from One Currency to Another

During the conversion from the initial twelve national currencies to the euro, many citizens and media articles questioned whether prices were actually being raised and whether merchants were using the confusion of the transition to camouflage the process. One technique was “rounding up” a fraction to the next largest coinage of the euro. For example, the price of a euro was set as 1,936.27 lira in Italy, so when a merchant changed the price of a shoe which cost 149,000 lira, the exact price in euros would become 76.952 euros. However, instead of rounding mathematically and posting a price of €76.95, a merchant might have posted the price at €80. A merchant might have posted such a price in the spirit of easy-to-understand pricing, but s/he might also have posted the price at €70 or €75, too. It’s the belief of many Europeans that many merchants raised their prices in that manner.

While studies of consumer prices in Europe have found that actual price increases were substantially less than the public’s perception, there were pockets of significant increases, such as for food in Italy where the average increase from November 2001 to November 2002 was 29 percent.¹⁰⁰ It’s the perception of

inflation which must be anticipated during the coming transition to a Single Global Currency. Paul De Grauwe concluded that some part of the price increases came due to an implicit understanding that such increases were permissible and collectively implemented. He also noted that the increases were not expected by economists, and has recommended price controls to deal with this problem for the ten accession countries.¹⁰¹ Now, with awareness heightened of this problem, future expansions and creations of monetary unions should include preparations to discourage such opportunistic price increases. Slovenian consumers are now being better informed about the pricing changeover to the euro, than was the case in 2002, in order to be vigilant against inappropriate price increases.¹⁰²

Fear of price increases is a major reason why people in the accession countries are hesitant about the adoption of the euro. Only 38 percent of Eastern Europeans believe that the euro will be positive for them at home, but 92 percent believe that the use of the euro will help travelers and 80 percent expect that shopping abroad will be easier.¹⁰³ The poll did not ask about any feelings of loss of sovereignty due to the prospective loss of national currencies.

By the time there is a consensus or agreement that a Single Global Currency has been born, it may be that the leading monetary system candidate, if through an anointing process, will be so stable there will be less concern about such inflation. With the creation of the euro, there were no such reassurances of stability, and, in fact, the euro varied in price relative to the dollar by as much as 60 percent during its first five years.

If the Single Global Currency is to be a new currency, like the 1999 euro, then it will, by definition, include several very large currencies which will, together, ensure its stability, and reduce the fear of inflation.

Assure the Public that Adverse Effects of the Implementation of a 3-G World Will Be Addressed

To the extent that there are individuals or groups who might be adversely affected by the implementation of the Single Global Currency, they should be identified and appropriate remedial measures should be planned. Such measures could be financed through the savings achieved through the 3-G implementation.

WHY IS A GLOBAL MONETARY UNION FEASIBLE NOW?

As noted in the beginning of this book, money has different functions and attributes. As we move toward the second decade of the twenty-first century (Gregorian calendar).¹⁰⁴ money is far less important as a medium of exchange, as the most important medium now used is the digit in the form of an electron in a cable or wire or in the form of a radio or other electromagnetic wave. As a store of value, it's far less important, too, as very few people speak openly of the virtue of placing one's savings under the mattress. That leaves the third leg of the standard definition of money as the most important: unit of account. As a unit of account, money is failing the people of the world who are increasingly oriented to buying, selling, and sending money internationally where the units of account are constantly fluctuating. It's time for at least one worldwide unit of account: a Single Global Currency.

A Global Monetary Union is more feasible now because the technology of computers and communications has enabled the faster distribution of information to a vastly larger audience than ever before. Robert Mundell writes that the lack of such technology was a major reason why a global currency was not created at Bretton Woods in 1944.¹⁰⁵

One of the earlier perceived obstacles to monetary union had been the incongruence of nations' business cycles, but over the past twenty years, the severity and volatility of business

cycles have moderated by about fifty percent,¹⁰⁶ thus reducing that barrier. The effect is so dramatic that it's called by economists "the Great Moderation."¹⁰⁷ A major cause has surely been the computerization of the world which enables companies to avoid unnecessary inventory accumulations, formerly a basic cause of recession.

The total cost of the multicurrency foreign exchange world is now more visible and no longer acceptable. Despite being dwarfed by the \$2.5 trillion of daily foreign exchange trading, the annual \$400 billion cost of the current system is still a vast amount of money. That is \$61.53 for every human being on the earth, more than half of whom subsist on \$2 or less a day.¹⁰⁸ Even more attractive are the potential gains of \$trillions in worldwide asset and GDP growth.

The risks of the global imbalances are growing. What might China and Japan DO with their huge reserves, each of which exceeds \$800 billion? In comparison, the United States, with substantial quantities of its currency outside its borders, has only \$66.0 billion in foreign exchange reserves.¹⁰⁹ Governments talk about fixing "global imbalances," but it sometimes takes voter interest and pressure to ensure that governments act properly. More effective than nations pressuring nations to change their behavior will be pressure to abandon an obsolete, often harmful multicurrency foreign exchange system in favor of a Global Monetary Union. Such a union will have zero destabilizing global imbalances, at least in the sense that such imbalances of payments, current account deficits, and trade imbalances are currently understood. With such imbalances set aside, the world can pay more attention to far more human and serious imbalances and inequalities in the world where the richest five percent of the world's population earn as much income as the poorest eighty percent.¹¹⁰

The multicurrency foreign exchange system is more like a

horse-driven five-wheel cart to carry people from different airports serving the same city, e.g., Gatwick and Heathrow. That is obviously not acceptable, nor even thinkable. We don't need the obsolete, though charming, horse, nor the fifth wheel of the international financial system.

The importance of the US economy to the economy of the rest of the world is diminishing as is its claim to be the legitimate issuer of the world's primary reserve currency. It has gone from being a wealthy creditor nation to being an "empire of debt."¹¹¹

At the time of Bretton Woods, the US economy accounted for approximately 40 percent of the world's GDP.¹¹² By 1984, the year of Richard Cooper's article, that percentage had shrunk to 25 percent, and he wrote, "...as the United States shrinks in relation to the rest of the world, as it is bound to do, the intrinsic weaknesses of reliance on the US dollar will become more apparent, especially in the United States, where the possible reaction of foreign dollar-holders will become an ever greater constraint on US monetary policy."¹¹³ Cooper forecast that by 2009, the year in which his world currency was to be implemented, the percentage would be 17 percent. By 2005, the percentage had actually grown to 29.4 percent (\$12.5-42.5 trillion).¹¹⁴ although the dramatic growth of China, East Asia, and India will surely bring that percentage down, though not as rapidly as Cooper foresaw.¹¹⁵

The world now has an alternative to the dollar: the euro. Even better, the choice is no longer which national or multinational currency will be the primary international reserve currency among other major currencies, but whether that competitive model is becoming obsolete and whether a multinational currency ought to be designated as the Single Global Currency.

SUMMARY

The world is ready to begin preparing for a Single Global Currency, just as Europe prepared for the euro and as the Arabian Gulf countries are preparing for their common currency. After the goal of a Single Global Currency is established by countries representing a significant proportion of the world's GDP, then the project can be pursued like its regional predecessors. If pursued with the investment of time and money on the scale of the US flights to the moon (and economics is not "rocket science") or the Allied invasion on D-Day, as suggested by Richard Cooper; then the path to the Single Global Currency could be greatly shortened.

One of the temptations during the pursuit of a 3-G world is to bundle additional goals into the effort, but those other goals must stand on their own. The chances of their implementation may be improved in that 3-G world, where monetary and fiscal policies will not be burdened by the multicurrency foreign exchange albatross. For example, it may be that the groundbreaking theories of Louis Kelso¹¹⁶ will improve the chances of increased economic growth and fairer distribution of income and wealth, but those goals will be enhanced in the 3-G world. Bundling Kelso's "binary economics" theories with the drive for a Single Global Currency will not help either effort. Borrowing from a 1970s environmental movement slogan: whatever the international economics cause, it's a lost cause until we implement a single global currency.¹¹⁷

Once the pieces of the 3-G puzzle begin coming together, as described above, then momentum will accelerate the process. As the inevitability of the 3-G world emerges with a common currency servicing countries containing somewhere around 30-40 percent of world GDP, then the rush to join will increase. Many great social and political movements have been successful with less than majority support. During the American Rev-

olution, approximately one-third of the colonists supported independence, one-third wanted to remain a British colony, and one-third was neutral.

It is now time to seriously pursue the goal of a Single Global Currency as managed by a Global Central Bank within a Global Monetary Union. As the title of Lester Thurow's book states, "fortune favors the bold."¹¹⁸

What that world will look like is addressed in Chapter 8.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. The title of this chapter is related to a favorite Maine joke, as related by Marshall Dodge in his routine, "Bert and I." When an out-of-stater asks for the way to Millinocket, the local Mainer attempts to respond with three sets of directions, but finally concludes, "Come to think of it, you can't get there from here." Well, despite the reluctance of some, we will, of course, get to a Single Global Currency from here. See Marshall Dodge and Robert Bryan, *Bert and I and other stories from Down East*. Camden, ME: Down East Books, 1981, and listen to the selections, "Which Way to East Vassalboro?" and "Which Way to Millinocket?" on the CD, *Bert & I/More Bert & I*, Bluewater Books & Charts, Fort Lauderdale, FL. The chapter title also echoes the last sentence of the article "One World, One Money" in *The Economist*, 26 September 1998, "Fine, you say, but how would the world ever get from here to there?" Benn Steil and Robert E. Litan had a different twist with the response from the proverbial Irishman when asked for directions to Dublin, "Best not to start from here," in *Financial Statecraft*. London and New Haven, CT: Yale University Press, 2006, p. 104.

2. Cover Story, *The Economist*, "Get Ready for the Phoenix," 9 January 1988, pp. 9-10.

3. See the table of "Currencies by Country" at the Single Global Currency Association website at http://www.singleglobalcurrency.org/currencies_by_country.html

4. By 2190, the quintennial drop would be less than one, so the drop after that point is assumed as one every five years, bringing the single global currency by 2220. Call it 2224, the 280th anniversary of the Bretton Woods conference.

5. Bryan Taylor, "The Eurodollar," 1998, p. 5, at <http://www.globalfinan>

cialdata.com/articles/euro.htm

6. Paul De Grauwe and Jacques Melitz, editors, *Prospects for Monetary Unions after the Euro*. Cambridge, MA: MIT Press, 2005, p. 2.

7. Robert E. Litan and Benn Steil, *Financial Statecraft*. London and New Haven, CT: Yale University Press, 2006, p. 143.

8. Robert Mundell, "Exchange Rates, Currency Areas and the International Financial Architecture," remarks delivered at an IMF panel, 22 September 2000, Prague, Czech Republic, at <http://www.usagold.com/gildedopinion/mundellprague.html>

9. Robert Mundell, "The Case for a World Currency," *Journal of Policy Modeling*, June 2005, pp. 465-75, at p. 474, at <http://www.sciencedirect.com/science/article/B6V82-4G5BF09-1/2/0a981dfd39b6bb0ab8800e29fb10f7b1>

10. C. Uday Bhaskar, "China's GDP & Asian Strategic Matrix," *India Economic Times*, 3 January 2006, at <http://economictimes.indiatimes.com/articleshow/1355922.cms>

11. Robert Guttman, *How Credit Money Shapes the Economy, The United States in a Global Economy*. Armonk, NY: M. E. Sharpe, 1994, p. 431.

