



# Japanization of the West? A closer look at the looming global government debt problem

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Research & Analysis

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How Western countries might end up in a bond crisis

- Government debt exploded as a result of stimulus packages in most advanced economies. The current deflationary environment allows for further quantitative easing measures.
- The financial crisis was an overdue catalyst to tackle the deficit restructuring problem.
- Western economies are benefitting from Japan's lessons learned during the balance sheet recession.
- We think that a substantial debt restructuring within the next 12-24 months is necessary. Otherwise, a "Eurozone light" including all the peripheral EU countries seems to us a fairly realistic scenario.
- If structural issues do not get resolved over the next 3-5 years, there may be a bond crisis.

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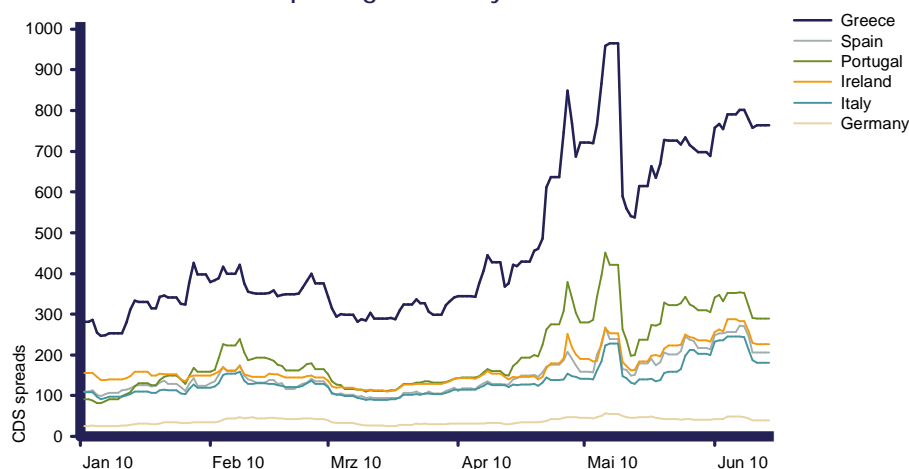
# Introduction

## “Euro TARP”

The looming government debt problem has dominated the headlines for months, peaking with the European bailout package (one is tempted to call this the “Euro TARP”) agreed on 10 May 2010, worth EUR 750 bn (USD 962 bn). This announcement represents a shift towards politics for the ECB, blurring the boundaries between monetary and fiscal policy. The ECB does not have a mandate to help out crippled countries within the Eurozone. A little over a year earlier, the previous crisis, caused by the US mortgage-market collapse, resulted in USD 1.8 trillion of global credit losses and writedowns.

Armed with the bailout package, the ECB started to buy Greek, Portuguese and Spanish government bonds, resulting in a flattening yield curve. But the ECB’s actions only calmed down markets for a few weeks. In June 2010 the EUR fell to its lowest level against the CHF<sup>1</sup> since its inception in 1999 and a 4-year low against the USD<sup>2</sup>.

Figure 1: CDS narrowing after the announcement of the EUR bailout package was only short-lived



Source: Bloomberg. Time period analysed: 1 January 2010 to 14 June 2010. German CDS is only shown for comparative purposes.

Investors still question how various European countries intend to solve the growing government debt problem. The European bailout package certainly helps cover the liabilities of the peripheral European countries in the short run (i.e. for the next 1-2 years), but it further devalues the EUR, undermining investors’ confidence in the EUR as a reliable currency. As a result, Asian central banks have started to shift their reserves away from the EUR and into the USD.

<sup>1</sup> Intraday, the EUR reached 1.3184 against the CHF on 30 June 2010.

<sup>2</sup> On 7 June 2010 the EUR fell to 1.1952 against USD.

One would expect European countries with strong export sectors, such as Germany, France and the Netherlands to benefit from this situation. However, the fact that the German investor confidence index ZEW plunged to 28.7 in June from 45.8 in May<sup>3</sup> – the biggest decline since October 2008 – reflects companies' concerns the sovereign debt crisis might undermine export prospects and crimp growth in Europe's largest economy, as most of the German export goes to the 16 EU-member countries and not abroad. Nevertheless, export figures and manufacturing production turned out fairly strong in June for Germany. Going forward, we expect tensions within the Eurozone to increase as European countries recover from the recession at different speeds.

Looming government debt problem is not just a European problem

In this paper, we will look at the looming government debt problem – which is not exclusively a European problem – in more detail. In order to understand where we might be going, we will also look at how Japan dealt with its two 'lost decades', although, as we will see, the Japanese situation was different in several important respects from the European and US government bond situations. We believe that the structural issues facing many Western countries have to be resolved in the next 3-5 years, otherwise there is a real possibility of a global bond crisis.

## Global government debt – current situation

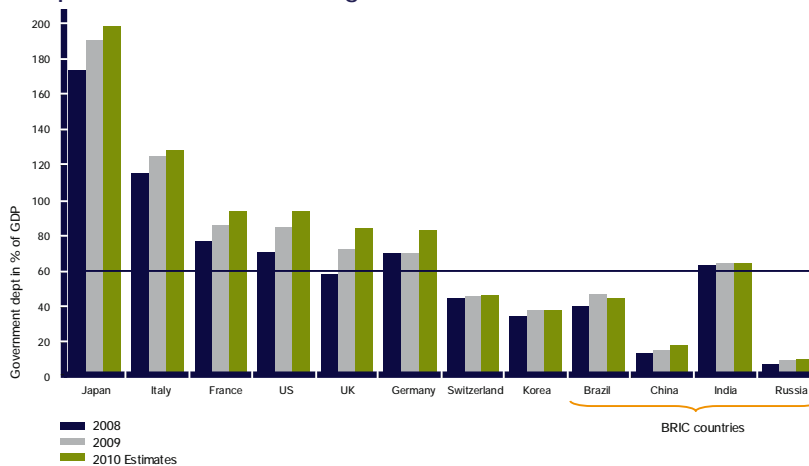
Most developed market countries exceeded 60% debt-to-GDP ratio a while ago

The problem of huge government debts is not new, even if it has gained additional significance in recent months following Greece's well publicised problems. A 60% debt-to-GDP ratio is considered a healthy level of government debt in relation to GDP, according to various studies. This is the level that has been incorporated into the Maastricht treaty which is binding on all Eurozone countries. However, as the following figure shows, several developed market countries, including countries in the EU, already had government debt in excess of 60% before the financial crisis 2008/2009. The crisis only exacerbated the situation. In fact, public debt has grown most rapidly in countries where it had remained fairly low before the financial crisis, such as the US, UK, Spain and Ireland. The financial crisis, while painful, was only an overdue catalyst to tackle the deficit restructuring problem. Furthermore, while countries such as Japan and Greece have dominated the news recently, a closer look shows that most developed countries have a public debt problem. By contrast, the BRIC countries – with India being a slight outlier – have fairly healthy balance sheets with government debt below the 60% level. For developed countries the situation is getting worse. The OECD expects total industrialised country public sector debt to exceed 100% of GDP by 2011.

