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## **Conversion Theory II: the case for Recession Bonds**

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# **Conversion Theory II: the case for Recession Bonds**

**By**

**Drs Kees De Koning**

**2<sup>nd</sup> January 2019**

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## Introduction

The IMF, in a recent report, calculated that global debt has reached the level of \$164 trillion<sup>1</sup>, with a global GDP level of \$85 trillion. On a per capita basis, this amount translates into a debt of \$86,000 per each individual in the world. This is more than 2.5 times average annual income level. Governments owe \$61 trillion of this debt. The U.S., Eurozone, Japan and China account for a substantial share of this debt.

In a previous paper: “Conversion Theory: The key to understanding economic developments before and after the 2008 financial crisis”<sup>2</sup>, the author explained that an individual inability to service a mortgage loan can lead to a collective inability, through falling house prices, increasing unemployment levels and lower real median incomes. The conversion of long-term mortgage loans occurs when such mortgage loans are converted into daily tradable securities. When the obligations of potential doubtful debtors are co-mingled with that of secure borrowers and the composite securities are given AA or AA+ ratings by the risk rating agencies, doubts about the payment capacity of a group of borrowers locked into the security, easily leads to collective fear. Liquidity in the mortgage-backed securities disappeared and set off a series of negative economic growth effects including widespread foreclosure proceedings in the U.S. (41.4% of all mortgage holders over the period 2007-2014). The end result was a global recession, firstly affecting the U.S. economy and subsequently spreading through a domino effect to Europe and the Far East.

To mitigate the effects of recession, particularly one on the scale of the recession that followed the global financial crisis, a new flexible sovereign debt instrument may be needed, covering the largest economies as well as the periphery of smaller countries –Recession Bonds. The International Monetary Fund (“IMF”) is well placed to accommodate such an approach, but it needs to rethink which instruments are best suited for the job. For instance, its current maximum facility is \$1 trillion to lend to member states. This is a sizable amount, but it is dwarfed by the \$61 trillion outstanding global government debt. Another example has been the \$4.5 trillion government debt increase that the U.S. alone experienced between 2007-2010. Even in the Eurozone, the government debt to GDP ratio increased from 64.9% in 2007 to 91.9% in 2014, a relatively large change of 41.6% in five years.

What the IMF might consider is to switch its role from lender of last resort to smaller countries to supervisor of the global economy in order to maintain financial stability, promote high employment and sustainable economic growth and reduce poverty around the world. This is within its mandate from its 189 Member States.

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<sup>1</sup> <https://blogs.imf.org/2018/04/18/bringing-down-high-debt/>

<sup>2</sup> [https://mpra.ub.uni-muenchen.de/90161/1/MPRA\\_paper\\_90161.pdf](https://mpra.ub.uni-muenchen.de/90161/1/MPRA_paper_90161.pdf)

## 1. The current state of affairs

In its latest Quarterly Survey (December 2018), the Bank for International Settlements sums up the current threats to world economies<sup>3</sup>. It states among others:

“Recent sharp selloffs across global financial markets are probably the first of many, as investors adjust to a world of tighter monetary conditions and the threat of an economic downturn.

The year has been a tough one in the financial markets, with big drops in European and Asian stocks and even U.S. equities recently slipping into the red for 2018 after a decade-long bull-run. The last quarter saw increasing fears for world and U.S. economic growth as trade war noise escalated and central banks tightened policy or prepared to withdraw extraordinary crisis-era stimulus.

The “market tensions we saw during this quarter were not an isolated event,” Claudio Borio, head of the monetary and economic department at the BIS said.

Monetary policy normalization was bound to be challenging especially in light of trade tensions and political uncertainty.

Among the challenges facing the global economy are the possibility of rising inflation, the “dark cloud” of lower-rated U.S. corporate debt in an overstretched market and weaknesses in the European banking sector.

Recent weeks also saw short-dated U.S. government bond yields briefly rise over medium-term rates, a phenomenon known as a “yield curve inversion”. A fairly reliable precursor of recessions, the inversion further spooked investors.

Steadily rising U.S. interest rates may also put a squeeze on the availability of dollars — the global funding currency of choice. But the BIS said the financial sector’s ability to raise dollar funding outside the United States could mitigate this risk.

The Bank also warns that the pillars of the global financial system are fundamentally unstable and could lead to a frightening chain reaction in the next crisis. It commented on the risks associated with the Central Counterparty Clearing Houses.