12. "Kyoto Protocol to the United Nations Framework Convention on Climate Change," at <http://unfccc.int/resource/docs/convkp/kpeng.html>

13. Robert Mundell, "Currency Areas, Volatility and Intervention," Columbia University, Discussion Paper Series, Discussion Paper #0102-09, January 2002, p. 2, at <http://www.columbia.edu/cu/economics/discapr/DP0102-09.pdf>

14. See, for example, "Explaining Exchange Rate Dynamics—The Uncovered Equity Return Parity Condition" by Elizaveta Krylova, Lorenzo Cappiello, and Roberto A. De Santis. The abstract begins, "By employing Lucas's (1982) model, this study proposes an arbitrage relationship—the Uncovered Equity Return Parity (URP) condition—to explain the dynamics of exchange rates," European Central Bank, Working Paper 529, September 2005, at <http://www.ecb.int/pub/pdf/scpwps/ecbwp529.pdf>.

15. See Egil Matsen and Ragnar Torvik, "Optional Dutch Disease," 27 April 2004, at <http://www.svt.ntnu.no/iso/Ragnar.Torvik/emrtjderev2.pdf>

16. See the list of 215 Economics Departments, Institutes and Research Centers in the World, for International Economics at the EDIRC database, maintained at the University of Connecticut at <http://edirc.repec.org/>.

17. Email, 6 July 2005, from the Single Global Currency Association to Martin Wolf, after receiving his earlier reply that implementation of the single global currency might be feasible in "Half a century, perhaps."

"Dear Mr. Wolf, Thanks very much. If you were to request in your column that the leaders of the world should begin planning for a single global currency by the year 2055, that would be very helpful. By setting a date, you would add a touch of reality to the prospects." "Then people

could start to analyze the schedule, with such questions as, 'What would the Global Central Bank look like, and by what date would it have to be established?' and 'What kind of reserves would be needed, if any?' and even "What should be the name of the single global currency?" "It took about 30 years to plan and implement the euro."

18. "Mahathir Proposes a Single Global Currency," NikkeiNet, 9 June 2001, at <http://www.nni.nikkei.co.jp/fr/nikkei/inasia/future/2001/2001news14.html>

19. "IMF Executive Board Concludes Article IV Consultation with Germany," Public Information Notice No 06/04, 18 January 2006, at <http://www.imf.org/external/np/sec/pn/2006/pn0604.htm>. See also IMF Article IV of Agreement, at <http://www.imf.org/external/pubs/ft/aa/aa04.htm>

20. "IMF Executive Board Concludes Article IV Consultation with Ecuador," Public Information Notice No 06/15, 9 February 2006, at <http://www.imf.org/external/np/sec/pn/2006/pn0615.htm>

21. Alex Brummer, "Financial Notebook: Birth Rites," *The Guardian*, online, 11 January 1994, at <http://www.guardian.co.uk/euro/story/0,11306,616489,00.html>, according to timeline at <http://politics.guardian.co.uk/euro/story/0,9061,617173,00.html>

22. Benjamin J. Cohen, *The Future of Money*. Princeton, NJ: Princeton University Press, p. 221.

23. Mark Leonard, *Why Europe Will Run the 21st Century*. London, UK: Fourth Estate, 2005.

24. Willem H. Buiter, "The EMU and the NAMU: What is the Case for North American Monetary Union?" op. cit., p. 286.

25. Robert E. Litan and Benn Steil, *Financial Statecraft*, op. cit., p. 156.

26. Simon Gray and Jacob Nell, *A New Currency for Iraq*. London, UK: Central Banking Publications, Ltd., 2005.

27. Ben Lyfield, "Launching a Palestinian Currency is No Small Change," *Christian Science Monitor*, 29 March 2000, at <http://csmonitor.com/cgi-bin/durableRedirect.pl?durable/2000/03/29/p6s1.htm>. See also "Choosing an Exchange Rate Regime" in "West Bank and Gaza Economic Performance, Prospects, and Policies Achieving Prosperity and Confronting Demographic Challenges," by Rosa Valdivieso, Ulric Erickson von Allmen, Geoffrey Bannister, Hamid R. Davoodi, Felix Fischer, Eva Jenkner, and Mona Said, all of the International Monetary Fund, 2001, at <http://www.imf.org/external/pubs/nft/2001/west/>, and See "Setting the Stage for a National Currency in the West Bank and Gaza: The Choice of Exchange Rate Regime," by Samya Beidas and Magda Kandil, of the IMF, April 2005, Working Paper 05/70, at <http://www.imf.org/external/pubs/ft/wp/2005/wp0570.pdf>

28. "Dollars for Peace: Monetary Foundation of the Two-State Solution," summarizing a speech by Sever Plocker, Economics Editor for Israel's

largest newspaper, *Yedioth Ahronoth*, at a Saban Policy Center Luncheon, 30 June 2005, Brookings Institution, at <http://www.brookings.edu/fp/saban/events/20050630.htm>

29. John Edmunds and John Marthinsen, *Wealth by Association—Global Prosperity Through Market Unification*. Westport, CT: Praeger Publishers, 2003, p. 146.

30. Felix Hammermann and Rainer Schweickert, "EU Enlargement and Institutional Development: How Far Away Are the EU's Balkan and Black Sea Neighbors?" Kiel Institute for World Economics, Working Paper No. 1261, November 2005, at <http://www.uni-kiel.de/ifw/pub/kap/2005/kap1261.pdf>. See also, Piritta Sorsa, "Macroeconomic Challenges with EU Accession in Southeastern Europe: An Overview," IMF Working Paper 06/40, February 2006, at <http://www.imf.org/external/pubs/ft/wp/2006/wp0640.pdf>

31. Menzie Chinn and Jeffrey Frankel, "Will the Euro Eventually Surpass the Dollar as Leading International Reserve Currency?" National Bureau of Economic Research, 16 August 2005, at <http://www.nber.org/papers/w11510>

32. See "One Dollar," Caribbean Broadcasting Corporation, 1 February 2006, at <http://www.cbc.bb/content/view/3923/46/>

33. Richard Cooper, "A Monetary System for the Future," *Foreign Affairs*, Fall 1984, pp. 184.

34. Robert Mundell, "Exchange Rates, Currency Areas and the International Financial Architecture," remarks delivered at an IMF panel on 22 September 2000 at Prague, at <http://www.usagold.com/gildedopinion/mundellprague.html>

35. Robert A. Mundell, website, "World Currency" page, at <http://www.robertmundell.net/Menu/Main.asp?Type=5&Cat=09&TheMeName=World percent20Currency>

36. Robert A. Mundell, website, "World Currency," *ibid.*

37. Robert A. Mundell, website, "World Currency," *ibid.*

38. Robert Mundell, "Exchange Rates, Currency Areas and the International Financial Architecture," *op. cit.*

39. Robert Mundell, "The case for a world currency," *op. cit.*, p. 472.

40. The term "free-rider fiscal policies" refers to the undeserved benefit for a member of a group who declines to contribute to a course of action, but benefits regardless. In the context of monetary union, Robert Mundell appeared to refer to countries which engage in reckless fiscal policy, but continue to use the currency of the monetary union which is made sound by the prudent fiscal policies of the other members. The EMU Growth and Stability Pact seeks to address this problem by preventing "free-riders."

41. Robert Mundell, *ibid.*, p. 472-73.

42. Robert Mundell, *ibid.*, p. 473-74.

43. Bryan Taylor, "The Eurodollar," 1998, at <http://www.globalfinancialdata.com/articles/euro.htm>
44. The 19 days were: 2, 3, 29, 30 December 1999, 24, 25, 26 January and 23 February 2000 on the "down" journey and 25 July, 3 September, 1, 4, 5, 6, 21 and 22 November, and 3, 4, 5, December 2002 on the "up journey. Source: Bank of Canada online currency conversion utility at <http://www.bankofcanada.ca/en/rates/exchform.html>
45. The raw data for the graph comes from the Bank of Canada's "10-year Currency Converter," at <http://www.bankofcanada.ca/en/rates/exchform.html>, and the data is in a file at the Single Global Currency website, at this endnote, at http://www.singleglobalcurrency.org/book_notes.html
46. Michael Emerson, Daniel Gros, Alexander Italiener, Jean Pisani-Ferry, and Horst Reichenbach, *One Market, One Money—An Evaluation of the Potential Benefits and Costs of Forming an Economic and Monetary Union*. Oxford, UK: Oxford University Press, 1992, p. 37.
47. C. Fred Bergsten, "The Euro and the Dollar: Toward a Finance G-2?" 26 February 2004, p. 9, at <http://www.iie.com/publications/papers/bergsten0204-2.pdf>. This paper later became a chapter in Adam S. Posen, editor, *The Euro at Five: Ready for a Global Role?* Washington, DC: Institute for International Economics, 2005.
48. Robert Mundell, "Currency Areas, Volatility and Intervention," Columbia University, Discussion Paper Series, Discussion Paper #: 0102-09, January 2002, p. 11, at <http://www.columbia.edu/cu/economics/discpapr/DP0102-09.pdf>
49. "Total GDP, 2004" (by Country), World Bank at <http://sitere.sources.worldbank.org/DATASTATISTICS/Resources/GDP.pdf>
50. The saying is, "Build it, and they will come." In the film, *Field of Dreams*, about a man's love for the game of baseball, the "it" was a rural baseball stadium. See website of filming location, <http://www.fieldofdreamsmoviesite.com/distance.html>
51. Kenneth Rogoff, "On Why Not a Global Currency," 8 January 2001, presented to the American Economic Association Meeting on "Exchange Rates and Choice of Monetary Regimes," published in the *American Economic Review*, Vol. 91(2) pp. 1243-247 and on the web at <http://www.economics.harvard.edu/~krogoff/AER-May01.pdf>
52. Joseph Nye, "Europe's Soft Power," in *Globalist*, 3 May 2004, at <http://www.globalpolicy.org/empire/analysis/2004/0503softpower.htm>
53. See Mark Leonard, *Why Europe Will Run the 21st Century*. London, UK: Fourth Estate, Ltd., 2005.
54. Charles Wyplosz, "An International Role for the Euro?" August 1997, p. 1, at <http://hei.unige.ch/~wyplosz/ecmi.pdf>, as quoted in Philipp Hartmann's *Currency Competition and Foreign Exchange Markets: The Dol-*

