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**Abstract**

There is a new approach to modeling business cycles that is gaining acceptance. It appears that there is good evidence that this approach may have a great deal to offer in understanding the causes and processes of major economic business cycles associated with financial crisis. This paper does not intend to define a mathematical model but instead describes the ideas and theories behind this new approach. In addition, this paper addresses a few of the unique challenges officials within the United States face with the current global crisis.

### Summary

The new approach has at its core the belief that the structure of our current economy, as well as many European economies, has changed significantly. Starting around 1983-1985 a structural break occurred that resulted in a period where changes in GDP, consumption and inflation ceased to experience high volatility. This period has been dubbed “The Great Moderation” and it is significant. The standard deviation during the years 1985-2004 was but one-half the standard deviation of the quarterly growth rate of real gross domestic product between the years 1960-1984 (Summers 2005). A variety of hypothesis for this period has been put forth of which will not be discussed in this paper. More importantly here, is that these new economies are subject to business cycles that are endogenous in nature and are highly correlated with financial crisis. It is believed that these new economies have specific characteristics that generate these financial business cycles. These cycles are not triggered by exogenous supply or demand shocks that throw an economy off of a steady state but instead are an endogenous force within the gears of the system itself that creates imbalances that can build up without any noticeable increase in inflation - the traditional parameter typically used to monitor imbalances.

The main characteristic of this new era of Great Moderation (GM) is rapidly rising growth coupled with low and stable prices which is highly correlated with an increase in the probability of episodes of financial instability (Borio 2003). In fact, within these new economies inflation shows up first as excess demand within credit aggregates and asset prices rather than in the traditional goods and services markets. This means that a financial crisis could occur without inflation ever having occurred within the broader economy. If asset bubbles are left unattended the resulting implosion of the bubbles can create virulent deflationary episodes. And it is the unwinding of the financial imbalances caused by the bubbles that are the source of financial instability. Note that according to this model, it

is not a sudden decline in inflation brought on by a contraction in the money supply that triggers a crisis as is often argued (for example Friedman and Schwartz 1963). So, minimizing the deflationary impact will not stop the necessary unwinding and required rebalancing.

There are many parameters that have been used in developing predictive models that anticipate a financial crisis. A few leading indicators that may warn of a growing financial crisis are:

1. Widening Credit gaps and rapidly rising assets values (equities, real estate- inelastic assets)
2. Over confidence / 'exuberance' coupled with faith in central bankers anti-inflationary commitments
3. Misalignments in intertemporal consumption, savings and investment decisions
4. Output gaps
5. Currency exchange rates / imbalance in global savings
6. High Debt service to export ratios

Again, this paper does not intend to define a model but instead simply lays out the ideas and theories behind this new modeling approach. This paper will first compare the traditional to the new modeling approach by first describing the economic environment that creates the business cycle. Secondly it will compare the two paradigms and explain how each generates different questions and answers in monitoring and explaining economic stability. Finally, I touch on a few of the unique challenges facing our current crisis within the United States.

### **Comparing the Traditional to the New Modeling Approach**

There is a new approach afoot to modeling business cycles that is gaining acceptance among a number of economic research groups; two of the most notable, The Bank of International Settlements Monetary and Economic Department (BIS [www.bis.org](http://www.bis.org)) and The International Monetary Fund (IMF [www.imf.org](http://www.imf.org)). There is good evidence that this approach may have a great deal to offer in understanding the causes and processes not only of cyclical financial crisis but of major economic business cycles that they generate. Its impressive predictive accuracy is cause to give this approach much more than a passing glance.

The approach is founded on the premise that the nature of the global economy has fundamentally changed over the past several decades and that this change has resulted in creating endogenous elements (parameters endemic to the system) that can give rise to financial crisis much like the one the global economic community is currently experiencing. The financial crisis has spillover effects on the broader economy by creating output gaps triggered by excesses in aggregate demand fed by the wealth from the equity in asset bubbles.