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<sup>3</sup> [https://www.bis.org/publ/qtrpdf/r\\_qt1812.pdf](https://www.bis.org/publ/qtrpdf/r_qt1812.pdf)

A central counterparty-clearing house (CCP)<sup>4</sup> is a corporate entity that reduces counterparty, operational, settlement, market, legal and default risk for traders.

A CCP becomes the counterparty to the buyer and the seller and guarantees the terms of a trade even if one party defaults on the agreement. The CCP collects enough money from each buyer and seller for covering potential losses incurred by not following through on an agreement, resulting in the entity replacing the trade at the current market price. Monetary requirements are based on each trader's exposures and open obligations.

These giant CCP's clear much of the \$540 trillion derivatives trades. The Bank warns in its quarterly report that the CCPs could cause " a destabilising feedback loop, amplifying stress". The BIS said "balance sheet interlinkages could cause a CCP default waterfall." The Bank concluded that the nature of the world's business cycle has changed over the last three decades. Offshore lending in dollars by European, Japanese and increasingly Chinese and emerging market banks has risen to \$12.8 trillion. This web of dollar liabilities is coming under strain as the U.S. Federal Reserve drains liquidity, pushing up global lending rates. The BIS concluded that cross-border funding, regardless of the source, may be fickle in a crisis."

The current threats to worldwide economic growth do not come from just one source in particular, like in the case of the U.S. mortgage-backed securities crisis. The potential sources are a multiple: rising interest rates in the U.S.; offshore lending in U.S. dollars; the structure of the derivatives clearing system; falling stock markets and potential trade wars.

Perhaps the time has come to some out of the box thinking. One possibility is the creation of "Recession Bonds"

## **2. The concept of "Recession Bonds"**

What are recession bonds and why are they needed?

To start with the "Why question": the financial crisis started in the U.S. in 2007. This crisis made the risks of financial alchemy abundantly clear with extremely serious repercussions to the economic wellbeing of a large swathe of the U.S. population. The act of securitization turned long term debt obligations into daily priced obligations: the debt conversion process. Investors relied on credit rating agencies to assess the collective risks of such securities.

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<sup>4</sup> <https://www.investopedia.com/terms/c/ccph.asp>

Often AA or AA+ credit ratings were attached to the securities. What –in hindsight- was overlooked was that future provisions for doubtful debtors were not included in the price setting of the securities. Bankers, often knowingly, sold “dud” products to the markets, making great institutional and personal fortunes in the process.

One of the main results was that nearly 7 million U.S. individuals lost their jobs between May 2007 and October 2009 and that the U.S. unemployment rate shot up from 4.4% in May 2007 to 10% by October 2009. Real median household incomes dropped by 9.2% from \$59,534 in 2007 to \$54,569 in 2012. House prices and new housing starts also dropped substantially.

The U.S. housing crisis had international ramifications. In the U.S. itself it was the dramatic effect on government finances, an effect that has lasted to current days. In December 2007, U.S. government debt to GDP reached a level of 64.7%. By September 2018 it had increased to 104.1% of GDP. To put it another way: at the end of Q4 2007 the U.S. Federal Government debt level stood at \$9.2 trillion; by Q4 2009 it was \$12.3 trillion, by Q4 2010 the level stood at \$14.0 trillion and the latest data for 2018 show a figure of \$21.2 trillion.<sup>5</sup> On top of this, after the 2008 financial crisis, the Federal Reserve printed money to the extent of some \$3.5 trillion. The real GDP figures show a drop from Q4 2007 to Q4 2009 or in real amounts from \$15.8 trillion to \$15.3 trillion by Q4 2009.<sup>6</sup> The huge increase in government debt during this period was unable to stop real GDP falling.

For the combined Eurozone countries, government debt to GDP levels stood at 62.9% by December 2007. Due to the recession effects, it reached 91.9% in 2014<sup>7</sup>. The most recent figure for 2017 assessed this level at 86.7%.

An economic crisis in a major country spreads around the globe and very few economies do not suffer when the largest economies go into a recession period. For instance, trade volumes go down in recession times: in 2008 the real level of U.S. imports of goods and services was \$2.55 trillion on an annual basis. By 2009 this level had dropped to \$1.97 trillion or over \$580 billion less in annual imports<sup>8</sup>. Less imports into the U.S. meant less exports from other countries.