- lar, the Yen, and the Euro. Cambridge, UK: Introduction, Cambridge University Press, 1998, p. 1.
55. Herbert Grubel, "The Merit of a North American Monetary Union," in *The Dollarization Debate*, edited by Dominick Salvatore, James W. Dean, and Thomas D. Willett. Oxford, UK: Oxford University Press, 2003, pp. 318-40, at p. 345.
56. Todd Sandler, *Global Collective Action*. Cambridge, UK: Cambridge University Press, 2004, p. 269.
57. Articles of Agreement, International Monetary Fund, Article XII—Organization and Management, Article XXVII—Amendments, and Schedule D—Council, all at <http://www.imf.org/external/pubs/ft/aa/index.htm>
58. Consumers International, London, at <http://www.consumersinternational.org/Templates/Internal.asp?NodeID=89712&int1stParentNodeID=89645&int2ndParentNodeID=89645>
59. International Organization for Standardization, Geneva, at <http://www.iso.org/iso/en/ISOOnline.frontpage>
60. Carter Dougherty, "Spotlight: 'Painless Doctor for German Economy,'" *International Herald Tribune*, 16 December 2005, at <http://www.iht.com/articles/2005/12/16/business/wbspot17.php>
61. Andrew Rose, "What should Academics tell Policy-Makers about Monetary Union? Discussion of Coleman and Wyplosz," 28 July 2001, at <http://faculty.haas.berkeley.edu/arose/RBADisc.pdf>. Note that Rose has stated that he is not in favor of a single global currency, in an email to the author, 15 August 2004.
62. Letter from the Single Global Currency Association, 6 September 2003, at <http://www.singleglobalcurrency.org/documents/OECDLetterasenttoOECDFinanceMinisters.doc>
63. California Public Employee Retirement System, at <http://www.calpers.ca.gov/index.jsp?bc=/about/press/news/invest-corp/home.xml>
64. Guidliemo Carchedi, *For Another Europe*. London: Verso Publishers, 2001.
65. Text of 1 December 2003 speech by Mr. Ulrich Kohli, chief economist, Swiss National Bank, as posted on internet by "Swiss Plus," of the Swiss Bankers Association at <http://www.swissplus.ch/newsletter-nov-2003?newsid=5531>
66. International Chamber of Commerce, Paris, at <http://www.iccwbo.org/>
67. Brian Warburton, "The Case for a Single Global Currency," *AmCham* magazine, American Chamber of Commerce, Belgium, 1996, No. 514, p. 28.
68. Michael Carabott, "HSBC Announces Lm36.7 Pre-Tax profit," *The Malta Independent Online*, 17 February 2006, at <http://217.145.4.56/>

[ind/news.asp?newsitemid=28383](http://www.weforum.org/pdf/am_2006/chomsky_4.pdf)

69. Email to author from Jose Luis Cordeiro of Venezuela, 15 February 2006. Jose was an advisor to the Ecuadorian Chamber of Commerce at that time.

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on 31 August 2000, where he wrote, "In fact, if we are to have a truly globalized economy, a single world currency makes sense." (He also wrote, echoing the feasibility concerns of others, "That is not a world I will live to see, but the underlying tendencies are in that direction...")

The phrase, "a global economy requires a global currency," may also be derived from the pro-euro slogan of the 1990s, "One Market, One Money," which is also the title of the book by Michael Emerson, Daniel Gros, Alexander Italianer, Jean Pisani-Ferry, and Horst Reichenbach, about the 1990 European Council study of the single European currency, Oxford University Press, 1992.

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94. "Copenhagen Consensus: The Results," at <http://www.copenhagenconsensus.com/> by clicking on "See Results."

95. Hugo Narrillos Roux, "Divisa Unica y Estabilidad Economica Mundial," translated as "Single Currency and Worldwide Economic Stability," April 2004, Ph.D. thesis in Spanish, with abstract in English, at http://www.singleglobalcurrency.org/academics_and_economists.html

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104. The "21st Century" is another example of a globalized standard, which came from the European/Christian timekeeping system which ostensibly begins with the birth of Jesus Christ. It's now commonly

believed that he actually was born several years before the date considered to be the first day, A.D.

1 January 2006 in the Christian/Gregorian calendar was 8 Kislev 5766 by Hebrew calendar, 8 Dhu I-Qa`da 1426 by Islamic calendar, 18 Azar 1384 by Persian calendar, and 18 Agrahayana 1927 by Indian Civil calendar. (See Index Librorum Librorum, at Fourmilab, at <http://www.fourmilab.to/documents/calendar/>

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The 1944 percentage is calculated from the nominal \$219 billion US GDP (from Louis D. Johnston and Samuel H. Williamson, "The Annual Real and Nominal GDP for the United States, 1790—Present." Economic History Services, October 2005, URL : <http://www.eh.net/hmit/gdp/>) and Bradford DeLong's estimates of World GDP at approximately \$1.5 trillion using table at http://econ161.berkeley.edu/TCEH/1998_Draft/World_GDP/Estimating_World_GDP.html

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113. Richard Cooper, "A Monetary System for the Future," *Foreign Affairs*, Fall 1984, pp. 175. See also, Richard Cooper, "Toward a Common Cur-

rency," June 2000, at <http://www.worldbank.org/research/interest/confs/upcoming/papersjuly11/cooper.pdf>

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115. Other parts of Cooper's article were remarkable prescient. Richard Cooper, "A Monetary System for the Future," *Foreign Affairs*, Fall 1984. He wrote, "The world will be very electronic," at p. 176, and "English will become even more widespread as the language of commerce," at p. 177. Also, he foresaw online purchasing, albeit through a television rather than a computer screen.

116. See Norman Kurland's summary of the Kelsonian binary economics perspective in "A New Look at Prices and Money: The Kelsonian Binary Model for Achieving Rapid Growth Without Inflation," at <http://www.cesj.org/binaryeconomics/price-money.html>

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THE SINGLE GLOBAL CURRENCY WORLD—IN 2024?

FOR THE PEOPLE OF THE WORLD, a Single Global Currency will be legal tender which can be used to buy anything anywhere within the Global Monetary Union without the need to convert to a foreign currency. In some parts of the world, there may be a second or third currency which may be acceptable as legal tender, but one Single Global Currency will be accepted within the Global Monetary Union. As proposed previously, the Single Global Currency can assume that mantle when it achieves usage in countries whose populations comprise a specified percentage of the world. Forty percent would be a good start, but the benefits of the Single Global Currency will grow as that percentage moves toward 100 percent.

As the usage of the Single Global Currency accelerates, international trade and investment contracts increasingly will be denominated in the Single Global Currency (SGC). For such major commodities as oil, this change will be significant. People and corporations from every country within the GMU will be able to purchase oil with their own currency, assuming either that the oil-producing countries are members or that oil is priced in the Single Global Currency, or both.

GLOBAL CENTRAL BANK (GCB)

Richard Cooper, among others, foresaw the need for a Global Central Bank. He wrote, "... a single currency is possible only if there is in effect a single monetary policy, and a single authority issuing the currency and directing the monetary policy. How can independent states accomplish that? They need to turn over the determination of monetary policy to a supranational body, but one which is responsible collectively to the governments of the independent states."¹

The primary office of the GCB likely would be located in one of the major financial centers of the world or in Basel, Zurich, or Geneva, Switzerland—assuming that Switzerland decides to join the Global Monetary Union as well. Switzerland has a reputation for sound money, and locating the GCB in Switzerland just might be the necessary incentive for that country to join the Global Monetary Union as a member.

GOVERNING STRUCTURE OF THE GLOBAL CENTRAL BANK

Richard Cooper suggested, "The governing board would be made up of representatives of national governments, whose votes would be weighted according to the share of the national GNP in the total gross product of the community of participating nations. This weighting could be altered at five-year intervals to allow for differences in growth rates."²

One model for the structure of the GCB is the International Monetary Fund which is governed by the Board of Governors, which is made up of one governor from each of the 184 member countries. Voting power is allocated on the basis of the allocation of SDRs, which, in turn, is done on the basis of the size of a nation's economy. As the board meets once a year, the operations of the IMF are managed by the Executive Board which has twenty-four members. Five are appointed by five larger nations, and the other nineteen are elected by groups of nations.³

Another model is the European Central Bank where the key rate setting decisions are made by the Governing Council composed of a six- member Executive Board and fifteen representatives of national central banks. In 2003, the European Council approved a plan for an enlarged EMU whereby the fifteen central bank seats would be rotated among the existing and New Member States.⁴

The governing structure of the GCB should be relatively easy to design, given the available, successful models of the US Federal Reserve, European Central Bank, International Monetary Fund, World Bank, United Nations, and associated organizations such as the World Health Organization. Not everyone is happy with the structure of all those organizations, but it's a negotiable political question and not one to be decided in this volume nor by any theory of economics. The IMF has published a good summary of structures of central banks in "Central Bank Governance: A Survey of Boards and Management." by Tonny Lybek and JoAnne Morris.⁵

To be accepted as legitimate, the governing structure must be representative of all of the stakeholder interests.

DUTIES OF THE GLOBAL CENTRAL BANK

A major responsibility of the Global Central Bank will be to ensure price stability around the world. The wording of that goal and of other goals will be the subject of extensive negotiations at future international monetary conferences, but the outcome will be substantially similar to the charters of the European Central Bank and other successful monetary union central banks.

Even without calling for a Single Global Currency, former US Undersecretary of Commerce Jeffrey Garten proposed in 1998 the establishment of a Global Central Bank with the duties of regulating lending practices around the world and, generally,

promoting worldwide financial stability.⁶

Wrote Richard Cooper, "...to stabilize the macroeconomic environment and to avoid or mitigate liquidity crises by acting as a lender of last resort, just as national central banks do today. The debate on the relative weights to be attached to output and employment as opposed to price stabilization, and on how monetary policy should actually be managed, could continue just as it does at present, without prejudice.... The Bank of Issue need not engage in detailed regulation of the banks throughout the system covered by the new currency. That could be left in the hands of national regulators."⁷

OPERATIONS OF THE GLOBAL CENTRAL BANK

One of the issues facing every central bank is the degree that its deliberations and decisions about interest rates, inflation projections, and money supply should be open to public inquiry.⁸ Petra Geraats of the University of Cambridge concludes that while there should be some level of "Monetary Mystique" to insulate central banks from political pressures, the operations of central banks should be open to the public, i.e., transparent. Its data and forecasts on interest rates and inflation should be available.⁹

Similarly, in a December 2005 paper presented at the American Economic Association meeting, Anne Sibert stated, "I find that, no matter what their preferences, central banks and societies are made better off by more transparency."¹⁰ On the other hand, cautions Alex Cukierman, "Although transparency is currently hailed as an important feature of best practice policy-making institutions, there are several aspects of modern monetary policymaking that are not as transparent as current rhetoric would lead us to believe. In addition, there are circumstances in which excessive transparency is actually detrimental."¹¹ Michael Ehrmann and Marcel Fratzcher of the European Cen-

tral Bank agree that transparency is important, but have found in their review of the operations of the US Federal Reserve, the Bank of England, and the European Central Bank that it's also important that central banks and their governing committees communicate with one voice."¹² Communications from members of those committees might better remain opaque.

To be researched is the question of how the need for transparency will be affected by the reduction of currency competition with other central banks as the Single Global Currency acquires more and more market share. What will be the effect on central bank communications if there is no substantial need to manage an exchange rate for the Single Global Currency, nor a concern about a balance of payments or international reserves? Presumably, without currency competition, there would be less need for secrecy.

Of no small import is the future financing of the Global Central Bank. As it will be independent of national governments, it will be easier for the bank to self-finance through the seigniorage benefit.¹³ Even as the use of cash declines, there should be surplus revenue from that source which can be used as the governors of the GCB, or other international body, direct.