The new economies are characterized by the following traits:

1. Significant financial liberalization and globalization
2. Stable strong growth rates
3. Steady low inflation
4. A strong belief by the public in an anti-inflation commitment by their central bank
5. Lower output volatility measured either by output gaps or growth rates
6. Greater prominence of financial booms and busts in credit and asset prices
7. Booms and Busts that grow in size of amplitude, frequency and severity (Borio 2003)

While all of the above parameters are necessary conditions each alone is not sufficient. They work together synergistically. Two, three and four above generates confident, exuberant, and strong risk taking behavior of agents within an economy. Easy access to capital and credit along with financial liberalization creates an appetite for risk resulting in the growth of excessive debt and excessive

leveraging for both households and the financial sector. The investments funnel into assets such as stocks, equities or real estate. These endogenous forces work together synergistically to amplify the business cycle both on the way up and, more importantly for today's crisis, on the way down. During the boom, synergistic forces are fed by muted risk perceptions, weakening external financing constraints, confidence in central banker's commitment to anti-inflationary goals and "irrational exuberance".

"According to this view, financial liberalisation has meant that the financial system can more easily accommodate, and reinforce, fluctuations in economic activity. The financial system can act as an amplifying factor as a result of powerful procyclical forces. In the wake of liberalisation, this view sees access to external finance as more plentiful and more intimately driven by perceptions of, and appetite for, risk. And these can move strongly in sympathy with economic activity. Hence the highly procyclical nature of credit, asset prices and market indicators of risk, such as credit spreads. Thus, during booms, virtuous circles can develop, consisting of higher asset prices, muted risk perceptions, weakening external financing constraints, possibly an appreciating currency, greater capital deepening, rising productivity and higher profits. These processes then go into reverse during contractions." <sup>1</sup>

The possible leading indicators of a growing boom are rapidly growing credit gaps, rapidly rising asset values, appreciating currency, misalignments of fundamentals of real exchange rates and earnings yields, uncertainty in rising productivity and finally growing output gaps in later stages of the cycle. During the boom, economic aggregate supply and demand imbalances can begin to occur due to the wealth created from the equity of the asset bubbles. The important characteristic of cycles that occur is that excesses in aggregate demand tends to be reflected in rising inflation *much more gradually* and in fact a crisis can occur without any noticeable inflation in the broader economy at all. If the bubble is not tamed in the early stages of its expansion, an implosion that occurs due to the collapse of the asset bubble or unsustainability of the debt can turn virulent.

The theory has grown in popularity beginning in the 1990's. There have been discussions among central bankers including the Federal Reserve in the US regarding this theory and the need to manage

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<sup>1</sup> BIS papers No 19: [A Tale of Two Perspectives: Old or New Challenges for Monetary Policy?](#) Borio, English, Filardo . This view is better explained in Borio and Lowe 2002 [Asset Prices, Financial and Monetary Stability: Exploring the Nexus](#) BIS Working Paper No 114. And in Borio 2008 [The Financial Turmoil of 2007: A Preliminary Assessment and Some Policy Considerations](#) BIS Working Paper No 251 Both are from the Monetary and Economic Department

large and growing credit and asset bubbles. But, managing bubbles is not as straight forward as it may seem. In fact, if the central bank is operating under the belief that the nature of our global economic system has been invariant over the past several decades and that our current deflationary cycle is due to exogenous shocks that must be counter balanced with appropriate monetary and fiscal policies then managing bubbles becomes more problematic.

Specifically, the standard approach assumes that the economy has not fundamentally changed over the course of the last 60 years and that the economy leans strongly towards a steady state where exogenous factors act against this state that cause output to fluctuate around long term trends. Whether these business cycles are based on the New or Old Keynesian theories, problems of longer or shorter expansions, inflationary growth, volatile financial markets and changes in productivity are all a result of a specific set of random and nonrecurring shocks that are impacting an economic system that results in some kind of market failure. The shocks can be demand or supply shocks such as imperfect information, terms of trade or commodity prices that trigger disturbances that generally results in slow adjustments of prices and/or wages. But, the focus of the standard view is on exogenous shocks, propagation mechanisms of the shocks and the nature and character as well as the degree of persistence of the shocks all of which give rise to economic fluctuations. The Monetary policy of this traditional model focuses primarily on price levels and inflation and believes that it is their main goal to counter the shocks with the appropriate policy to correct the imbalances.

The new approach, on the other hand, believes that the structure of the current global economy has changed significantly as described by the seven points above. Moreover, the financial crisis is not triggered by some random, nonrecurring exogenous supply or demand shock that throws an economy off kilter but instead a force within the gears of the system that create imbalances that cannot be monitored by using the traditional parameters typical of the central bankers, like interest



rates and inflation. Additional leading indicators of a financial crisis such as credit aggregates and asset bubbles must be included in the monitoring variables as well.