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<sup>3</sup> Source: Bloomberg.

Figure 2: Government debt as % of GDP: developed countries are leading the list

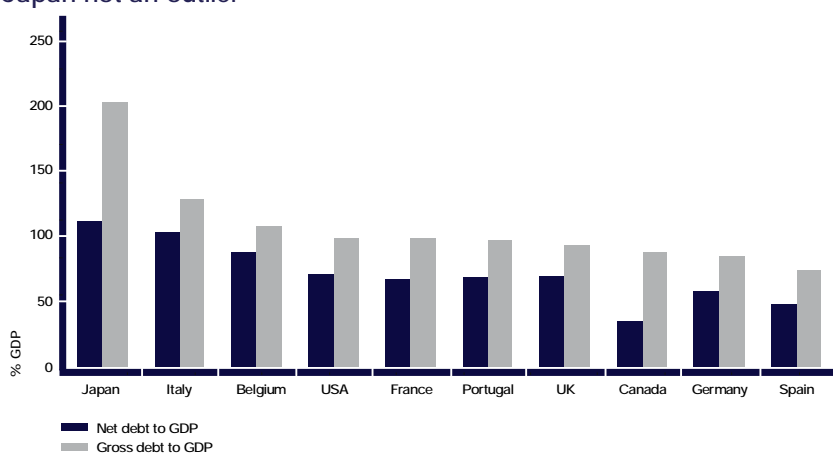


Source: OECD, IMF. Forecast 2010 according to the European Commission, autumn 2009.

On a net adjusted basis,  
Japan is not an outlier

Japan clearly dominates the list of government debtors, with gross government debt reaching close to 200% of GDP. This is a direct result of the massive – and largely unsuccessful – stimulus packages that Japan released after their real estate bubble collapsed in the early 1990s. However, on a net adjusted basis, the picture looks quite different.<sup>4</sup> While Japan still leads the list of government debtors, European countries are not that far behind (figure 3). Although Japan’s gross debt is around 200%, nearly half is held by the public sector which is government-owned, such as the Japanese Post and the Government Pension Investment Fund.

Figure 3: Government debt on a net basis – Japan not an outlier



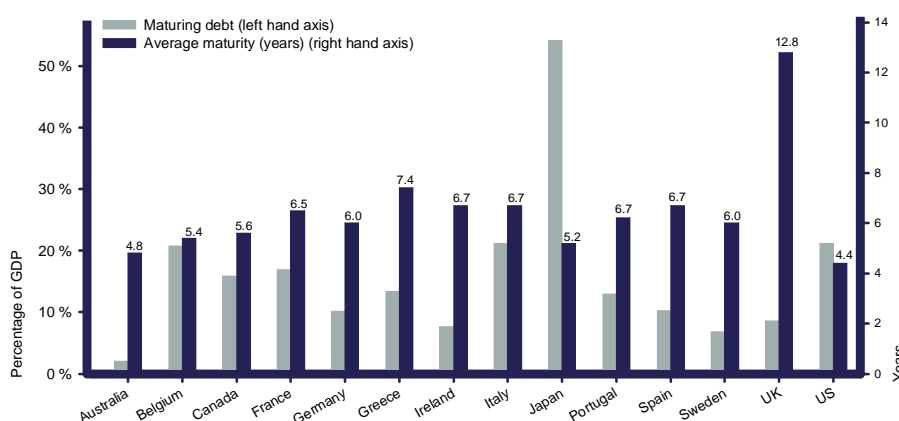
Source: OECD; Société Générale.

It is important to monitor gross and net government debt levels, but a country’s financing needs have the most direct impact in the short-term. The

<sup>4</sup> Net adjusted basis represents gross government debt minus financial assets of governments and government agencies.

table below shows that while Japan has the most debt maturing this year the US has the fastest debt turnover. The average maturity of US debt is 4.4 years, while the UK only has to roll its debt every 12.8 years. Credit default swap spreads for countries with fast turnover and high debt amounts are expected to increase the most.

Figure 4: Advanced economies' gross financing needs, 2010



Source: IMF, Fiscal Monitor, 14 May 2010.

Worsening demographic conditions and increased social welfare expenditures increase government debt

The main reason for high government debt is worsening demographic conditions, with fewer young people supporting more old people, but increasing welfare expenditure and a lack of budget discipline have also played their part. It is usually easier for politicians to increase government expenditures rather than announcing budget cuts. It is also worth noting that some countries have either virtually no government debt (Australia) or very low government debt, such as Russia.

High government debt is worrying, because, according to a recent study by Reinhart/Rogoff<sup>5</sup>, median GDP growth rate decreases by 1% when the ratio of debt-to-GDP rises above 90%. They argue that public debt can crowd out productive private investment. They also came to the conclusion that three years after a typical banking crisis, the absolute level of public debt is 86% higher, but in cases of severe crisis the debt could grow by as much as 300%. Even a recent working paper published by the Bank for International Settlements<sup>6</sup> came to the conclusion that "the path pursued by fiscal authorities in a number of industrial countries is unsustainable". The IMF expects that the government debt of developed market countries will continue to increase until 2014.

<sup>5</sup> Source: Reinhart/Rogoff: Growth in a time of debt, 7 January 2010 draft.

<sup>6</sup> Cecchetti, S. G., Mohanty, M S, Zampolli, F.: The future of public debt: prospects and implications. BIS Working Papers, March 2010.