STABILITY AND GROWTH PACT

The European Union has a Stability and Growth Pact (SGP) with its most publicized provision that member and applicant countries cannot permit their annual government budgets to be imbalanced by more than three percent of the Gross Domestic Product.¹⁴ In an interesting illustration of the relationship between the EU and EMU, the Stability Pact applies to the three non-EMU members of the EU (Denmark, Sweden and UK), but the pact's enforcement mechanisms can be applied only to members of the EMU.¹⁵ Efforts to enforce the SGP's require-

ments against EMU countries have led to considerable controversy, which led to relaxation of the requirements in March 2005.¹⁶

The Eastern Caribbean Monetary Union does not have a Growth and Stability Pact. If the other existing monetary unions have them, they are not as contentious as is the SGP in the EMU. The Gulf Cooperation Council is considering whether to have such provisions in its charter documents.

As the size of a Global Monetary Union increases, it will matter less to the currency's value whether any of its member states is fiscally irresponsible. Just as it does not matter now to the value of the dollar whether there is a bankruptcy of a corporation or even a state government, it will not affect the value of the SGC when a member state in the GMU has financial difficulty. There was no serious effect on the US dollar in the 1970s when New York City nearly defaulted on its debt payments, nor in the 2000s with the bankruptcies of Enron, Worldcom, and Global Crossing. The foundation for faith in the value of money in a monetary union is confidence in the soundness of the union's central bank, and not the political and financial status of member countries.

There are powerful forces within countries to ensure that member states are fiscally responsible: the citizenry and the financial markets. The citizens know that the final cost of borrowing will be greater than the current cost and that it will be borne by their children. For various cultural reasons, countries view their national burdens quite differently, as can be seen by comparing the 1997 national debt-to-GDP ratios of neighboring Luxembourg (10 percent) and Belgium (120 percent).¹⁷

The markets efficiently digest the numbers, and they understand the ability of debtors to pay. When that ability is questioned, the interest rates on bonds increase, and citizens and governments will be forced to take notice by either paying more

interest or by borrowing less or both. During the first few years of the euro, yields from member states' bonds converged with the unwritten assumption that the EMU would bail out irresponsible countries. Without ever testing that assumption, the yields began diverging in 2005 as investors realized that even with a common currency, countries are responsible for their own fiscal policies and debt.¹⁸ J. Bradford DeLong argues that the markets are still not correctly valuing the risks of individual EMU countries, and that "In the long run, this is dangerous. Both market discipline and sound fiscal policy are needed to create a reasonable chance of long-run price stability."¹⁹

Even if the future Global Monetary Union has a Stability and Growth Pact, the principle of members' fiscal responsibility might be preserved with a less restrictive deficit to GDP ratio, such as 5 percent.

One major question is whether the Global Central Bank will be a bank of last resort to a mismanaged national bank. That will be for the framers of the charter of the bank to determine.

SECESSION FROM THE GLOBAL MONETARY UNION

There are no provisions for member secession from the European Monetary Union, but there was some discussion in 2005 within at least one member country, Italy, about such a drastic move.²⁰ As all pre-twentieth century monetary unions have vanished,²¹ except for those which were also political unions, such as the United States, it seems prudent to plan for the option for secession from the Global Monetary Union by a member country. The principle that monetary unions are voluntary associations is important to their democratic processes.²²

In a 3-G world, however, what could be the incentives for seceding? What would a seceding country do for foreign exchange? How would it handle its large currency risk, compared to that of countries within the Global Monetary Union?

These are just a few of the questions for further research and thinking.

NAME OF THE SINGLE GLOBAL CURRENCY

Names are important, as one can see when looking at the names of buildings on university campuses or of bridges, airports, and public buildings. The EU chose the name “euro” at the December 1995 meeting of the European Council at Madrid. Other possibilities included “Europa”²³ and the name of the previous European basket currency, “ecu,” for European Currency Unit.

An ideal name for the Single Global Currency would be one that is easy to pronounce and spell in all major languages. Of the proposed options on the Single Global Currency website, “Geo,” as proposed by Charles Goldfinger,²⁴ was leading with 29 percent (22) of a total of 75 votes, as of 13 April 1006.²⁵ The other proposed names listed on the original 2003 ballot are: Alitinonfo, Bancor, Eartha, Global, Globo, Intor, Mondo, Mundo, Only, Terran, UNA, UNIT, and Worldo. Other suggested names, but not on the ballot, are: Cosmos, Dey, Esperanza, Galacto, Harmony, Phoenix, and Unitas.

The name of the Single Global Currency is one element that can easily be opened to a nominating process and votes around the world.

ELECTRONIC MONEY

When the Single Global Currency is implemented, money will be even more digitized than it is in 2006, and there will be less cash. However, the format of money should make no difference regarding the successful operation of the Single Global Currency. Digital money requires a unit of account in order to store value and in order to transfer payment.

ALTERNATE CURRENCIES

There are thousands of non-currency area, non-state currencies which are perfectly compatible with the existing multicurrency world and will be similarly compatible with a Single Global Currency. Benjamin Cohen calls these currencies, “Local Money” and notes that they are also called, “private currencies” and “complementary currencies.” He writes, “Local currency systems can be created in one of two ways. One approach offers a specialized medium of exchange, generically labeled ‘scrip’ as a means to underwrite purchases of goods and services, often at a discount. The other, typically referred to as barter-based money, is explicitly based on an updated multilateralized form of the primitive bilateral transaction that preceded the invention of money.”²⁶

An example of a scrip system is the Canadian Tire Store’s “Canadian Tire ‘Money’™” which can be used to purchase items at any of the company’s stores.²⁷ Another is frequent flier miles on major airlines, of which there are estimated to be 14 trillion “in circulation,” worth about \$700 billion.²⁸

A barter-based currency began in Vancouver, Canada in 1983 called the “Local Exchange Trading System (LETS),” where members could trade labor for the goods and services of other members.²⁹ In the United States, “Ithaca Hours,” from Ithaca, New York, became the model for many similar systems which value an hour of labor by a member. An “Ithaca Hour” was the unit of account and the name of the currency, and each hour of any member’s work was worth ten US dollars.³⁰ Support for these systems depends upon the energy of their founders and managers, and the willingness of people and businesses to accept the paper notes as money. Some systems have collapsed or died, leaving the holders of the alternate currency with worthless paper.³¹

REMAINING FOREIGN EXCHANGE TRADING

As most of the world's trade and most of the international financial transactions will be conducted with the Single Global Currency, by definition, the scope of foreign exchange trading will be vastly reduced in quantity and in importance. Sam Cross put it simply in his book, *All About The Foreign Exchange Market in the United States*, "In a universe with a single currency, there would be no foreign exchange market, no foreign exchange rates, no foreign exchange."³² The world's financial health will no longer be jeopardized by uncertain fluctuations of the major currencies of the world.

Thus, for the first time in 2,500 years, foreign exchange will not be necessary for most of the world's financial transactions.

The decline in foreign exchange trading upon the adoption of the euro is a precedent for the upcoming Single Global Currency-induced decline in the volume of foreign exchange trading. In 1998, the reported daily volume of foreign exchange trading by the Bank for International Settlements was \$1.49 trillion, but by the next triennial report in 2001, it had declined to \$1.20 trillion.³³ Most, if not all, of the decline must be attributed to the substitution of one European currency for twelve.

The existing foreign exchange market fills a vast need and the market will continue to exist as long as there is a need; and the market will not be legislated away. Instead, it will just fade away as the people of the world increasingly use the Single Global Currency for all their transactions. Eventually, foreign exchange trading will be relegated to the same role as is now occupied by stamp and expired-currency trading.

BANK RESERVES: FOREIGN EXCHANGE AND CASH

Barbados Central Bank Governor Marion Williams summed up the necessary amount for foreign exchange reserves by saying "Enough is enough," in response to the tendency among many

central banks to accumulate more than enough reserves.³⁴

There will be no more need for international reserves, by definition, so the only remaining need for reserves will be for sufficient cash and deposits to ensure that national banks and their local banks can meet customers' needs.

Juan Luis Moreno-Villalaz estimated that Panama's dollarization had reduced the need for bank reserves from a level of 13 percent of GDP to 8 percent—a significant savings.³⁵

What will be done with the excess foreign exchange reserves after they are all converted into SGCs? Some would be retained by national banks for liquidity reserves, and the rest could be disbursed as each country determines.

THE ROLE OF GOLD

Economists remain divided over the utility of gold, even though the phrase “gold standard” continues to evoke nostalgic fondness for a more stable period, despite John Maynard Keynes' label of the gold standard as a “barbarous relic.”³⁶ A recent article by Natalia Chernyshoff, David Jacks, and Alan Taylor, “Stuck on Gold: Real Exchange Rate Volatility and the Rise and Fall of the Gold Standard,” suggests that the gold standard was useful before World War I, but not between that Great War and World War II.³⁷

The role of gold in the international monetary system has declined over the years as central banks and governments, with some exceptions, have learned how to make their money more stable—and it is stable money that the people of world want. Presumably, with the advent of the most stable money ever, the Single Global Currency, gold will finally be relegated to its deserved, rather than inflated, role as a wondrous metal that is resistant to corrosion, transmits electricity, and attracts the admiring eyes of people of all races.

EFFECTS ON FINANCIAL MARKETS

The adoption of a Single Global Currency would tend to synchronize yields in different countries' bond markets.³⁸ As all the financial markets would be run with the same currency, further consolidation of markets would be expected. Philip Arestis and Santonu Basu have written about financial globalization and state that to reduce financial dislocation, "it is necessary to introduce a single currency that would allow international financial markets to adopt a uniform credit standard for all countries. To introduce a single currency and to implement uniform standard credit requirements, there is a need to establish a world central bank for the global financial markets."³⁹

As John Edmunds and John Marthinsen predict, the values of assets worldwide would increase by trillions. The amount of increase by country would be roughly in reverse proportion to the pre-SGC level of currency risk.

PRICES

While there is a "Law of One Price" in economics which states that the price of a good or service will be the same everywhere, other things being equal, it's rare that other things are equal. Thus, prices for the same goods and services vary from place to place. The source of some disappointment in the euro is that prices still vary by geography as much as they do, but it was the expectation of "one price" that is the problem, not the geographic variation. It's been noted that prices in the United States, a large common currency area, also vary substantially among and even within the fifty states.⁴⁰

Also, the fluctuations of prices are not likely to be affected by Global Monetary Union. Kenneth Froot, Michael Kim, and Kenneth Rogoff have found that the price volatility for basic food commodities in England and Holland has not varied substantially over the past 700 years.⁴¹

INFLATION

One of the mysteries of economics (which economists might call a puzzle) is why there must be inflation. Prior to becoming US Federal Reserve chair in 2006, Ben S. Bernanke said in 2002, “Since World War II, inflation—the apparently inexorable rise in the prices of goods and services—has been the bane of central bankers. Economists of various stripes have argued that inflation is the inevitable result of (pick your favorite) the abandonment of metallic monetary standards, a lack of fiscal discipline, shocks to the price of oil and other commodities, struggles over the distribution of income, excessive money creation, self-confirming inflation expectations, an ‘inflation bias’ in the policies of central banks, and still others. Despite widespread ‘inflation pessimism,’ however, during the 1980s and 1990s most industrial-country central banks were able to cage, if not entirely tame, the inflation dragon.”⁴² One possible cause he didn’t mention were the fluctuations of exchange rates.