However, monitoring leading indicators of a crisis may not be sufficient to insure an appropriate or timely response. In fact, if the monitoring institution is of the belief that the economic system has been invariant over the past decades, that is they follow the traditional paradigm, then even if they are aware of the credit and asset bubbles they may not correctly interpret or fully appreciate the implications of the economic performance on the broader economy and fail to respond in a timely manner.

Consider our current crisis, as a case in point. Although the Federal Reserve had been made aware of the growing asset and credit bubbles, prior to the crisis, they had been uncomfortable with 'managing' these aggregates with the so called blunt tools of the monetary policies. The Fed had been in discussions with both the IMF and the BIS regarding the abnormal size and growth of the bubbles. The Fed was well aware of potential deflationary risks regarding bubbles. (*Greenspan December 19, 2002 Issues for Monetary Policy Federal Reserve Speeches*). The IMF and the BIS had warned Bernanke and Greenspan that aggregates pointed to strong destabilizing influences and a more prudent stance toward the issue was warranted in order to minimize the risk of a large market correction and a sharper economic slowdown later. But, the Fed disregarded their advice, primarily because the fundamental difference in perceptions between these two paradigms also creates a fundamental difference in the monetary policies they generate.

The standard paradigm expects that the shock would show up in aggregate price indices or output gaps *first*. In our current crisis the Consumer Price Index in fact had remained low prior to 2007 even though inflation had moved into inelastic assets such as real estate, securities and equities. Again, within the new economies inflation may not show up *at all* in the broader economy prior to an

implosion. Moreover, output gaps as a leading indicator of a financial crisis has not done well and according to one model is only successful 28 to 40 percent of the time (Borio 2002).

In our current crisis in the United States, if the Fed had attempted to make corrections by raising interest rates based solely on the increasing values of specific assets, it would have seemed quite irrational to anyone holding the standard paradigm when no obvious inflationary evidence was apparent across the broader economy. In fact, you would likely here an outcry from the entire financial sector - as did occur when the Fed burst the Dot.com bubble. It was argued in 2001 that the Fed had no business destroying wealth by raising interest rates in an apparently healthy economy.

There is an even greater risk with ignoring asset bubbles while holding the standard paradigm. We know that the lag of inflation usually takes between one to two years. During this time, the bubbles are growing, excess demand begins to expand *within inelastic assets* and a swift increase in value of these assets begins while credit aggregates expand unsustainably. Since these measures have never been used by the standard models, these parameters may very well be ignored or worse they may be interpreted as signs that they are not only reasonable but justified within an economy that is growing rapidly with low inflation and within an economy that is increasingly productive. Households and consumers may be expecting higher growth in incomes and higher returns in their investment. So the Fed simply ignores the warnings until the damage of aggregate dislocations from the wealth effect of rising asset values has occurred and the deleveraging begun.

On the other hand, the new model assumes that financial booms and busts are a natural occurrence of the new economy and that business cycles are intimately associated with fluctuations in credit and asset bubbles in much the same way that prices and inflation are intimately tied to imbalances in the broader economy. Business cycles generated from credit and asset bubbles are the result of specific characteristics unique to the situation or the countries affected and are tied

fundamentally to the new environment. If the monetary system does not have any mechanisms for observing the upswing and responding to it, the system will become overstretched and whatever growth is occurring will not be sustainable. Again, in the same way that the 'old school' believes that high inflation produces growth that is not sustainable. It is in the best interest of all to slow the economy down by raising interest rates in an effort to contain the growing bubbles. The important point to recognize here is that without an understanding of this cycle and a conscious effort to monitor the relevant credit and asset aggregates the economic system will appear to be strong and stable even though it is growing at an unsustainable pace. And if the credit and asset bubbles are not managed they will impact the broader economy through significant dislocations in aggregate demand and supply due to the consumer demand from the false wealth effect fed on leverage and debt. The subsequence unwinding can be virulently deflationary.

There are a few subtleties that should be made at this point. Greenspan and Bernanke do not argue that credit and asset bubbles can trigger a significant deflationary spiral. But what they do not believe is that these forces are endogenous and endemic to the economic system and will *necessarily* result in a deflationary downward spin if not managed. The endogenous parameters that create and feed the bubbles are procyclical in that they move with the bubble and empower their growth. Unfortunately, they are also procyclical on the way down and can unwind virulently if allowed to implode on their own. If Bernanke believed that it was a cycle and operated within this paradigm, he would have had solid reasons to justify popping the bubble to prevent the *inevitable* dislocations and *inevitable* virulent deflation and deleveraging; inevitable because the growth is based solely on debt and leverage and not on income and long term capital investment that generates real wealth.