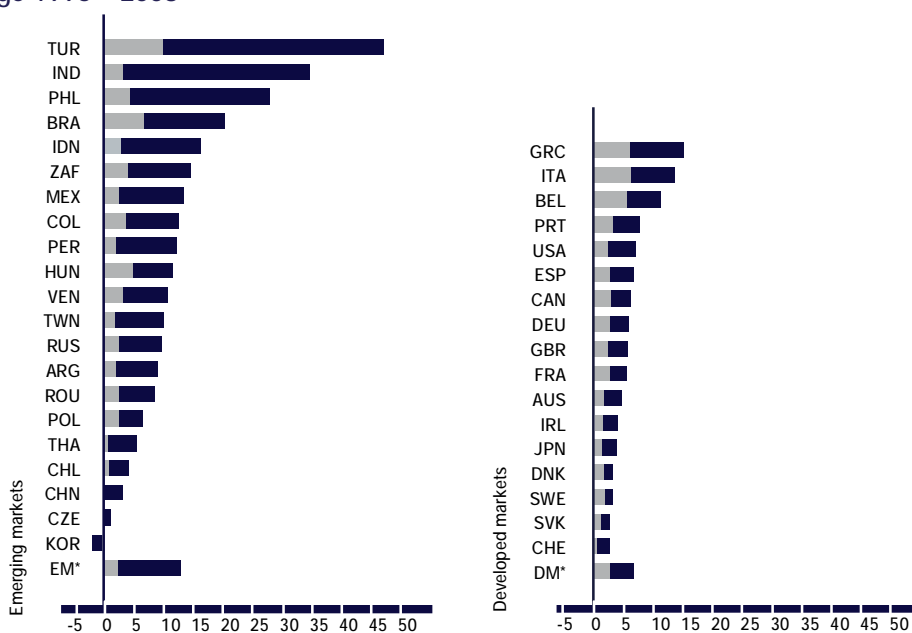
At some stage increasing government expenditures no longer increase GDP. By continuing to increase government debts after that point countries shift the problem onto the next generation.

Economic growth has to grow faster than government debt to prevent yield increase

If growing deficit spending is not accompanied by economic growth, yields will most likely increase. This is because the debt-to-GDP ratio will continue to increase unless growth in the economy outpaces interest rates. If this does not happen, unsustainable debt levels will eventually have to be corrected.

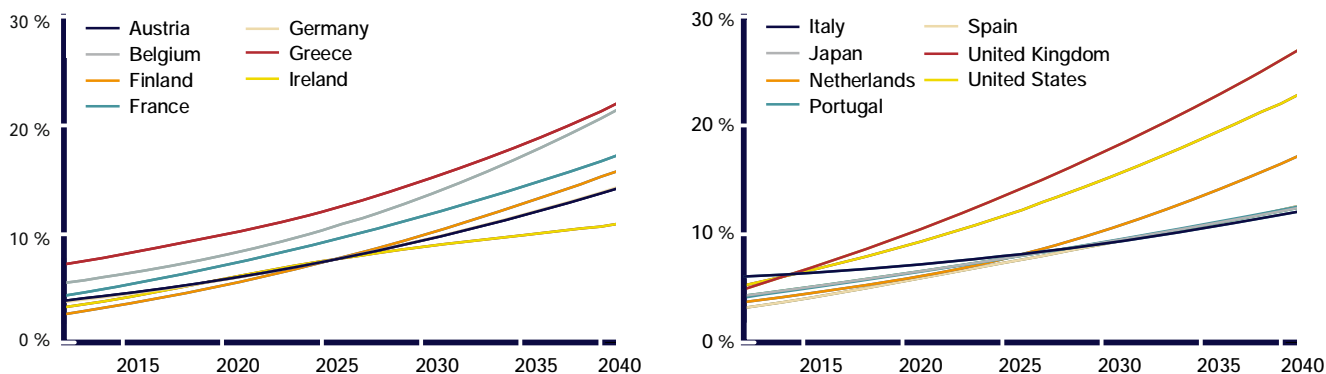
Furthermore, additional interest payments further exacerbate the situation and increase the overall government debt. Figure 5 shows the net debt interest payments for both developed and emerging markets for the time period 1996 to 2008 and how these payments are expected to rise going forward (see figure 6). In such a situation, high debt ratios result in higher debt servicing bills, even if there is no change in real interest rates.

Figure 5: Net debt interest payments: average 1996 – 2008



Source: OECD, IADB, IIF, IMF, IHS Global Insight, DB Research. Grey bar represents % of GDP, grey and blue bars represent % of revenue. \*GDP weighted.

Figure 6: Government debt interest payments are projected to rise substantially for most countries



Source: BIS, March 2010, OECD.

Figure 6 shows that while interest payments are around 5% today, these numbers are expected to rise to over 10% in all cases, and as high as 27% in the UK in a going concern scenario, i.e. if no austerity measures are implemented and no money is printed by the central banks.

The IMF estimated the change in the primary balance (i.e. excluding interest payments) required to reduce gross debt-to-GDP ratios back down to 60% by 2030 as shown in the table below. It shows that four countries require an adjustment of more than 10% of GDP, with Japan not surprisingly leading the list, followed by the UK, Ireland, and Spain. Within this context, it is important to keep in mind that historically an adjustment of 5-6% was already considered quite large, although this has been achieved, as we will show later on when we discuss the possible scenarios for the current situation.

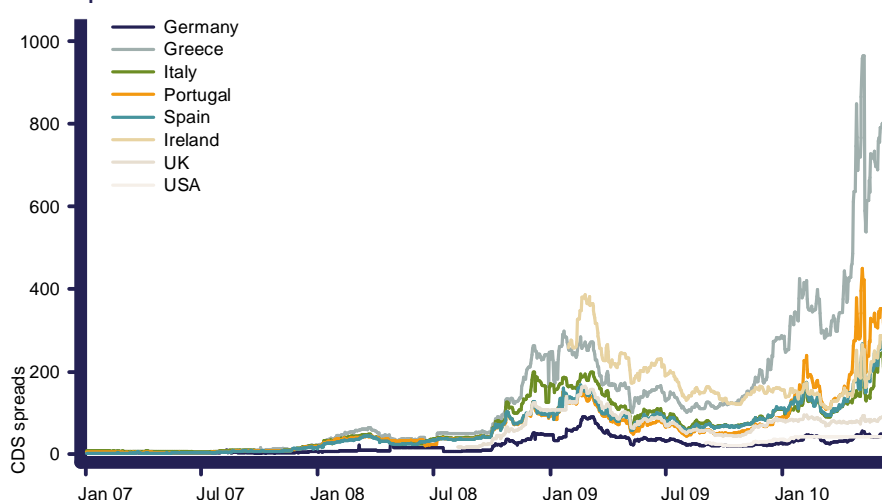
Figure 7: IMF estimates of the required adjustment in primary balances until 2030 to reach 60% debt-to-GDP ratio