It defies common cents/sense that a product must cost more units of money in the future than in the past. The people of the world may have become used to it, but that doesn’t mean that it’s right or that the system must continue, as Thomas Paine would argue. He wrote, “...a long habit of not thinking a thing *wrong*, gives it a superficial appearance of being *right* and raises at first a formidable outcry in defence of custom.”⁴³ Why should the people of the world remember that when they were children they paid X units for a loaf of bread and that now the same loaf of bread costs 5X or 10X? If the ingredients, labor, and energy cost the same, the price should have remained the same. Another way to look at it is to ask why people cannot see as many prices going down as up? One of the reasons is that it’s hard to see that a product with more functionality and costing the same as last year actually represents a price-per-functionality decrease than the previous year.

For example, a radio might have cost €25 last year, and this year the same model radio might cost €27. However, it now includes new features, such as a travel plug conversion from European to US electric circuits, which would have added €4 to the cost of any other radio. Thus, an increase of the price to €27 actually represents a price decrease per functionality for a radio which could have cost €29.

It is this creeping worldwide inflation that has driven people to continue to wish longingly for the world of gold with its illusion of stability. Perhaps in a Single Global Currency world, the price of gold will become more stable, too.

The effect on inflation rates by the establishment of a common currency, as shown by a study of the Eurozone is not yet clear, and requires more study.⁴⁴ One other element of inflation needing further clarification in the Single Global Currency world will be the products and commodities whose prices are included in any inflation index. For example, some measures of inflation use wholesale prices and others used consumer price indices, with or without energy and food.⁴⁵

The question is: How much of the economists' expectation of an annual inflation rate of two percent arises because of the needs of the multicurrency foreign exchange world and system? In a Single Global Currency world, would there be as much concern about deflation?

If it's found that a Single Global Currency world CAN operate with an inflation rate of zero percent, then the question will arise of whether the people of the world really want such a low rate, and a governing board of the Global Central Bank will respond to their wishes, through its open, transparent operations.

Monetary stability has always been a goal of central banks, and it was almost universally thought that controlling the size of the money supply was the best means to that end. Now, how-

ever, many of the central banks (twenty-one as of 14 December 2005) are now explicitly using “inflation targeting” as a method of operation.⁴⁶ It’s not known how the future Global Central Bank will operate, and its work within a 3-G world will differ from that of its multicurrency predecessors. Still, it’s safe to predict that some type of inflation targeting will be a major part of its work for global monetary stability. The remaining question will be the desired and feasible inflation targets that will be established.

One of the widely acknowledged reasons for central bankers’ success at lowering inflation around the world is the increased independence of central banks from national governments. In the 1990s, several countries passed laws which made their central banks less susceptible to temporary political pressures. John Edmunds and John Marthinsen summarized this development, “To control inflation, central banks have to control their money supplies, and one of the most important lessons we have learned from monetary history is that the more independent a central bank is from the government, the greater are its chances of controlling inflation.”⁴⁷

In a Global Monetary Union, the Global Central Bank will be even more independent of the politics of national governments by virtue of being one entity among 191. This is one of the elegant realities of a monetary union, and its truth becomes more evident as a monetary union grows.

DEFLATION

One of the recent concerns among central bankers has been the risk of deflation, which Lester Thurow calls “capitalism’s worst disease.”⁴⁸ Early twenty-first-century Japan is exhibit #1, where, stated Ben Bernanke before becoming chair of the US Federal Reserve, “what seems to be a relatively moderate *deflation*—a decline in consumer prices of about 1 percent per year—has

been associated with years of painfully slow growth, rising joblessness, and apparently intractable financial problems in the banking and corporate sectors. While it is difficult to sort out cause from effect, the consensus view is that deflation has been an important negative factor in the Japanese slump."⁴⁹

Even if deflation is not a serious risk in a Global Monetary Union, it will take a long time for central bankers to believe that to be the case. Therefore, it can be expected that inflation will be targeted at some level greater than zero.

INTEREST RATES AND THE AVAILABILITY OF CREDIT

Interest rates are typically about two percent higher than inflation, so the key to low interest rates is a low inflation rate.

A major concern of economists and others about whether a country should join a monetary union is the loss of an independent monetary policy and thus the ability to lower interest rates in order to promote investment and spur economic growth. However, if a country has the prospect of joining a Global Monetary Union with low inflation and low interest rates, the loss of the option to lower interest rates does not seem to be a substantial loss.

For most people in the developing world, interest rates for longer term loans do not matter because such loans are not now available, due to lenders' aversion to currency risk. Benn Steil and Robert Litan report that "15-30-year fixed-rate mortgages...are unavailable elsewhere in the developing world."⁵⁰ With a Single Global Currency, and its near-zero currency risk, mortgages and shorter risk loans of all types will be more available.

GLOBAL INEQUALITY OF WEALTH AND INCOMES

To the extent that the poor live in poor, high-currency-risk countries, they will be helped as their countries benefit from the 3-G

world. States Jose Cordeiro, “Countries with more fluctuation in their currencies show less economic development, about two percent less. If we can introduce a global currency, poor countries wouldn’t pay so much to keep these national currencies, and their economies would grow more. Believe me, the poor will benefit more from a Single Global Currency.”⁵¹

The Single Global Currency will not, by itself eliminate poverty. However, it will expose to the light of day the true price of labor and goods and services throughout the world. We will know that a day laborer for construction work in New Delhi can be hired for SGC .50 an hour and one can be hired in Cape Town for SGC 5.00 and in London for SGC 10.00. Those rates can be relied upon to be stable and not subject to the ups and downs of currency fluctuations from day to day. Such knowledge will assist investors and others in making their investment decisions. Using Thomas Friedman’s terms in *The World is Flat*, the Single Global Currency will level the world’s economic playing field, and perhaps be part of “Globalization 3.0.”⁵²

While inflation is decreasing around the world and is less likely to impair the lives of the poor, it is still a major problem for most of the people in the less-developed world. The poor have no ability to send their savings to Switzerland or Monaco or Miami, so they suffer the loss of earning and saving power by themselves. With a Single Global Currency, such unavoidable losses will not occur, and the poor and all of us can safely save whatever we can.

WAR AND PEACE

Thomas Friedman noted in *The World is Flat* that countries with McDonald’s restaurants did not go to war with each other, and similarly, countries in the Dell Computer supply chain have not fought each other; and are not likely to do so.⁵³

Would membership in a Global Monetary Union effectively preclude going to war against another member? When the southern states of the USA rebelled in 1861 and became the Confederate States of America, they were forced to develop their own money system. In all the major nineteenth- and twentieth-century wars, the combatants used different currencies. A recent news article about a renewal of bus service between Punjab cities in India and Pakistan looked forward to the day when those cities will share a common currency and noted, "When businessmen from both sides of the border gain a common currency in money, then war will just not make any business sense."⁵⁴

Just as the Maastricht treaty does not provide for the withdrawal of a member state from the European Monetary Union, it does not contemplate war among member states either. Assuming a two-country war, there are only three possibilities for management of their currencies: they both continue to use the euro, or one is cut away from the system, or both are cut away. It's hard to imagine how a war between two European Union or Global Monetary Union nations, could continue for long without severe sanctions being imposed upon one or both, including restrictions on the money supply.

If a member country exited a Global Monetary Union, and quickly created, or recreated, its own currency, it would likely need to purchase war materials or other supplies from other countries, but the lack of a functioning foreign exchange market would make that more difficult. Barter would likely be used to some degree, albeit inefficiently. Thus, one could argue that one likely effect of Global Monetary Union would be a decrease in the use of war as a political tool or weapon.

SUMMARY

The 3-G world will be more efficient, without the costly burden of a multicurrency foreign exchange system. Money will flow even more easily to all corners of the globe, and there will be no resulting currency crashes. Money may still flow to Switzerland and other money centers for investment and safety, but it will not be due to a fear of currency crisis at home.

The 3-G world will not be Nirvana nor Utopia, but it will be a better world; and the goal should be pursued as soon as possible.

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CONCLUSION

THIS BOOK HAS EMPHASIZED COMMON SENSE and common cents, and that is what the people of the world understand, just as they quickly grasp the concept of the Single Global Currency, “You mean, like the euro?”

A primary goal of the leaders of the international financial system is stability, the essential economic foundation for people who seek to earn, spend, trade, save, and invest. That international financial stability has been the goal of the International Monetary Fund from its beginning in 1945,¹ and it will be substantially achieved upon the implementation of the Single Global Currency.

The proverbial person from Mars would not design such a multicurrency foreign exchange system as we have today. Robert Mundell writes, with commendable acknowledgment of changing gender roles, “If some spaceship captain came down from outer space and looked at the way international monetary relations are conducted, I am sure she would be very surprised.... But it would strike her as very strange to find the complete disorganization of currency markets, the recurrent currency and debt crises, and wonder why more than one currency was needed to conduct international trade and payments in a world that aspired to a high degree of free trade.”²

Willem Buiter has stated “From a microeconomic efficiency point of view, if one were to design the world from scratch, a

single currency would be adopted.”³

Money is a human invention of immense utility. Without it, trade would be severely hampered. The problem addressed in this book began approximately 2,500 years ago when traders began exchanging the newly developed coins of the emerging currency areas.

People understand the value and simplicity of barter, but barter for international trade of primary goods in a \$45 trillion GDP world is impossible, despite the increased automation of even that basic transaction.⁴ Similarly, bartering for money, a secondary good, on the foreign exchange markets, is also incompatible with other financial goals. What the people want is a return to a simple system of trade, and that means a Single Global Currency. The 2,500-year multicurrency foreign exchange transition between barter and the Single Global Currency must soon end.

During those 2,500 years, the fifth wheel of the international financial system has been oiled, supercharged, and otherwise improved to handle \$2.5 trillion per day in exchanged money. However, the two central problems of foreign exchange have never been solved: how to consistently and accurately determine the value of one money compared to another, and how to predict changes in those relative values over time. Even with all the computers and economists now available, no one has been able in 2,500 years to solve these two puzzles—and it’s time to change gears, and discard the fifth wheel. Throwing Tobin’s sand into the wheel is not enough. Even if the “Tobin Tax” might have achieved his goals of slowing down worldwide capital flows, it was never adopted and it would not have solved the other problems of the multicurrency foreign exchange world. Developing worldwide support for a tax is a more difficult task than implementing a Single Global Currency, which will save money.

The foreign exchange system can be soon relegated to a special wing of the money museums of the world where people can examine all the techniques to make predictable the unpredictable, until the quest was abandoned upon the arrival of the Single Global Currency.

A world with a Single Global Currency, managed by a Global Central Bank, within a Global Monetary Union is both useful and feasible for the world. There are easily quantifiable benefits and softer benefits, such as the elimination of fear of currency crises. The quantifiable benefits are staggering:

One-Time

\$36	trillion increase in world financial assets
\$9	trillion in increased GDP

Annual

\$270	billion in GDP increases arising from asset increases
\$400	billion savings from elimination of transaction costs

Such amounts more than justify the effort required for planning and implementation.

Also, there are many risks to continuing the multicurrency foreign exchange system, such as unhedged currency fluctuations and currency crises. There is no logical need for such financial uncertainty. As noted in Chapter 5, Robert Mundell has termed the multicurrency foreign exchange system “an absurd currency system.”⁵

Like Plato’s prisoner emerging from the cave of shadow-reality into sunlight,⁶ the people of the world have seen in the European Monetary Union the stable money they want, and they cannot go back to the economists’ shadows of “real

exchange rates” and Purchasing Power Parities and unsolved puzzles.