Our Central Bank in the current crisis was caught off guard because they did not wear the new spectacles of the new theories that told them that bubbles only follow a period of low and stable

inflation and that excess demand pressures that accompany these bubbles show up first within the credit and asset aggregates and not within goods and services. By all accounts, the economy was going strong and the Fed was doing their job.

Even now they have not recognized the real issues. Bernanke is operating out of the belief that these types of business cycles can be managed because the crisis is the result of a random exogenous shock and that by applying the appropriate Monetary policy the economy can be pushed back onto its stable growth path. His goals continue to be to be focused on restoring/repairing lending channels and consumer spending/borrowing – albeit correctly now that the bubble has burst- but without addressing the deeper issues at the root of the crisis – an inappropriately structured, supervised and incentivized banking system. The reason is that Bernanke follows the Freidman and Schwartz belief that depressions are caused by incorrect Federal Reserve responses to exogenous financial shocks. Their solution is to simply provide liquidity and follow some form of quantitative easing. The Fed began quasi-quantitative easing in creative ways through its' new facilities: Term Auction Facility, Term Securities Lending Facility and Primary Dealer Credit Facility as well as with foreign exchange swaps and bailout loans to failing banks. And in nearly every case, officials exchanged cash or Treasury securities in exchange for low quality collateral. More recently they have turned to 'not-so-creative-ways of quantitative easing, like simply printing currency and purchasing treasuries, an approach in use more recently.

Bernanke's responses are motivated by his belief that the cause of the Great Depression was due to the deliberate contraction of the money supply by Central Bank. Let's pause for a moment to review Milton Freidman and Anna Schwartz's argument on the causes of the Great Depression (GD) which has greatly influenced Bernanke. In the seminal book *A Monetary History of the United States, 1867-1960* Freidman and Schwartz implicated the Fed for the entire Depression reasoning that the

cause and the depth of the depression was primarily a monetary phenomena caused by the Fed raising the interest rates. The bubbles were germinated by an easy money policy by the New York Reserve Bank prior to 1929. The Federal Reserve began increasing the interest rates because they believed that asset bubbles reflected 'speculative' as opposed to 'productive' uses of credit. The Fed believed that productive uses of credit included expanding productive capacity or investing in plant and equipment. It appeared evident that the uses of credit were not being put to such ends and believed it imperative that it be managed. To address the concern, a deliberate tightening of the money supply began in the spring of 1928. The stock market finally responded with the crash in October 1929. In October 1931 they raised interest rates once again, in order to put a halt on the gold drain but concurrently triggering a large number of bank failures. This tightening of the money supply and its' consequent of bank failures, falling prices and falling aggregate demand, is further supported by additional research (Hamilton 1987, Bernanke 1995). The ongoing increase in interest rates and the bank failures all contributed to a rapid decrease in the money supply that eventually found its way into the real economy with output and prices falling precipitously.

However, Friedman and Schwartz's claim that the *cause* of the GD was a tightening of the money supply could be argued against on the grounds that in fact the Depression was triggered more by asset bubbles – asset bubbles that would eventually have to be deleveraged and the resulting 'excess' in demand in the economy eliminated. The Fed reacted incorrectly during the GD is supportable and resulted in tragic consequences. But, whether deflation could have been averted entirely is open to debate.

Regardless, Bernanke supports their conclusions. According to Friedman and Schwartz's theory the economy was struck with a financial shock and thrown off of its' growth path. They argue that had

the Fed countered this shock by providing enough currency or liquidity to counteract the lost wealth before the deflationary forces took effect they may have averted the spiral downward.

But, here is the flaw and where the two paradigms part company. Once the bubbles have been allowed to expand, their deleveraging and aggregate dislocations created from excess demand must be allowed to dissipate. No amount of liquidity or continued borrowing can halt this inevitable process. It can only forestall it. And forestalling this process will not solve the dilemma. Providing liquidity and recapitalization and focusing on mending the broken down lending channels of the banking sector may soften at best, but more likely postpone the landing. But, the economy must and will go through a deleveraging cycle.