Advanced economies	Required adjustment in % of GDP	Advanced economies	Required adjustment in % of GDP
Japan	13.4 %	US	8.8 %
UK	12.8 %	Portugal	6.5 %
Ireland	11.8 %	France	6.1 %
Spain	10.7 %	Italy	4.8 %
Greece	9.0 %	Germany	3.4 %

Sources: IMF, World Economic Outlook, October 2009 and IMF staff calculations. Primary balance is assumed to improve gradually during 2011-20; thereafter, it is maintained constant until 2030. The percentage column shows the primary balance improvement needed to stabilize debt at end-2011 level if the respective debt-to-GDP ratio is less than 60%; or to bring debt ratio to 60% in 2030. Illustrative scenarios for Japan are based on its net debt and assume a target of 80% of GDP. The analysis makes simplifying assumptions: in particular, beyond 2011, an interest rate-growth rate differential of 1% is assumed, regardless of country-specific circumstances.

As a result of the increased sovereign debt, the respective CDS levels also exploded, as can be seen in the figure below.

Figure 8: CDS spreads exploded in peripheral European countries



Source: Bloomberg. Time period analysed: January 2007 to 14 June 2010. CDS shown represent USD SR 5Y Corp for each country. Swaps are used as a numeraire to compare sovereign credit risk across multiple countries. Swap spreads refer to the yield differential between a specific maturity government bond and the fixed rate on an interest-rate swap with an equivalent tenor.

## The episode of debt deflation – Japanese lessons learned?

As global government debt increases massively around the world, it is worth asking whether Western countries could benefit from the lessons Japan learned during the two lost decades (starting 1988/1989 and 2002), when Japan fell into deflation.

Japan experienced price bubbles in both equities and real estate in the 1980s

In the 1980s Japan experienced a price bubble in equities and real estate, which then burst in the early 1990s. When those bubbles burst real estate values dropped and corporate balance sheets deteriorated sharply, leaving banks with a large number of non-performing loans (NPLs). As a result, Japanese clients lost faith in their banks and started to hoard their cash “under the mattress” instead of keeping it in a bank account.

Initially the Bank of Japan (BOJ) decided not to intervene to rescue the banks. In fact, it took them 17 months before they cut interest rates to below 0.5%, which was far too late for the Japanese economy.

Even when interest rates had been lowered that did not help Japanese corporations. When the asset bubble burst, the corporations paid down debt rather than borrowing any new money, despite low interest rates. Easing monetary policy only works if willing borrowers exist, however.

Japanese corporations were suffering from a balance sheet recession...

Japanese corporations were facing the challenging situation whereby their core operations, i.e. the development and marketing of products and technologies remained healthy, but the asset bubble collapse left holes in their balance sheets (Richard Koo, the Chief Economist at the Nomura Research Institute, named this situation “balance sheet recession”). In an environment “where there are no borrowers and debt is being paid back, the money supply cannot grow since the liquidity which is injected by the central bank cannot leave the banking system”.<sup>7</sup>

...but M2 expanded

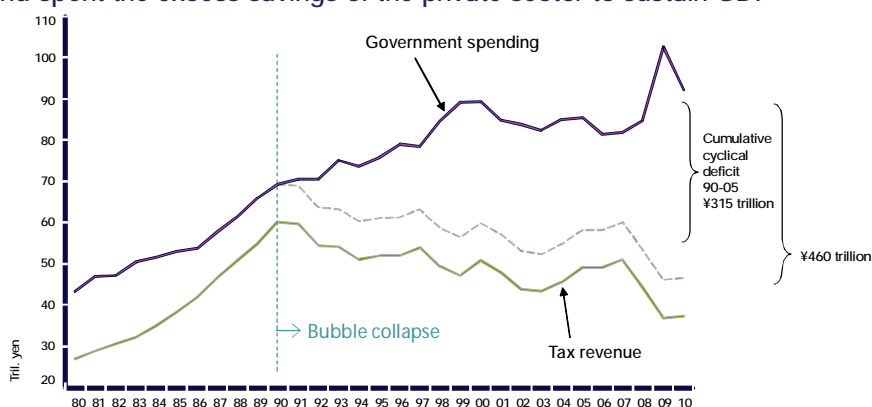
Nevertheless, “the money supply (M2 plus certificates of deposit) in Japan not only failed to contract, but actually expanded at an annual rate ranging from 2-4% during the period 1990 to 2007”.<sup>8</sup> This contradictory phenomenon was, according to Koo, only possible due to the large government intervention. As banks tried to lend money to the private sector and were unable to do so, they eventually bought Japanese government bonds (JGBs), and this process was repeated several times, resulting in an increased M2. Koo therefore argues that while the Japanese government has been bashed by several economists for not doing enough to prevent a deflation in Japan, the government and the BOJ

<sup>7</sup> Source: Koo, R.C.: The Holy Grail of Macroeconomics, Lessons From Japan's Great Recession. 2009.

<sup>8</sup> Source: ditto.

actually managed to prevent Japan from falling into depression, similar to the 1930s in the US. As a result, “the money supply in Japan did not contract and GDP remained steady at about JPY 500 trillion despite the loss of JPY 1,500 trillion in national wealth and a decline in corporate demand totalling more than 20% of GDP”.<sup>9</sup>

Figure 9: Japanese government borrowed and spent the excess savings of the private sector to sustain GDP



Source: Nomura Research Institute, April 2010, Ministry of Finance, Japan. Note: FY 2009 includes supplementary budget, and FY 2010 includes initial budget. Dotted line represents likely path without government action.

Nevertheless, one should keep in mind that while the BOJ tripled the amount of liquidity in the system over this fifteen-year period, the money supply, that is, money actually available to the private sector, only rose 50%, and this occurred because of government borrowing.