The people, their unions, their corporations, their non-governmental organizations, and their governments are increasingly saying to the economists, “We want stable money, now that we see how to get it. We want our money back.” There is no reason to delay the first meetings of nations, non-governmental organizations, corporations, and individuals to plan the steps necessary to achieve the goal.

If a cure for cancer became known, but which required years of planning to design and build the facilities to produce that cure, would there be any reason to delay the first meetings to plan that result?

The cure for the ills of the multicurrency foreign exchange system is before us and deserves the attention of the world. We are becoming a global village, and a village needs only one currency.

Ralph Bryant posed the dilemma for supporters of the Single Global Currency with the “complete motto of pragmatic incrementalism...*Don't ask too much, too soon. But don't be too timid either.*”⁷ Given what we know about the net benefits of the 3-G world, it does not seem too soon to ask, and this is not the time for timidity. Indeed, we have a moral obligation to press for implementation as soon as possible.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

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Appendix A

THE SINGLE GLOBAL CURRENCY ASSOCIATION

ORIGIN

The Single Global Currency Association (SGCA) was founded in June 2003 to educate the world about the benefits of a Single Global Currency, and to mobilize efforts toward implementation. The only other organization in the world with a similar goal of a Single Global Currency was the Centre Jouffroy, established in 1974 by Jacques Riboud in France.¹ The Centre has worked on behalf of the euro and international monetary reform and has proposed, also in 1974, a “non-national indexed IMF-issued world currency” to be called the “New Bancor” (NB), after Keynes’ proposal for the “bancor” at Bretton Woods in 1944.

It is hoped that the SGCA will be as effective in the area of currency reform as Greenpeace² has been in awakening the environmental consciousness of people around the world, and as Transparency International³ has been to reduce international corruption, and as the Innocence Project has been in the US in bringing justice to hundreds of wrongfully convicted innocent people.⁴ With luck, the SGCA will be as successful as the International Landmine Coalition was in promoting the creation and signing of the 1997 Land Mine Ban Treaty.⁵ If the 148 signers of that treaty would all endorse a Global Monetary Union, it would be implemented forthwith.

WEBSITE

Critical in the communication of any twenty-first-century message is the Internet. The SGCA website, www.singleglobalcurrency.org, was established upon the establishment of the organization, in order to bring to one electronic location as much information as possible about the Single Global Currency and related monetary issues.

SINGLE GLOBAL CURRENCY CONFERENCES

The first Single Global Currency Conference was held at the Mt. Washington Hotel in Bretton Woods, New Hampshire, USA, on 9 July 2004, in the Gifford Room, which was used during the 1944 conference. The second Single Global Currency Conference was held on 14-15 July 2005, and the third is scheduled for 20-21 July 2006, at Bretton Woods. It is open to all those who may be interested. Future annual conferences will be held at Bretton Woods, at least until the implementation of the Single Global Currency. Perhaps these conferences can be supplemented with regional conferences in other parts of the world.

CONTACTS WITH ECONOMISTS

A major activity of the association is to contact economists around the world who have written papers and books about the multicurrency foreign exchange world, and monetary unions and related issues. Through such contacts, the association acquaints them with the Single Global Currency and the association, and urges them to research and write about the Single Global Currency.

SINGLE GLOBAL CURRENCY JOURNAL

The association plans the first online issue of its journal in 2006. For more information see <http://www.singleglobalcurrency.org/journal.html>.

PUBLIC OPINION POLLS

As noted in the text of this book, the SGCA has sponsored a question about the Single Global Currency in three national USA polls conducted by Zogby International.⁶ In the future, similar polls will be conducted worldwide to measure the increasing public awareness of the Single Global Currency.

CURRENCY AREA CHAPTERS

The SGCA seeks the establishment of a chapter in every currency area in the world. That is, one chapter is anticipated for the Eurozone, and one for the Eastern Caribbean Monetary Union, and one each for countries and monetary unions which have their own currencies. Local chapters might be established in countries within monetary unions. The only requirements for establishing such a chapter are a strong interest in the goal of a Single Global Currency and an informal agreement to work together with the SGCA, and others within that currency area.

CONTRIBUTIONS

The SGCA welcomes contributions and support from interested individuals, corporations and foundations. During the year 2006, suggested contributions for individuals are, \$20.06, €20.06, 200.60 yen, or any equivalent amount in a local currency. Larger contributions and sponsorships or other business relationships are welcomed. Contributions to the association are tax-deductible according to the US Internal Revenue Service through Chapter 501(c)(3) of the US tax code.

A contribution to the SGCA provides an opportunity for uniquely large “returns on the investment,” even if the return does not return to the actual contributor. That is, looking only at the potential \$400 billion savings to the world arising from elimination of transaction costs, we suggest to potential contributors that if all the work of the SGCA over the next eighteen

years (until 2024) nudges the implementation date forward by only ONE week, our efforts will have saved the world \$7.7 billion. If a single donor were to fund our entire annual budget of \$100,000 for those next eighteen years, for a total of \$1.8 million, that would mean an *annual* return on investment of a multiple of 4,273 or 427,350 percent. That's a staggering "return." It would also give a donor, or donors, considerable worldwide visibility, if desired.

THE FUTURE

For the Single Global Currency Association to be successful it must add members and build global support and coalitions among related groups, organizations and governments. The movement to the Single Global Currency must be a massive, cooperative effort. Please join this effort to save the world—trillions.

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. Information about the Centre Jouffroy was obtained in 2003 from its website, www.centre-jouffroy.com, which later became inaccessible and began responding with "site en developpement," in 2005. Efforts to reach the centre by email have failed.
2. Greenpeace International is based in Amsterdam, with website at <http://www.greenpeace.org/international/>
3. Transparency International is based in Berlin, with website at <http://www.transparency.org/>
4. Founded by attorneys Peter Neufeld and Barry Scheck and based in New York City, the Innocence Project chose a precise strategy to challenge wrongful convictions in the US of innocent people—focus only on cases where exculpatory DNA is available. This strategy is slowly forcing the US legal system to confront its wrongful convictions of hundreds of innocent people. See <http://www.innocenceproject.org>
5. International Campaign to Ban Landmines is based in Belgium, with website at <http://www.icbl.org/>. The full name of the 1997 treaty is the

“Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and on Their Destruction.” Currently, 154 countries have signed it, and 148 of those have ratified the treaty.

6. Zogby International is based in Utica, New York, with website at <http://www.zogby.com/>

Appendix B

WHAT CITIZENS OF THE WORLD CAN DO TO HELP MOVE THE WORLD TOWARD IMPLEMENTATION OF THE SINGLE GLOBAL CURRENCY

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.”

TMMargaret Mead (1901-1978)¹

Despite the persuasive powers of Margaret Mead and the knowledge of how a few large changes have occurred in the world, such as the American, French, and Russian Revolutions, it is still daunting to commit to working for a large scale change for the international monetary system.

Below are suggestions for actions which might be available to most human beings. One inspiration for such a list was the book, *Rules for Radicals* by Saul Alinsky.²

In the spirit of innovative activism, this Appendix has a list of twenty recommended activities which individuals and/or groups can initiate in support of the implementation of a Single Global Currency. There is one for each letter in the term s-i-n-g-l-e g-l-o-b-a-l c-u-r-r-e-n-c-y.

Send a copy of this book to a friend and ask that person to read it and pass it on; and then buy another, and another, and pass

those on, too. If a thousand people read the book in a week and then buy two more and pass on the three books to others, and those 3,000 do the same the next week for 9,000, and so on, it will take only 15.5 weeks for every human being on the earth to read the book. In the 16th week everyone would have a chance to read it again, and again.

Initiate discussions with friends and others, “What do you think of a Single Global Currency?” Then ask them to read this book and visit the SGCA website.

Next time you purchase something from another currency area, try to determine the amount and percentage of the transaction charge for the foreign exchange barter, and then multiply that percentage by \$2.5 trillion and then by 260 trading days.

Go to the Single Global Currency Association website, www.singleglobalcurrency.org, and explore, including the links in the online endnotes to this book.

Learn more about the Single Global Currency, beyond what is in this book.

Elect representatives who understand that the people want international financial stability and that the 3-Gs are necessary elements of that future stability.

Google “monetary union,” “Global Monetary Union,” “Robert Mundell,” “Single Global Currency,” “single world currency,” “Global Central Bank” and related topics and learn all you can about this important international financial reform. Also, try www.yahoo.com or www.altavista.com or any other search engine.

List your provincial, regional, state, and federal government representatives and then ask them what they are doing to promote the implementation of the Single Global Currency, and ask them to sponsor the SGC resolution in Chapter 7.

Organize a chapter of Single Global Currency Association, with one to a country or monetary union. The primary goals of such chapters are to support the goals of a Single Global Currency and to encourage the home country or monetary union to take steps toward that goal.

The SGCA is a non-profit corporation in the United States, but there are no requirements about how other chapters must be organized. All it takes is for one or more persons to join together and then notify the Single Global Currency Association of the establishment of a country/monetary union chapter. The organizational structure might be an informal group or an incorporated, tax-exempt corporation. The SGCA recognizes chapters by listing them in the “About Us” section of the website, www.singleglobalcurrency.org

Buy more copies of this book and loan them to friends and give them to libraries, and when the 2007 edition is published, buy that, too.

And the 2008 edition, etc.

Ask governments and economists and newspaper editors and everyone else why we don't yet have a Single Global Currency, and then ask them to explore the issues.

Listen to those who have questions about the utility and feasibility of the Single Global Currency and respond with either answers or promises to get more information from the Single Global Currency Association.

Contribute to the Single Global Currency Association, a non-profit organization seeking to save the world trillions.

Understand that the multicurrency foreign exchange barter system is obsolete, and that it will be replaced by a Single Global Currency.

Rquest legislators to pass a law which would require each country's treasury department and central bank to provide a semi-annual report of the progress made toward a Single Global Currency. Such a report would be similar to the report required semi-annually in the United States from the Treasury Department, which identifies those countries/monetary unions where the currency is manipulated to have a lower value to finance exports. Instead of semi-annual finger-pointing, why not a semi-annual report on progress toward the 3-G future?

Rquest that groups, organizations, and legislative bodies pass resolutions urging implementation of a Single Global Currency.

Engage others in discussion and inquiry about the solutions to the costs and risks of the existing multicurrency foreign exchange system.

Network with others to spread the word about the 3-G world.

Consider devoting a few minutes a day to this large enterprise which will bring so much benefit to so many people.

Yell from your window or rooftop that you are "mad as hell"³ and that you are not going to tolerate an expensive, risky, multicurrency foreign exchange system anymore, and that you want a stable 3-G international financial system with a Global

Monetary Union with a Global Central Bank and a Single Global Currency.

ENDOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. I had the privilege of being a student in a large, introductory anthropology class taught by Margaret Mead. The force of her personality, and the memory of her swaggering with her walking stick to the podium makes her quoted statement the more powerful for me. This exact quote from Margaret Mead generated 28,300 “results” in a Google search. With the word “people” substituted for “citizens,” there were another 848 results. However, the citation is unknown for the original quote, now trademarked by the intellectual caretaker for Mead’s work, the New York-based, Institute for Intercultural Studies, Inc. From the Institute came this email about the source of the quote:

“The Institute has received many inquiries about this famous admonition by Margaret Mead, which has become a motto for many organizations and movements. However, we have been unable to locate when and where it was first cited. We believe it probably came into circulation through a newspaper report of something said spontaneously and informally. We know that it was firmly rooted in her professional work, and that it reflected a conviction that she expressed often, in different contexts and phrasings. This quote is now trademarked, and the trademark is held by the Institute for Intercultural Studies.

We appreciate hearing about members of your family having been students of Dr. Mead, and appreciate your question concerning this most famous quote attributed to her.

Sincerely yours,

Betty Howe

Administrative Assistant

Institute for Intercultural Studies, Inc.

67A East 77th Street, New York, NY 10021”

2. Saul D. Alinsky, *Rules for Radicals: A Pragmatic Primer for Realistic Radicals*. New York, NY: Vintage Books, 1971, revised edition, 1989. One memorable demonstration of those rules came when a neighborhood group in Chicago, in opposition to the expansion of an airport, made its voice heard when members engaged in a sit in/sit down in all the toilets in all the restrooms available to the public at that airport. While it caused discomfort to some, the authorities responded affirmatively to the group’s grievances.

3. This a reference to Howard Beale's (played by Peter Finch) speech as a newscaster in the movie *Network*, where he urged viewers "get up right now and go to the window, open it, and stick your head out and yell, 'I'm mad as hell, and I'm not going to take this anymore!'" at <http://www.americanrhetoric.com/MovieSpeeches/moviespechnetwork2.html>

AUTHOR'S AFTERWORD

After founding the Single Global Currency Association in June 2003, I've often been asked, "How did you think of THAT idea?" The first part of the answer is that there are few original ideas, and even if I thought at the time that I might be among the first to articulate it, I knew that it surely was not original with me—and it wasn't, as this book has shown.¹

The second part is that in October 2002, while running for the Maine State Legislature (United States), the issues of the campaign focused on taxes, education, health care, taxes, education, health care and taxes. Thinking that some other issues might invigorate the discussion, I proposed a Single Global Currency in the following letter to the *Wiscasset Newspaper* and *Boothbay Register*:

A VOTE FOR ONE CURRENCY

Dear Editor:

...we are distracted from the really important long term issues facing humanity. Species become extinct, the earth warms and the environment deteriorates, but these issues are not so dramatic as war and weapons of mass destruction. It's hard to win elections on those issues.

Somewhere in between those two poles is a goal, which, if reached, can dramatically improve the lives of everyone on the earth: a single currency. That's right, a single currency. Actually, for the United States it's not so revolutionary a goal, as we tran-

sitioned from a thirteen-currency system to a single currency after the American Revolution.

This time, Europe has led the way with the euro. One currency now exists where before there were many. When traveling from Germany to France to Italy, there are now no money changers and no associated changing costs and no time spent translating from an unfamiliar currency into one's home currency. Also, but less visible, there are no currency exchanges, and their speculators, for francs or marks or lira; and the rate of inflation is the same for all the euro countries. Soon, more European countries will be added.

The logical next step, but not on the Washington radar screen, is a world currency. Let's call the basic unit a "mundo," or "eartha," or whatever name we can choose from a worldwide contest. No more Canadian dollars, nor Mexican pesos, nor US Dollars, just one currency.

All this requires fiscal discipline in each participating country, but the rewards would be great for their citizens. As a single currency would require a truly multi-national effort—

Let's move to a single world currency by the year 2010.

Morrison Bonpasse

Newcastle

Democratic Candidate for the House 58th District²

Despite the logical appeal of that issue, I lost the election.³ However, the seed was planted. While the idea had been conceived long ago and discussed by many eminent persons, it became clear to me there was not a single organization in the world entirely dedicated to that one goal: the Single Global Currency, despite its large potential benefits to the people of the world.

The next spring, I sold my small business and returned to the idea of a Single Global Currency. There were other non-

profit options, but, paraphrasing the twentieth-century bank robber in the United States, Willie Sutton, the issues involving foreign exchange are “where the money is,”⁴ even if not for me personally. After further research, the Single Global Currency Association was founded as a non-profit corporation in Maine, USA, in June 2003, with a website at www.singleglobalcurrency.org.

Now, after two-plus years of learning, and two Single Global Currency conferences at Bretton Woods, it’s time to share the bad news and the good news. The bad news is that the existing multicurrency world financial system is very expensive and is in danger of suffering some type of a collapse or crisis. The good news is that the long term, elegantly simple, clean solution is available and stands in front of us, in the form of existing monetary unions. What is needed is to make the transition from many monetary unions and currencies to one Global Monetary Union.

The models and inspiration for this book are the books which inspired economic, social, or political movements, among them:

Common Sense, by Thomas Paine (British colonialism)

The Communist Manifesto, by Karl Marx (unregulated capitalism)

Uncle Tom’s Cabin, by Harriet Beecher Stowe (slavery)

The Jungle, by Upton Sinclair (slaughterhouse conditions)

The Other America, by Michael Harrington (poverty in the United States)

Silent Spring, by Rachel Carson (DDT, pollution of environment)

Unsafe at any Speed, by Ralph Nader (unsafe automobiles)

Human Sacrifice, by James Moore (wrongful conviction of Dennis Dechaine in Maine)

For some of these books, the solution was presented, as in *Common Sense*, and as is the case in this book. John Maynard Keynes' *The Economic Consequences of the Peace* would have been listed above, but its cogent analysis of the post-World War I peace imposed upon Germany regrettably did not lead to sufficient political action, in order to avoid World War II. Another inspiration was the book, *The Territorial Imperative* by Robert Ardrey, which brought to the people the findings of ethology, the study of animal behavior, and its relationship to humans.

Some may think that the cyber-age has diminished the power of the book to influence change, but the evidence shows that the power of a book continues. The book, *Human Sacrifice*, was published in Maine in 2002 about the wrongful conviction and continued imprisonment of an innocent man, Dennis Dechaine. Written by a retired Federal Alcohol, Tobacco & Firearms agent, James Moore, the book has roused the conscience of the people of Maine to correct that injustice. The facts were known for fourteen years by people who should have reopened the case, but not enough was done. The book has brought new momentum to that struggle for justice. Dennis became one of my best friends during my efforts, together with many others, to assist his struggle for justice. He saw the logic of the Single Global Currency and, in October of 2005, joined the Single Global Currency Association's Board of Advisors and urged me to write this book. It was for him that I purchased the French version of *The Sand Castle*, as mentioned in Chapter 1. His innocence is more certain than the future of the Single Global Currency, and their common denominator is time. The remaining question is: how long before each is actualized.⁵

Just as John F. Kennedy's *Why England Slept* sought to explain the United Kingdom's slow reaction to Hitler's early aggressions, the book in your hands seeks to explain why the

world sleeps with respect to the issues of the multicurrency foreign exchange system; and it seeks to wake up those who can be stirred.

It is hoped that this book has met the standards of Roger Lowenstein's "Off the Shelf" column in *The New York Times*, "Exposing the Economics Behind Everyday Behavior," where he noted that "A funny thing seems be happening to economics writing: it's getting better."⁶ In addition, it's hoped that this book will lead to substantial research on the topic of the Single Global Currency and to political progress toward that goal. Perhaps the readers who are international economists will be inspired to do the research necessary to inform the decision makers about the timing of implementation and operations of the Single Global Currency. My third hope is the same as stated by Paul De Grauwe in his Introduction to *Economics of Monetary Union*, "...that I have conveyed to the reader the same sense of excitement that I have when I study the subject."⁷ If the readers of this book are not now excited by the subject of the Single Global Currency, then your assistance is requested on how to make the 2007 edition of the book better—because the subject is monumentally exciting, and important.

This first edition is the first of many, and each subsequent annual edition will include improvements as suggested by readers. Please send comments to me at morrison@singleglobalcurrency.org. Criticisms and identifications of errors are especially welcome. All comments, unless requested otherwise, will be posted on the Single Global Currency website at www.singleglobalcurrency.org, and additions and corrections will be included in subsequent editions.

Morrison Bonpasse
Newcastle, Maine, USA
13 April 2006

ENDNOTES (These endnotes also appear on the website of the Single Global Currency Association at www.singleglobalcurrency.org with active links to referenced works.)

1. The idea of a single global currency is elegantly simple and many people around the world have surely already thought of it, independently from economists and science fiction writers. In fall 2005, the labor union, Service Employees International Union, in the United States launched a website, www.sinceslicedbread.com and asked for ideas on how to improve the world. Of the 22,000 ideas submitted, four, including my own, explicitly called for a single global currency. There is no known connection of the Single Global Currency Association to the originators of the other three proposals.

2. "Letters—A Vote for One Currency," *Wiscasset Newspaper*, Wiscasset, Maine, 17 October 2002, at <http://wiscassetnewspaper.maine.com/2002-10-17/letters.html>. I learned later that the letter was incorrect when it stated that the Eurozone has one rate of inflation.

3. For those who seek more information about the author, Googling "Bon-passe" will work, and my resume is on the Single Global Currency Association website at http://www.singleglobalcurrency.org/about_us.html

4. "Famous Cases: Willie Sutton," Federal Bureau of Investigation, at <http://www.fbi.gov/libref/historic/famcases/sutton/sutton.htm>. See also "The Bank Robber, the QUOTE, and the Final Irony," on the website of the American Banking Association, at http://www.banking.com/aba/profile_0397.htm. According to the latter article, Sutton never said, "because that's where the money is," in response to the question, "Why do you rob banks?" After finally being released from his last of several prison terms due to poor health, he wrote two books and in one he stated that it was a newspaper reporter who made up that quote and attributed it to him. In his book, Sutton wrote, "If anybody had asked me, I'd have probably said it. That's what almost anybody would say... it couldn't be more obvious." The story of the origin of this quote parallels that of three other quotes cited in this book, by Senator Everett Dirksen ("Take a billion here, and a billion there and pretty soon, you are talking about real money") and Federal Reserve Bank retired chair Paul Volcker ("A global economy requires a global currency"), and Margaret Mead ("Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has"). The originators of all four did not clearly write or speak those words, but confirmed subsequently what others recorded for them.

5. For more information about the case of Dennis Dechaine see the website, maintained by his support group, Trial & Error, at www.trialanderrordennis.org. His case is part of the growing civil rights movement in

the United States to prevent wrongful convictions and exonerate those already wrongfully convicted. See the website of the Innocence Project, at www.innocenceproject.org. Dennis Dechaine became a client of the Innocence Project in 1993 when exculpatory DNA was found under the murdered victim's thumbnails. Maine's failure to correct this injustice in the face of all the evidence has done a gross disservice to Dennis Dechaine, the family of the twelve-year-old victim, Sarah Cherry, and the people of Maine, all of whom have a right to expect higher standards from their public officials. See James P. Moore, *Human Sacrifice*. Nobleboro, ME: Blackberry Books, 2002, and also his followup volume, *State Secrets*. Madawaska, ME: Trial & Error, 2006.