As you have probably guessed the conditions characteristic of this new economy are much the same conditions that the US has faced prior to the Great Depression (Borio Crockett (2000)). These business cycles resembles significant aspects of the Great Depression including stable inflation and rapidly rising growth coupled with public confidence in low inflationary targets (due to the gold standard) and 'exuberance'. Japan prior to their crisis in the 1990's also had many of these same characteristics as did a number of emerging nations that experienced 'credit crises' that rocked their economies. This economic environment creates a perfect storm that ironically is generated by a Central Bank that has done a very good job of keeping the economy on a steady growth path marked by low inflation with a public that has complete confidence in their captains

So contrary to Freidman and Schwartz's arguments of the cause of the Great Depression, recent busts of the era of Great Moderation (that closely resembles the pre Great Depression era) are not caused by a tightening of Monetary policy, but by the unwinding of an investment boom typical of a boom – bust cycle. These more modern crises may prove to be counter examples to Freidman and Schwartz's arguments.

In summary, this new approach to business cycles lends a helping hand to understanding the events and responses to our current crisis as well as other historical financial crisis such as the Great Depression and Japan's lost decade. The model appears to fit the data. And this model goes further than the traditional approach in explaining the recurrence of the financial crisis that the United States has experienced over the past 25 years. Moreover and perhaps more importantly, it provides us with useful tools in addressing these events. For according to the traditional model, business cycles are random nonrecurring events. Random, nonrecurring events are difficult to prevent and by their very nature belie paradigms that help interpret and give structure to previously isolated events. I believe that with additional research this approach may give us greater insight into our economic world and that could perhaps grow our discipline into a broader economic understanding of its' internal mechanisms.

#### **Examples of "Weakening External Financing Constraints"**

I would like to end with just a few additional points that I feel compelled to discuss. In particular, there are some very disconcerting characteristics to our own particular situation within the United States. Simply solving the aggregate supply and demand imbalances will be only a small part of the task before us. This crisis grew to great proportions due to the lack of governance over our financial institutions. It was not laissez-faire it was lawless; an important distinction that needs to be understood. The movement back will require not simply a realignment of supply and demand in the economy as long term investment kicks in, consumers begin to save, and the excesses dissipated, but a fundamental change in the way banks and the economy do business must also take place.

In fact, the crisis is the result of three failures: a regulatory and supervisory failure in advanced economies; a failure in risk management in the private financial institutions; and also a failure in market discipline mechanisms.

So now we need to go further. Let me emphasize a few points.

We need to have more flexibility and less procyclicality of some of the Basle II norms, including on the question of "fair value".

The rating agencies have to adapt to the new complexity of the financial sector, to limit conflict of interests, and to accept supervision.

We need to close loopholes and fill information gaps in financial regulation and supervision. This includes looking again at regulation for covering securitization, private equity companies, and mechanisms that increase leverage. We also need to give more thought to how to regulate hedge funds, either directly or indirectly, by regulating their counterparties. (The Euro At 10: the Next Global Currency?, Speech by Dominique Strauss-Kahn, Managing Director of the International Monetary Fund, At the Peterson Institute, October 10, 2008 )

There were many laws and regulations that were put onto the books to prevent just such a crisis that we face today. The Glass Steagall Act is but one example. It was repealed and replaced with the Gramm-Leach-Bliley Act by an overly confident and exuberant bank sector who insisted in housing the commercial and investment banking industries under one roof. This in essence allowed investment banks ('Prime Dealers') to borrow (leverage) from commercial banks in order to fund their hedge fund operations. Yet, commercial banks were obtaining their funding and profit not from the interest of their loans but instead from selling their mortgages to the Prime Dealers. This closed loop and intertwining of investment banking and commercial banking instilled very risky profiteering behavior within commercial banks. When the investment banks lost their market for Mortgage Backed Securities (MBS) they ceased to demand mortgages from the commercial banks. As a result revenues evaporated for the commercial banks. Unfortunately, by this time many commercial banks had invested in many of these MBS sold by Prime Dealers and held them on their balance sheets. So not only did their revenue evaporate but when the music stopped, the commercial banks were left with worthless MBS on their books.

The Commodity Futures Modernization Act of 2000 had additional far reaching implications for our current crisis. This legislation blocked any kind of oversight or regulations by the government for any products offered by banking institutions if they were sold as futures contracts, for example Credit Default Swaps. In addition, it wiped out each and every state and local ordinance that up to this point



had regulated Credit Default Swaps. So the entire industry of Credit Default Swaps took place “behind closed doors” and between “private parties”.