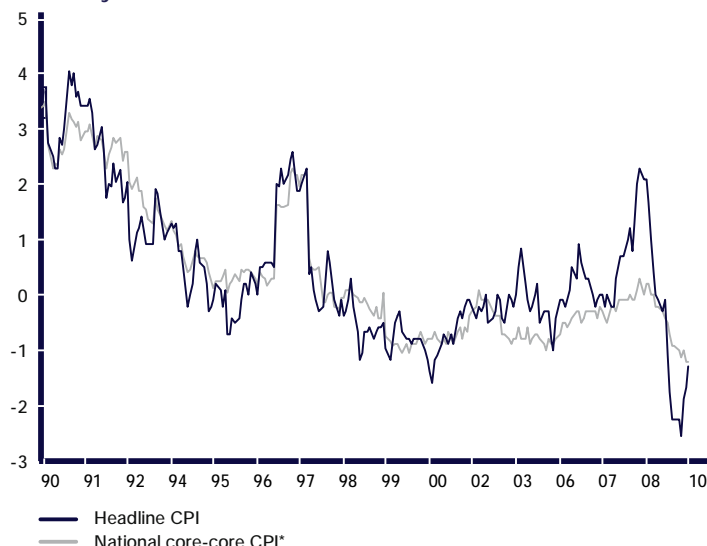
Typically, in this kind of environment, unemployment should rise as GDP falls, but Japan’s inflexible labour market prevented that from happening. Instead, the average household income decreased during the two lost decades as wages fell and domestic demand struggled to recover.

In 1995 prices started to deflate in Japan. When the BOJ finally decided to lower interest rates, this helped raise prices, but not for long. Japan was soon feeling the effects of the Asian crisis. After reaching an inflation level of over 2.5%, inflation started to decrease again in 1998, returning once again to deflation (see figure 10).

Japan fell into deflation which lasted for two decades

<sup>9</sup> Source: ditto.

Figure 10: Japanese inflation turned slowly but surely into deflation

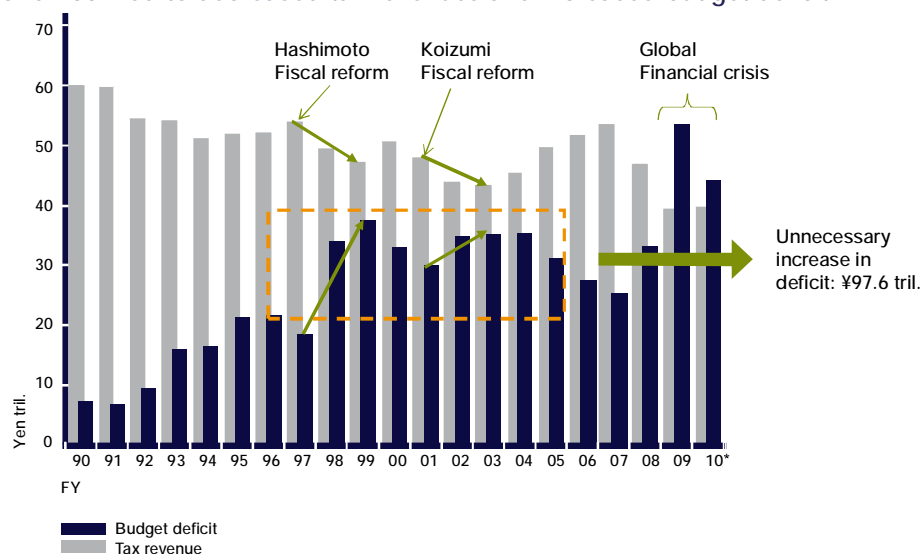


Source: Datastream, Natixis. Time period analysed: January 1990 to March 2010. \*Excluding food and energy.

Massive stimulus packages did not revive the Japanese economy

Besides lowering the key interest rate and increasing government borrowing to replace private sector deleveraging, the Japanese government also issued massive stimulus packages trying to revive the economy. These stimulus packages were released too late, however, and they only increased the government debt burden. The Japanese government compounded that error by raising a consumption tax in 1997, which stifled the first signs of the economic recovery (see figure below).

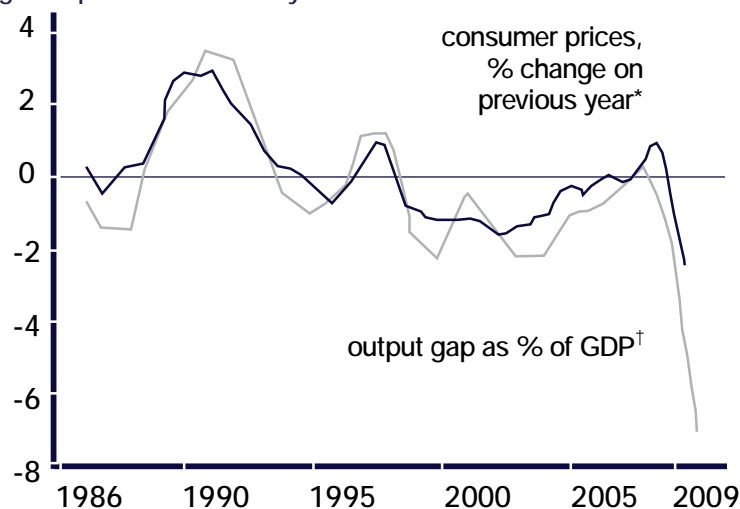
Figure 11: Premature fiscal reforms in 1997 and 2001 led to decreased tax revenues and increased budget deficit



Source: Ministry of Finance Japan and Nomura Research Institute/ Richard C. Koo, "The Age of Balance Sheet Recessions: What Post-2008 US, Europe and China can learn from Japan 1990-2005, April 2010. \*Estimated by the Ministry of Finance, Japan.

The resulting deflation also led consumer prices to fall:

Figure 12: Consumer prices have been falling in Japan since the early 1990s



Source: Oriental Economist, The Economist. \*Two-quarter lag. †Four-quarter moving average. Time period analysed: 1986 to 2009.

## A closer look at deflation

Deflation occurs when the general price level of goods and services decreases. This is the case when the annual inflation rate falls to below zero percent, i.e. when the inflation rate turns negative. This results in an increase in the real value of money.

There are several causes of deflation. Traditionally four types of deflation can be distinguished:

Figure 13: Different types of deflation

Inflation type	Historical example	Main characteristics
Deflationary boom	Industrial revolution 1870-90	<ul style="list-style-type: none"> <li>• Supply of goods increases</li> <li>• Consumer Price Index (CPI) decreases</li> </ul>
Cash hoarding deflation	Japan two lost decades	<ul style="list-style-type: none"> <li>• Cash savings increase</li> <li>• Velocity of money decreases</li> <li>• Demand for money increases</li> </ul>
Bank credit deflation	Deleveraging 2010 H2 onward	<ul style="list-style-type: none"> <li>• Banks decrease supply of credit</li> <li>• Central banks increase money supply</li> </ul>

Confiscatory deflation	Weimarer Republic 1929-33 & US New Deal 1930s	<ul style="list-style-type: none"> <li>• Bank deposits are freezed or confiscated</li> <li>• Money supply is decreased</li> <li>• War as solution to the problem</li> </ul>
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Source: Man Investments Research.