Less trade also impacts corporate investment intentions, thereby impacting economic growth rates further.

Stock markets are another example of international interrelationships. The largest companies in the world do not just depend on the sales in one market, but depend on such sales levels in a multiple of markets.

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<sup>5</sup> <https://fred.stlouisfed.org/series/GFDEBTN>

<sup>6</sup> <https://fred.stlouisfed.org/series/GDPC1>

<sup>7</sup> <https://tradingeconomics.com/euro-area/government-debt-to-gdp>

<sup>8</sup> <https://fred.stlouisfed.org/series/IEAMGSA>

What the U.S. experience shows is that the additional government debt created over the period Q4 2007 to Q4 2009 (\$3.1 trillion) was unable to reverse or even arrest the loss in real GDP growth; the latter still showed an absolute loss of \$500 billion over the same period. The Fed through quantitative easing added another \$3.5 trillion to the financial markets.

Accordingly, a different approach for fighting a recession is merited: Recession Bonds. Recession bonds help to convert long-term government debt into current short-term government expenditure: the conversion process! Financial alchemy with more noble results, representing a conversion from financial sector assets into real sector economic activities.

## **2.1 Recession bonds**

Recessions bonds are ordinary government bonds (Treasuries in some countries like in the U.S or Gilts in the U.K.), but with a special feature. The feature is that interest and some repayment obligations can be postponed from the start of a recession period until the end of such period. In doing so and in the situation that a substantial share of government debt is converted into Recession Bonds, such conversion provides a government with ample funds to support economic activities and to stimulate economic growth during a recession without having to resort to additional borrowings: it relies on the financial markets to grant it the option to enhance government expenditure needed to get an economy back to economic growth levels. It is the option to turn financial powers of investors into real sector activities: the conversion from long-term borrowings into short-term cash injections into the real sector. A recession period is the time when such conversion is most needed.

Recession Bonds do not increase the outstanding level of government bonds; they alter the debt servicing level by moving obligations to future years, just as an upward change in the fixed or variable interest rate would do.

The pre-requirements for a successful program of Recession Bonds are:

1. Having a series of economic activities ready to be executed as and when a recession period starts;
2. Having a sufficient level of long-term bonds either issued or converted from already outstanding long-term bonds into Recession Bonds;

3. Having a pricing structure of the bonds, which reward the holders of such bonds for accepting the temporary postponement of interest payments and some principal payments; typically for a maximum period of two to three years;

4. Having a pricing structure which is attractive to investors. The target group of investors will be worldwide pension funds and banks. Pricing could be set at a premium of approximately 0.5% over existing thirty-year bond rates.

5. The assessment of when a recession starts and when it finishes should be made by a neutral international body. The ideal one is the IMF. This role is fully compliant with the IMF Charter. It would have the capability to decide –in co-operation with countries concerned- the timing of when a recession period starts and when it finishes. It would also decide, again after consultation with a government involved, the percentage of the principal payment that is rolled over to the period after the recession. Such powers, if granted to the IMF, would enable the IMF to steer various economies, including the largest ones, simultaneously out of recessions.

6. The IMF could also assist countries in choosing which activities would be most effective for turning around a recession period. Different countries might require different solutions.

7. The existence of Recession Bonds will transform the IMF from an agency extending loans as a priority fund provider to smaller countries to an organization helping the big economies to shorten their recession periods. Over time, smaller countries may also be able to issue Recession Bonds.

8. All countries wishing to utilize Recession Bonds need to sign an agreement with the IMF, so that providers of the funds can count on the neutrality of the Fund to assess the starting and the finishing dates of the recession period.

9. All amounts affected by the temporary waivers of interest and principal amounts will need to be included in the payments to be made after the recession period is over.

### **3. The role of the IMF**

One has to be realistic in what the IMF currently can and cannot do. It has the firepower of \$1 trillion in available funds, made available by the richer countries. Such amount is dwarfed by the \$61 trillion of outstanding levels of government debt in the world.

The concept of the IMF supplying funds to smaller countries is perhaps outdated, especially since 2008. The capital markets have shown themselves capable of raising \$164 trillion. The world does not have a shortage of savings, but such savings can be used more efficiently. Some lenders and borrowers could contractually agree that some debt servicing during recession periods is not in the interest of either lenders or government borrowers. Such debt servicing could be more effectively used for stimulating economic growth in order to shorten and reduce the level of economic displacements: the conversion process from long into short-term without increasing the outstanding level of borrowings. It will also be a conversion from financial assets into real sector economic activities.