And there were other provisions in laws that allowed a ‘shadow’ banking system completely unregulated to grow that provided a place (Structured Investment Vehicles) to store off-balance sheet assets most of which were the mortgage backed securities, asset backed securities, collateral debt obligations and credit default swaps. The sheer size of these now ‘toxic’ derivatives that make up the books of our banking system is enough to keep the knowledgeable awake at night. The credit default swaps alone have been estimated up to 60 trillion although after netting out the double accounting may ‘only’ be around 30 trillion. The sum of all the GDP in the world is around 50 trillion so, regardless, we are talking a significant amount of money and a potentially large impact on the broader economy while they deleverage.

There were other laws that were passed with the ‘help’ of the banking industry. Significant among these was the Agency 04 Rule a decision made in 2004 by the Securities and Exchange Commission which abolished regulation on holding capital reserves for only the largest investment banks, that is, for banks whose assets exceeded \$5 billion. This SEC decision removed all government oversight on capital requirements allowing these firms leverage as they saw fit. It took these banks but a few years to engage in massive leveraging up to 30:1. Henry Paulson, while working for Goldman Sachs was at the meeting and a strong advocate of this new ruling.

The dismantling of the laws that protected Americans from such crisis along with the new legislation implemented by the Wall Street financial institutions have created a financial culture that was far too thinly capitalized and highly leveraged - ratios that often reached 30 to 1— yes \$30 of debt to \$1 of capital. It created a culture that operated with little or no government oversight with an

executive bonus system that created inappropriate shortsighted incentives for massive risk taking and enticed our commercial banking system into their lair. When Prime Dealer's investments failed they dragged down the commercial banking system with them. So what we face now is not just rebalancing aggregate demand and supply, recapitalizing our banks and providing liquidity or even finding an effective means to quarantine toxic derivatives. What we face is the very restructuring of our entire financial system which must include not simply addressing oversight issues, transparency and simplifying complex derivatives but solving the inherent problems with moral hazards, with conflict of interest of oversight agencies, *with simply providing oversight agencies* once again and with removing the principal agent problems throughout the system.

### **Protecting Self-Regulating Dynamics of the Market**

Market economies operate efficiently because of their inherently 'self regulating' mechanism. If you dismantle these mechanisms you are effectively dismantling efficient market driven outcomes because the market economy no longer has the ability to self correct to these efficient equilibriums. The 'invisible hand' fundamentally assumes that the government has a legitimate role in identifying and enforcing rules of the market in order to preserve this self-correcting dynamic. Governments preserve and enforce private property, competitive markets, *transparency* and *accurate information flow* within markets. Without these dynamics in place our economy is more akin to a barbaric anarchy where winner takes all. This is not what Adam Smith had in mind or upon which his theory is based.

Since 1987 there has been a concerted effort on the part of the financial institutions and the Federal Reserve to dismantle existing legislation that protected Americans from anarchy within financial markets and ironically all in the name of 'free markets'. Moreover, these financial

institutions along with the help of the Fed have created *new* legislation that left these powerful institutions completely 'unfettered' and often resulted in financial environments that closely resembled gambling casinos but without the risk.

The lesson that we must learn is not that the market economy does not work - quite the contrary. We can liken this to how we protect our democracy. Our history has taught us how to implement a democracy. We must apply this understanding to our economy. For though democracy is about freedom from the rule of dictators, benevolent or otherwise, we know that democracy does not imply that we are free to do whatever to whomever we want. We have courts, law and order that guarantees and ensures that democracy can and does survive and flourish; laws that prevent others from abusing our freedoms. So too with a market economy, we need laws and regulatory policies in place that manages and directs greed and the profit motive into productive means that ensures prosperity and that stabilizes growth. We need to protect and build a nurturing economic environment that protects and preserves the self-correcting mechanisms and dynamics within the market that allows the invisible hand to perform its job of allocating goods and services efficiently. Laws that protect private property, competitive markets, transparency and accurate information flow within markets and which ensures that no one group usurps our democracy by obtaining too much economic power by destroying the mechanisms that guarantees a free market economy.