Deflation often ends in a deflationary spiral, which is difficult to stop: as prices of goods start falling, consumers begin to delay their purchase and consumption. This causes prices to fall further, which in turn causes investments to fall, thus reducing aggregate demand, ending in a deflationary spiral.

Central banks fall into liquidity trap in a deflationary environment

Furthermore, as investors and buyers start hoarding their money instead of investing it, this ends in a liquidity trap. Monetary policy is typically unable to stabilise the economy in this kind of situation, as a central bank cannot normally charge negative interest. Now that most Western central banks have lowered their interest rates to close to zero, they have no room left for easing, which is why they started using alternative mechanisms such as quantitative easing (printing money). Quantitative easing (QE) by the Fed included corporate and bank bailouts as well as stimulus packages. The ECB is currently buying bonds from EZ countries, but at the same time sterilising these amounts by selling the same amount of repos in order not to increase the overall money in circulation.

However, in the long run, QE measures alone will not suffice to get an economy out of deflation. Besides fiscal measures, infrastructure measures, a flexible job market, lower taxes and incentives for industries to invest in their sector are necessary to bring growth back.

What makes Japan a special case?

Majority of JGBs are held domestically...

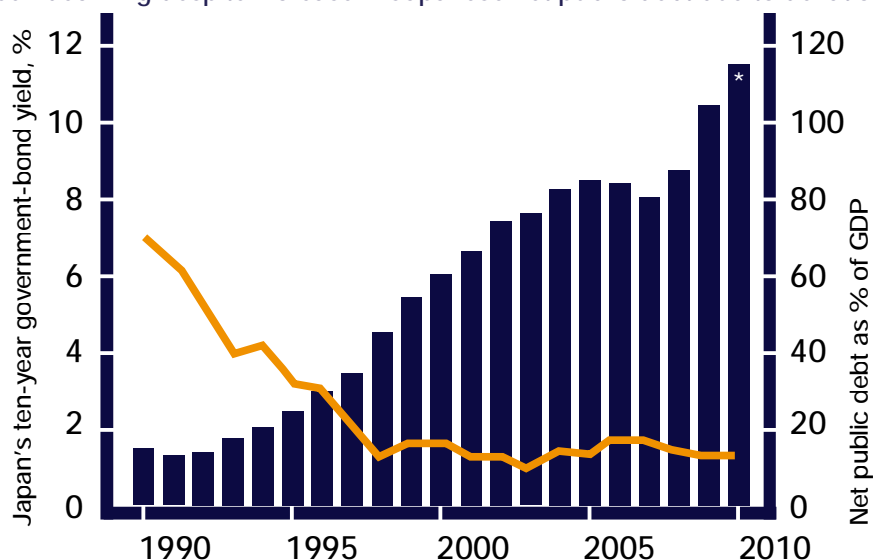
... and corporate savings rate is a major component...

There are several reasons why Japan is a special case when it comes to analysing the government debt problem. In an inflationary environment, with government debt investors scattered around the world, the yield tends to rise in line with increasing amounts of government debts issued. In Japan's case, however, deflation increased the real yield<sup>10</sup>. Japan was also different from any other developed country because JGBs are mainly held domestically (roughly 94% of JGBs are held domestically, compared to 53% for US Treasuries) and Japan has a very high corporate savings rate. While the household savings rate has declined from the 10-14% in the 1990s to only 3-4% in recent years, corporate savings have become the main savings component in Japan. As a result, JGB nominal yields even decreased as the amount of JGBs issued

<sup>10</sup> Real yield equals nominal yield minus inflation/deflation. In an environment with negative inflation, i.e. deflation, the real yield is higher than the nominal yield

increased (see figure 14).

Figure 14: 10-year JGB nominal yield has been declining despite increase in Japanese net public debt due to deflation



Source: IMF, OECD, Thomson Reuters, The Economist. \*Forecast.

... with the main JGB investors being state controlled

As the figure above shows, 10-year JGB nominal yields declined steadily from 7% to roughly 1.3-1.4%, while net public debt rose from 20% of GDP to 60% of GDP during the 1990s. Since 2000, the net public debt climbed up further to slightly above 100% by early 2010, while long-term yields remained fairly stable. As a result, the Japanese government has been in a comfortable situation whereby they were able to issue several stimulus packages which they financed with new JGB issuance.

Furthermore, the situation is unlikely to change anytime soon despite the worsening demographic conditions, because government-controlled financial institutions in Japan are not allowed to hold foreign currency assets to cover their yen-denominated liabilities. Two government controlled investors, the Japanese Post and the Government Pension Investment Fund together own around 35% of total JGBs.<sup>11</sup>

More than 20% of the Japanese population is older than 65. With the number of retired people growing, the big JGB investors, i.e. banks, insurance companies and pension funds will no longer be able to keep up investing in JGBs in the long run, say in the next 15-20 years. And as foreign investors will certainly not be willing to invest in JGBs only yielding meagre 1.4%, the yield curve of JGBs will have to increase substantially in the long run. The only

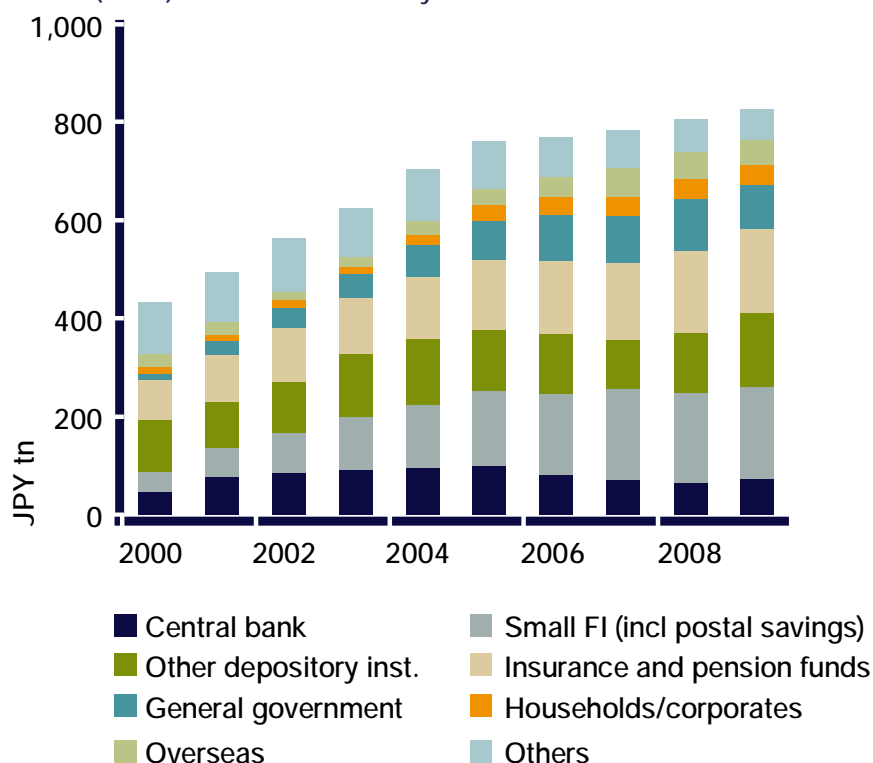
<sup>11</sup> According to J.P.Morgan, foreigners sold JPY 7.4 trillion JGBs in 2009, while domestic financial institutions bought more than the total new issuance of JGBs. In fact, social security funds became net sellers of JGBs for the first time against the backdrop of an aging population, but this was more than offset by purchases of banks.