What the financial sector needs is an independent arbitrator to decide when a recession starts and when it finishes and equally important how much of the principal amount due should be included. Such decision should be based on pure economic arguments and not on political considerations. Of course such decision should be the result of a discussion between the country concerned and the IMF, but ultimately the IMF should be given the powers to act independently.

A contract between the country concerned and the IMF can establish such independence.

In giving such powers to the IMF, it will enable the Fund not just help to overcome a recession period in one country, but simultaneously do this for various countries affected by a global recession. Country Recession Bonds enable the IMF to act globally to fight recessions, without having itself to raise trillions of U.S. dollars or the equivalent in other currencies. Smaller countries will automatically benefit from the reduced duration and less deep recessions in the world's major economies.

The conversion of part of an outstanding long-term government debt into short-term government expenditure constitutes a conversion of a financial asset into current expenditure.

#### **4. The fund providers**

The logical buyers of Recession Bonds would be the worldwide banking sector and the world's pension funds. The latter collectively manage \$41.4 trillion in assets according to a recent study<sup>9</sup>. The world's asset managers collectively manage even more of the world's financial assets on behalf of third parties. The central banks that have been involved in quantitative easing could in particular

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<sup>9</sup> Willis, Towers Watson Global Pension Assets study 2017

be helpful to start up the process of converting existing government bonds into Recession Bonds. They are the U.S. Federal Reserve, the Bank of England, the European Central Bank and the Bank of Japan. The latter four have acquired a sizeable slice of world government debt by acquiring their respective country's government bonds through Quantitative Easing programs.

To start with the Fed's example, its quantitative easing program bought up U.S. government treasuries and some mortgage bonds issued by government-sponsored enterprises, like Fannie May and Freddie Mac. This act was a pure financial transaction: it replaced the holders of such securities from the private sector to a central bank holding. In the U.S. about \$3.5 trillion was pumped into the financial markets in this manner. The hope was that such money would be used to stimulate the real economy. It did help lower long-term interest rates, but one may express doubts that it led to more actual government spending as the dates of purchase fell mostly after the 2008-2009-recession period. QE facilitated a transfer of ownership of government debt, but QE did not increase government spending levels at a time when many individual households faced their most serious financial crisis for many years.

What the Fed might now consider is to stop selling back such securities to the financial markets, but to wait to the next financial crisis, which according to the BIS and others might not be too far off. If such event happens, the Fed could be the first to turn its existing U.S. government Treasury holdings into Recession Bonds.

The ECB is in a somewhat different position in that the government bonds it purchased, are denominated in Euros, but are country bonds from different countries in the Eurozone. The debt titles held are country specific, rather than a collective debt title. However the ECB could help countries like Italy and Spain by converting the ECB holdings from these countries into Recession Bonds. This will help these countries to cope with a potential recession period.

For the worldwide banking sector converting short-term client deposits into long-term government security holdings has always been a major activity. The ability to convert such holdings back into cash, as and when needed, has always existed, as there are huge markets to supply funds to these markets.

In order for the banking sector to participate in turning some of its holdings into Recession Bonds, a few elements need to be clarified. The first element is the accounting rules to be applied to Recession Bonds. It could be decided that, since government debt is the safest category of debt, income of interest can be recognized accounting wise in the year that it originally was due, notwithstanding that it will be received two or three years later. However, no tax should be levied until actual cash has been received.

#### **4.1 Positive effects of using Recession Bonds**

The BIS report, quoted above, makes clear that there has been a structural change in the level of government debt outstanding in the U.S., but equally in other countries. The more than doubling of U.S. government debt to over 100% of GDP over the period 2008-2018 is unlikely to be a pattern that can be repeated over the next decade.

It is therefore essential to find instruments that can shorten recession periods, not just for one country, but also for the global economy. One option is to create Recession Bonds.

Recession Bonds will turn financial assets into real sector economic activities at a time when such cash injections are most needed. Increased economic activities also imply increasing tax revenues. The existence and use of Recession Bonds have the potential to improve the credit rating of the more vulnerable countries, provided that the largest economies also sign up to such action. It is likely that a better balance can be maintained between the ever-growing powers of the financial sector and real sector activities not just in one country, but also in the largest countries in the world. Smaller countries will benefit from such an approach.