6 . Roger Lowenstein, "Off the Shelf: Exposing the Economics Behind Everyday Behavior," *The New York Times*, p. BU 7, 18 December 2005. He also wrote, "In recent books like *Freakonomics* and *The Travels of a T-Shirt in the Global Economy*, economists have taken it upon themselves to explain something of how the world works. They even tell little stories." at <http://www.nytimes.com/2005/12/18/business/yourmoney/18shelf.html>

7. Paul De Grauwe, *Economics of Monetary Union*. Oxford, UK: Oxford University Press, 1992, p. 2.

Appendix D

ACKNOWLEDGMENTS

At Phillips Academy, I first heard the aphorism, "Chance favors the prepared mind," and while my preparations for this book were not traditional; I'm pleased that the opportunity to write it chanced my way. At many turns, the road not taken might have been entirely missed.

I thank those who assisted my journey toward creating the Single Global Currency Association and the writing of this book. Neither task could have been read in the stars more than four years ago.

In June 2003, Babson College professor Alan Cohen, who taught me management skills during my 1980s MBA studies, graciously responded to my request for networking help. I asked, "Might you know someone who is interested in the topic of the single global currency?" Indeed, he did, and referred me to Professor John Edmunds whose initial openness, enthusiasm, and curiosity were invaluable. We met in his office that month, and subsequently began to write this book together. When his schedule did not open up as anticipated, he graciously encouraged me in October 2005 to go ahead on my own. Also at Babson, John Marthinsen shared with John Edmunds the initial efforts to further my financial education.

Similarly, the initial encouragement from Professor Robert Mundell was very helpful. He wrote in 2003, "I applaud all efforts to get support for a global currency. Good luck!" His subsequent personal graciousness is also appreciated.

In the summer and fall of 2003, my late sister, Barbara

Bump, encouraged me to continue working for justice for Dennis Dechaine and for the Single Global Currency; and her bequest was extremely helpful in my work toward both goals.

My thanks go also to the members and Boards of Directors and Advisors of the Single Global Association who have lent their names and time to the effort to implement a Single Global Currency and thereby save the world--trillions. Of specific help in this book were Ratnam Alagiah, Harvey Arbelaez, Jose Cordeiro, Christopher Gan, James W. Dean, and Celali Yilmaz.

As a former currency trader, Stewart Thomson tried to teach me the intricacies of foreign exchange and his patience is appreciated, despite the limits of his success.

Benjamin J. Cohen was kind enough to review the manuscript and make suggestions, even though the book disagrees with his own conclusions about the monetary future of the world.

Also reading the manuscript and giving feedback were friends DeWitt Clinton, Bill Evans, Henry Hobson, and Robert Scofield. Comments by Greg Dahl, Jeff Frankel, Norman Kurland, and Ed Tower were valuable and appreciated.

Thanks also to the occasional encouragement that came from people over the past three years with no previous familiarity with the idea of a single global currency, but who immediately responded with support. One such person was Jeannette Poe, an employee of a bank in South Carolina whose response to learning about a possible future Single Global Currency was, "Well, Yeah!". With a few million more such responses, the 3-G world will be achieved.

Illustrating the benefits of our cyber-world, an email inquiry came in February 2006 from University of Copenhagen economics students, Christina Wix Wagner & Ascha Lychett Pedersen. They wrote with questions about the Single Global Currency for their Bachelor Project. They had been introduced

to the idea when seeing a footnote reference in an International Economics textbook¹ to Richard Cooper's 1984 article, "A Monetary System for the Future." Seeing the obvious merits of the idea, they searched the web and found the Single Global Currency Association and fortunately emailed me. Subsequently, they volunteered to read the entire manuscript and provided many helpful observations and recommendations. I hope they continue their work in this discipline, as we need young economists who can "think outside the box."

My supportive sister, Cindy Tourte, read the manuscript twice and found many errors my own eyes had glazed over, and added a new dimension to our lifelong relationship.

Throughout the journey my wife, Leah Sprague, has claimed to retain the common sense in the family as she patiently endured the burdens of marriage to a champion of unusual causes.

Without Jennifer Bunting's publishing expertise and enthusiasm for the task, the book would have been far less pleasing to the eye and mind, and reached far fewer readers.

Finally, despite the efforts of the above and those perhaps negligently omitted, the book remains imperfect, and such failings are solely my responsibility.

—M.B.

1. The textbook is *International Economics—Theory and Policy*, by Paul R. Krugman and Maurice Obstfeld. Boston, MA: Addison Wesley, 6th Edition, 2003. Footnote #9, seen by Ascha and Christina, came after two sentences on page 597: "Current proposals to reform the international monetary system run the gamut from a more elaborate system of target zones for the dollar to the resurrection of fixed rates to the introduction of a single world currency. Because countries seem unwilling to give up the autonomy floating dollar rates have given them, it is unlikely that any of these changes is in the cards." The footnote read, "...The case for a single currency for the industrialized democracies is made by Richard N. Cooper, "A Monetary System for the Future," *Foreign Affairs* 63 (1984), pp. 166-84." Footnotes and endnotes work!

Appendix E

HOW TO PURCHASE COPIES OF THIS BOOK

PRICE

The price of this book is set initially in euros, as the euro is the currency which is presently the most promising beacon toward the single global currency. The euro services the world's second largest economic unit, after the United States, and it will soon be the official legal tender currency of 22 European Union countries, and later more. The price was set at €16.00, as of 3 January 2006, the first currency trading day of the New Year. All the equivalent prices in 146 other currencies are established as of that date. (See table at end of book.) This is as close as we can get to the "Law of One Price," meaning that identical goods should cost the same everywhere, if trade were free and without friction.

Unfortunately, because of currency-related Purchasing Power Parity differences throughout the world, the 16 euro price is more expensive to those potential buyers with currencies with low PPP compared to the euro. As noted in the text of the book, such differences in purchasing power occur within currency areas, too, but the multicurrency foreign exchange world makes the PPP differences worse.

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2 copies When buying two copies, the price is €12.00 each, or 75 percent of single copy price.

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Copies can be purchased directly from the publisher, the Single Global Currency Association, or an online bookstore such as Amazon.com, or your local bookstore—which may wish to order multiple copies from the Single Global Currency Association. Further discounts for bookstores and academic classes or groups are available upon request, by writing people@singleglobalcurrency.com. If ordering through Amazon.com, please consider accessing that company through the Single Global Currency Assn. “Books” webpage at <http://www.singleglobalcurrency.org/books.html>, since that will generate a contribution by Amazon to the Association.

SHIPPING

Shipping charges for surface and airmail by U.S. Mail are an additional 20 percent and 30 percent, respectively, for North

America, and 40 percent and 60 percent for all other locations.

ELECTRONIC DELIVERY (E-COPY)

E-copies (pdf file) are available on a pre-paid basis at the list price, without shipping charge. Send order to people@singleglobalcurrency.org

PAYMENT

Payment can be made by:

- *Cash* sent by mail in any of the listed 147 currencies to the Single Global Currency Association, P.O. Box 390, Newcastle, ME USA 04553-0390.
- *Paypal*, online at www.paypal.com, to "Single Global Currency Assn." with "recipient email address of morrison@singleglobalcurrency.org. PayPal is also accessible at the website of the SGCA at www.singleglobalcurrency.org, and click on "Contribute."
- *Credit Card*, through the PayPal utility when it asks, "Don't have a PayPal account?"

QUESTIONS?

Send questions to the Association at the above address or by email to people@singleglobalcurrency.org.

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43,000.00 COP	Peso	Columbia	1
7,800.00 KMF	Comoran Franc	Comoros	1
8,600.00 CDF	Congolese Franc	Congo, Dem. Republic	1
9,400.00 CRC	Colon	Costa Rica	1
120.00HRK	Kuna	Croatia	1
18.00CUC	Cuban Peso	Cuba	1
9.20 CYP	Cyprus Pound	Cyprus	1
460.00CZK	Koruna	Czech Republic	1
120.00DKK	Krone	Denmark	1
3,500.00 DJF	Djibouti Franc	Djibouti	1
660.00 DOP	Dominican Peso	Dominican Republic	1
110.00 EGP	Egypt Dollar	Egypt	1
260.00ERN	Nakfa	Eritrea	1
250.00EEK	Kroon	Estonia	1
170.00ETB	Birr	Ethiopia	1
33.00FJD	Fiji Dollar	Fiji	1
550.00GMD	Delasi	Gambia	1
35.00GEL	Lari	Georgia	1
170,000.00 GHC	Cedi	Ghana	1
140.00 GTQ	Quetzal	Guatamala	1
3,600.00 GYD	Guyanese Dollar	Guyana	1
830.00 HTG	Gourde	Haiti	1
370.00 HNL	Lempira	Honduras	1
4,100.00 HUF	Forint	Hungary	1
1,200.00 ISK	Krona	Iceland	1
860.00 INR	Rupee	India	1
190,000.00 IDR	Rupiah	Indonesia	1
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1,400.00 KES	Shilling	Kenya	1

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27.00	LYD	Dinar	Libya	1
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6,000.00	MRO	Ouguiya	Mauritania	1
600.00	MUR	Rupee	Mauritius	1
200.00	MXN	Mexican Peso	Mexico	1
250.00	MDL	Moldovan Leu	Moldova, Republic of	1
21,000.00	MNT	Tugrik	Mongolia	1
200.00	MAD	Dirham	Morocco	1
450,000.00	MZM	Metical	Mozambique	1
127.00	MMK	Kyat	Myanmar	1
120.00	NAD	Namibian Dollar	Namibia	1
1,400.00	NPR	Nepalese Rupee	Nepal	1
28.00	NZD	NZ Dollar	New Zealand	1
300.00	NIO	Cordoba	Nicaragua	1
2,500.00	NGN	Naira	Nigeria	1
128.00	NOK	Krone	Norway	1
7.30	OMR	Rial	Oman	1
1,100.00	PKR	Rupee	Pakistan	1
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62.00	PLN	Zioty	Poland	1
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10,000.00	RWF	Rwandan Franc	Rwanda	1
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140,000.00	STD	Dobra	Sao Tome & Principe	1

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45,000.00 SLL	Leone	Sierra Leone	1
610.00 SKK	Koruna	Slovakia	1
3,800.00 SIT	Tolar	Slovenia	1
150.00 SBD	Solomon Is Dollar	Solomon Islands	1
33,000.00 SOS	Somalian Shilling	Somalia	1
120.00 ZAR	Rand	South Africa	1
1,900.00 LKR	Sri Rupee	Sri Lanka	1
4,400.00 SDD	Dinar	Sudan	1
53.00 SRD	Suriname Dollar	Surinam	1
120.00 SZL	Lilageni	Swaziland	1
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66,000.00 ZMK	Kwachi	Zambia	1
1,500,000.00 ZWD	Zimbabwe Dollar	Zimbabwe	1

MORRISON BONPASSE is the founder and president of the Single Global Currency Association. After a childhood in Duxbury, Massachusetts, he was educated at Phillips Academy, Andover, and Yale University and was trained as a lawyer at Boston University Law School (JD), a public administrator at Northeastern University (MPA), and a businessperson at Babson College (MBA). He lives with his wife in Newcastle, Maine, USA, not far from his two stepchildren and four grandchildren, and predicts that all will live to see the implementation of the Single Global Currency.