possible scenario which would allow JGB yields to stay low would be if employees of Japanese corporations as well as corporations themselves were to invest their savings in JGBs, now that Japanese corporations recovered from their balance sheet recession and are again able to pay employees bonuses as they generate profits.

Even though Japanese companies recovered from their balance sheet recessions it is far from clear that they would choose to invest in JGBs. There are obviously much more profitable investments available globally. Companies are expected to increase their capex and hiring and some might choose to avoid high Japanese corporate tax rates (currently at 40%) by moving abroad. If that were to happen, capital outflow could be accelerated and funds flowing into JGBs could therefore be restrained.<sup>12</sup>

On a side note, it is interesting to see that the Japanese central bank is also holding a fair amount of JGBs, representing quantitative easing par excellence.

Figure 15: Majority of Japanese government bonds (JGBs) are held domestically



Source: BOJ, Standard Chartered Research. Figure shows holdings of JGBs and financing bills, as at end of each year.

<sup>12</sup> Source: J.P.Morgan, 11 June 2010.

## Two 'lost decades' might not have been that lost after all

Unlike the US, UK and peripheral Europe, which have substantial current account deficits and therefore rely on foreign investment, Japan has a healthy export industry. As a result, Japan was not dependent on foreign capital during its two decade crisis.

To sum up, it can be argued that despite two lost decades, the Japanese deflation still allowed the country to prosper. Living standards in Japan did not fall. Some market commentators now argue that as corporations managed to clean up their balance sheets, the "two lost decades" might not have been that lost after all.

Nevertheless, Japan continues its quantitative easing approach: On the one hand, the newly elected Prime Minister of Japan, Naoto Kan, announced that the government must hold new bond issuance to under JPY 44.3 trillion, which is the target for fiscal year 2011 and beyond, "no matter what".<sup>13</sup> On the other hand, the BOJ has announced that it will supply up to JPY 3 trillion at the policy rate of 0.1% to banks that provide loans for companies in "promising fields"<sup>14</sup>, through its new lending facility, with a ceiling at JPY 150 billion per bank on 15 June 2010. The BOJ will accept requests for loans through March 2012 and will begin the lending programme as early as the end of August 2010.<sup>15</sup> Looking at the list of areas where the BOJ intends to invest money, it remains to be seen whether additional jobs can be created.

## Can the US and Europe learn from Japan?

During the recent financial crisis, central banks in the US and in Western Europe reacted much more swiftly than the Bank of Japan at the time, by expanding the money supply and injecting liquidity into the financial system to prevent the global economy from collapsing. In fact, developed world central banks eased financing conditions in three ways<sup>16</sup>:

- 1) lowered target interest rates to close to zero (zero interest rate policy)
- 2) provided liquidity facilities for the financial system (i.e. discount window)

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<sup>13</sup> Source: Nikkei.com;14/ June 2010.

<sup>14</sup> BOJ refers to the following areas where the funds should be used to strengthen the Japanese economy: (1) research and development, (2) setting up a new business, (3) business reorganization, (4) investment and business deployment in Asian and other countries, (5) science and technology research at universities and research institutions, (6) development and upgrading of social infrastructure, (7) environment and energy business, (8) business for securing and developing natural resources, (9) medical, nursing care, and other health-related business, (10) business serving the needs of senior citizens, (11) business in the content creation industry [whatever that means], (12) tourism business, (13) regional and urban revitalization business, (14) agriculture, forestry, and fisheries business; business linking agriculture, commerce, and industry, (15) business which supports the creation of housing stock, (16) disaster prevention business, (17) employment support and human resources development business, (18) childcare services business.

<sup>15</sup> Source: Nikkei.com; 15 June 2010/ BOJ. The bank loans will be for one year in principle, but financial institutions can roll the loans over annually up to three times, for a maximum term of four years. Funds will be supplied every quarter at up to 1 trillion yen per loan.

<sup>16</sup> Source: Bridgewater, 27 April 2010.

- 3) some central banks<sup>17</sup> proactively purchased assets in order to push money more directly into the broader economy

## The US and Europe learned their lessons from Japan...

Furthermore, additional support such as cash for clunker programmes in the US, in Germany and Japan helped to keep demand alive. However, it seems that these programmes might only have brought forward the renewal of cars, rather than actually increasing car demand in the long run.

But while Western countries so far managed to prevent their economies from falling into deflation, they now sit on a huge pile of government debt as a result of their support operations. The US, UK and Southern Europe today show similarities with Japan in the early 1990s:

- sudden end to residential and commercial property boom
- banking system crisis
- huge central government deficits and debts
- central banks forced to apply new quantitative dimensions having lowered interest rates to close to zero
- continued private sector deleveraging

## ... as the US, UK and Southern Europe show similarities with Japan in the early 1990s

If these countries do not manage to stabilise the debt pile and reduce the budget deficit within a reasonable amount of time, their stimulus efforts might have only delayed a looming deflation, rather than prevented it. We think that sometimes it is better to allow countries to default rather than trying to artificially keep them alive. In the case of Greece, Spain and Portugal, we think that a real debt restructuring within the next 12-24 months will be necessary. Otherwise, a "Eurozone light" including all the peripheral EU countries seems to us a fairly realistic scenario.