#### **4.2 Some practical implications**

Pension funds do not experience any tax implications in maintaining a Recession Bond portfolio, as they usually pay no tax over incomes. The pensioners, as receivers of the pension payments, are usually liable for income tax. These pensioners will notice no difference in their pension payments.

For banks it is important to maintain a solid backing for their liabilities. Hence it is recommended that interest due over a government's Recession Bonds be accounted for as received as if they were normal bonds; tax-wise the income flow would reflect the actual time payments from a government.

It is important that there will be an active market in such bonds, with daily price setting. For banks it is also essential that Central Banks operate repurchase agreements for Recession Bonds, if needed.

Finally, shortening a recession period as a real sector experience will also help the stock markets, as volatility levels are likely to be reduced. The real sector supports the financial sector, a conversion from short-term economic activities into long-term benefits.

## 5. Some conclusions

Threats to economic activity levels can come from a multitude of sources.. Government debt levels compared to their respective GDP have risen sharply over the last ten years, even for the most developed countries. Continuation of this is unlikely to be an option for the next decade. The key in understanding what can and cannot be done is linked to the relationships between the financial sector and the real sector: the latter being the sector of expenditure in the current period.

The financial sector can pose a threat to real expenditure levels through its conversion mechanisms, turning long-term debt into daily tradable obligations. This happened during the financial crisis of 2008 in the U.S. when long term home mortgage obligations were converted into daily tradable ones. When doubts arose about the quality of some loans incorporated in the mortgage-backed securities, the liquidity to trade in these funds disappeared and a race was started to force mortgage holders to pay back their mortgages. Some 41.4% of all U.S. mortgage holders were confronted with foreclosure proceedings over the period 2007-2014!

This in itself led to high U.S. unemployment levels, dropping house prices and very low levels of new housing starts. It also led to the explosion in U.S. government debt levels. It furthermore led to an international recession period as lower trade levels and the active participation of overseas financial investors in the U.S. mortgage backed securities markets –both as originators and as savers- created a downward pressure on financial assets in other markets, away from the U.S.

It is unlikely that during the next decade governments can or should allow such ballooning of debt levels.

It is for this reason that the suggestion was made in this paper to use the financial sector assets of one type of particular borrowers: i.e. governments as the stepping-stone to a quicker economic recovery. Recession Bonds could be the vehicle of choice, especially if the rules to use them are administered by an independent international agency such as the I.M.F.

The conversion of financial assets into real sector activities can be achieved with the help of Recession Bonds, thereby mitigating the economic harm wrought by a recession.

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2<sup>nd</sup> January 2019

## **Appendix 1: the Conversion process**

The conversion of interest due over outstanding Recession Bonds into actual government expenditure during a recession period is a relatively simple process. Recession bondholders will have agreed that a government during a recession will make no interest payments. The IMF will closely monitor the start and finish of the recession period. Such interest payment waiver leads to less debt servicing expenditure by a government during a recession period and thereby more money available for fighting a recession.

What is slightly more complicated is how to deal with the repayments element as in many cases during a recession period no repayments need to be made on the outstanding long-term government bonds. In this case a variant of Quantitative Easing (VQE) could be introduced. Instead of buying up outstanding government bonds in the market, which represents a financial sector to financial sector action, a central bank could assist in turning a financial sector claim into real current government expenditure through a VQE process.

VQE could work as follows: The IMF, a central bank and a government could agree on the volume of VQE needed during the recession period. This volume of funds is created by a central bank, just like in the case of QE. However a link is made with the volume of outstanding Recession Bonds and a percentage is assessed of the principal amounts outstanding. What happens next is that a central bank, rather than spending this money on actively buying up outstanding government bonds (the current QE process), it transfers such funds to a government for fighting a recession (VQE). The difference between QE and VQE is that in the VQE case the money used is converted from the financial sector directly into real economic sector activities, while in the QE case it would have been a transaction between financial sector participants only.

The safeguards in monitoring the process need to be in the hands of the IMF with full collaboration of a central bank.

Repayments of such money to a central bank should come out of future government budgets, when an economy is back to economic growth levels.

VQE applies the conversion method from long-term financial sector transactions into short-term government expenditure as and when needed. QE does not do this. Safeguards will need to be in place to ensure that VQE is not an open-ended process.

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