## References

1. Bakshi, Gurdip S. and Zhiwu Chen. 1996. "Inflation, Asset Prices, and the Term Structure of Interest Rates in Monetary Economies." *Review of Financial Studies*. Vol. 9. Pp. 241-76.
2. Bank for International Settlements. 1998. "The Role of Asset Prices in the Formulation of Monetary Policy." *BIS Conference Papers*. Vol. 5. Basel. Bank for International Settlements (2001): "Empirical studies of structural changes and inflation", *BIS Papers*, No 3, August.
3. Claudio Borio, William English, Andrew Filardo (2003) "A Tale of Two Perspectives: Old or New Challenges for Monetary Policy?" *BIS Working Paper No. 127* February
4. Claudio Borio (2008) *The Financial Turmoil of 2007-?: "A Preliminary Assessment and Some Policy Considerations"* *BIS Monetary and Economic Department No. 251* March
5. Claudio Borio, Iihyock Shim, (2007) "What Can Macro-Prudential Policy do to Support Monetary Policy?" (*BIS*) *Monetary and Economic Department No. 242* December
6. Bernanke, Ben and Mark Gertler. 1999. "Monetary Policy and Asset Price Volatility." *Economic Review*. Federal Reserve Bank of Kansas City. Vol. IV. Pp.17-51.
7. Barro, Robert J. 1996. "Inflation and Growth." *Federal Reserve Bank of St. Louis Review*. Vol. 48. No.3. Pp.153-69. May/June.
8. Borio, C, C Furfine and P Lowe (2001): "Procyclicality of the financial system and financial stability: Issues and Policy Options" in *Marrying the Macro- and Micro-prudential Dimensions of Financial Stability*, *BIS Papers*, No 1, pp 1-57.\*
9. Borio, C, N Kennedy and S Prowse (1994): "Exploring Aggregate Asset Price Fluctuations Across Countries: Measurement, Determinants and Monetary Policy Implications", *BIS Economic Papers*, No 40, Basel, April.
10. Claudio Borio and Philip Lowe (2002) "Asset prices, financial and monetary stability: exploring the nexus" *BIS Economic Papers*, No 114. July.
11. Claudio Borio and Andrew Filardo (2007) "Globalisation and Inflation: New Cross-Country Evidence on the Global Determinants of Domestic Inflation" *BIS Working Papers No 227* May.
12. Dermirguc-Kunt, A and E Detragiache (1997): "The determinants of banking crises: evidence from developing and developed countries", *IMF Working Paper WP/97/106*.
13. ---- (1998): "Financial liberalisation and financial fragility", *IMF Working Paper WP/98/83*.
14. Edison, H (2000): "Do indicators of financial crises work? An evaluation of an early warning system", *International Finance Discussion Papers*, No 675, Board of Governors of the Federal Reserve System.
15. Friedman, Milton and Schwartz Anna, *A Monetary History of the United States, 1867-1960*. Princeton: Princeton University Press (for the National Bureau of Economic Research), 1963.
16. Glassman, James K., and Kevin A. Hassett. 2001. "Did the Fed's Obsession with Stocks Cause it to Miss the Slowdown?" *Wall Street Journal*. January 5.
17. International Monetary Fund, (2000) *World Economic and Financial Surveys*, "World Economic Outlook May 2000 Asset Prices and the Business Cycle"
18. International Monetary Fund, (March 2002) *Global Financial Stability Report*, Chapter IV Early Warning Systems Models: The Next Steps Forward

19. Paul Mizen, (2008) The Credit Crunch of 2007-2008: A Discussion of the Background, Market Reactions, and Policy Responses, Review: Federal Reserve Bank of St Louis September/October 2008
20. Naohiko Baba, Paola Gallardo, (2008) "OTC Derivatives Market Activity in Second Half of 2007" (BIS) Monetary and Economic Department, May
21. Papademos, Lucas Vice President of the ECB, Speech to International Symposium of the Banque de France, "Monetary Policy, the Economic Cycle and Financial Dynamics" Paris, March 7, 2003
22. Raghuram Rajan, Economic Counsellor and Director of Research Department, The International Monetary Fund. Speech at the Global Financial Imbalances Conference, London, United Kingdom, January 23, 2006
23. Summers, Peter M. 2005 What **Caused The Great Moderation?** Some Cross-Country Evidence URL: <http://www.kc.frb.org/Publicat/Econrev/PDF/3q05summ.pdf>
24. Professor Axel A Weber, "Financial Markets and Monetary Policy" Speech by the President of the Deutsche Bundesbank, at the CEPR/ESI 12<sup>th</sup> Annual Conference "The Evolving Financial System and the Transmission Mechanism of Monetary Policy", co-organised by BIS – Bank of International Settlements, Basel, 25-26 September 2008