Japan has nothing to teach Western countries about the reduction of government debt. So how should this debt be reduced?

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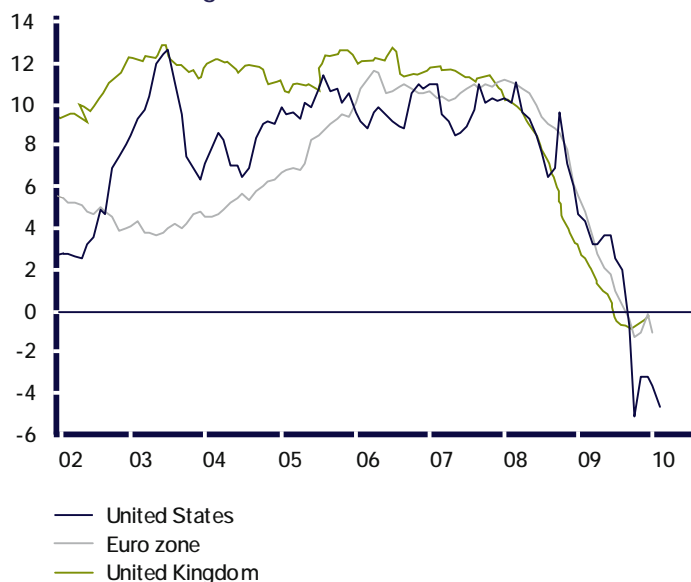
<sup>17</sup> such as in the US and UK.

## Global economy still too weak to escape deflation

With a global economy below trend growth, growing out of debt is not a solution

Economic growth could increase government revenues and reduce debt. Every major economic recovery in the past has been started by a pick up in private credit growth, but that has not happened this time, despite record low interest rates. In fact, as the deleveraging continues, bank loans to private investors are still decreasing (see figure 16). This tension in the banking system can also be seen in the 3-month LIBOR rate, which increased to 0.538 on 27 May<sup>18</sup>, the highest level since last July. The overnight indexed swap also increased, indicating that banks are hoarding their cash rather than making it available on the interbank market. Tighter regulations require banks to increase their Tier 1 ratio. This means that they cannot lend as much as they used to. Nevertheless, we believe that banks could still lend more if the private sector demanded more credit. So far in May companies issued just USD 47 bn of bonds<sup>19</sup>. Despite non-existent credit growth, most central banks have started to phase out their asset purchase programmes which will probably lead to even weaker growth in the second half of 2010. We expect global growth to be positive, but below average trend growth (4%). Growing out of debt is, therefore, clearly not a solution.

Figure 16: Bank loans to the private sector are still decreasing in Western countries



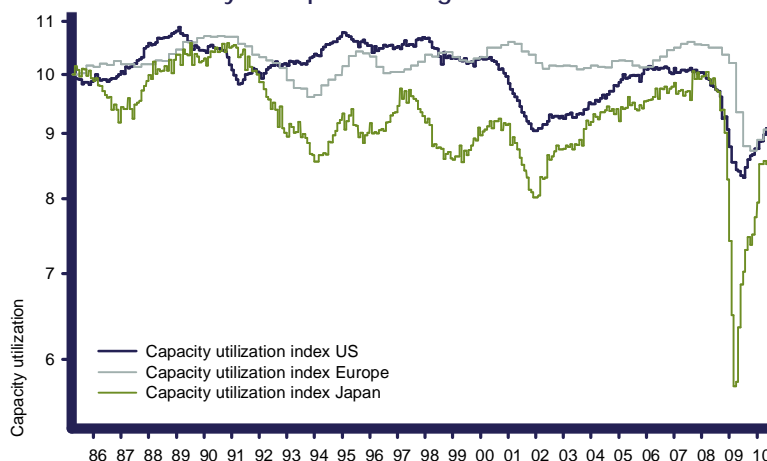
Source: Datastream, Fed, ECB, BOE, Natixis, 2 April 2010.

Low capacity utilisation and global freight activity also point to subdued economic activity. This can be seen in the following figures.

<sup>18</sup> Source: Bloomberg.

<sup>19</sup> Source: The economist, 29 May 2010.

Figure 17: Capacity utilisation has recovered but is still far away from previous highs



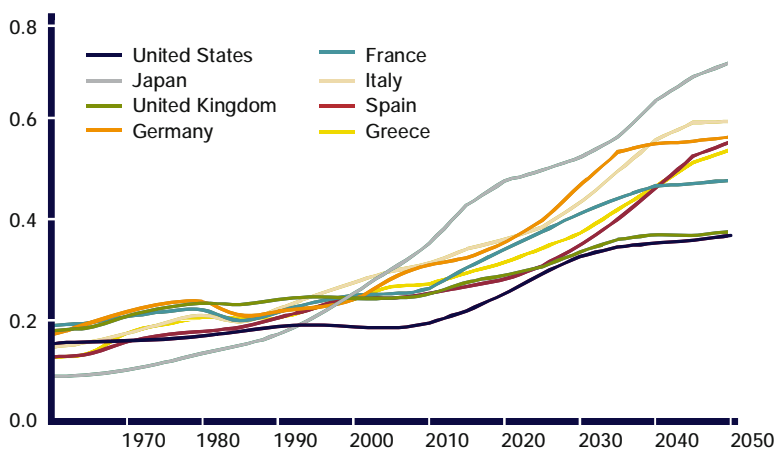
Source: Bloomberg. Time period analysed: 1 January 1980 to 11 May 2010. The following capacity utilisation indices have been used: US: CPMFNAIC Index, Europe: EUUCEMU Index, Japan: JNCIC4 Index. Figures have been rebased to 10 on 31 March 1985.

Interestingly enough, as figure 17 above shows, the Japanese economy recovered fairly quickly from the recent lows, although it is still performing worse than the US and Europe. This was mainly due to the export sector, which benefitted from the faster Asian recovery, lead by China.

Unemployment benefits and social welfare payments are expected to increase

As a result of the weak economic recovery, unemployment benefits and social welfare payments are expected to increase in the short run. This situation will be exacerbated with rising age-related spending, as the ratio of old-age population to working-age population is projected to rise sharply. This rise is concentrated in countries, such as Japan, Spain, Italy and Greece, which are already suffering from relatively high debts (see figure 18 below).

Figure 18: Ratio of old-age population to working-age population is increasing



Source: BIS, IMF, UN Secretariat, European Commission, Congressional Budget Office. Working-age population is between 15 and 64 years of age.

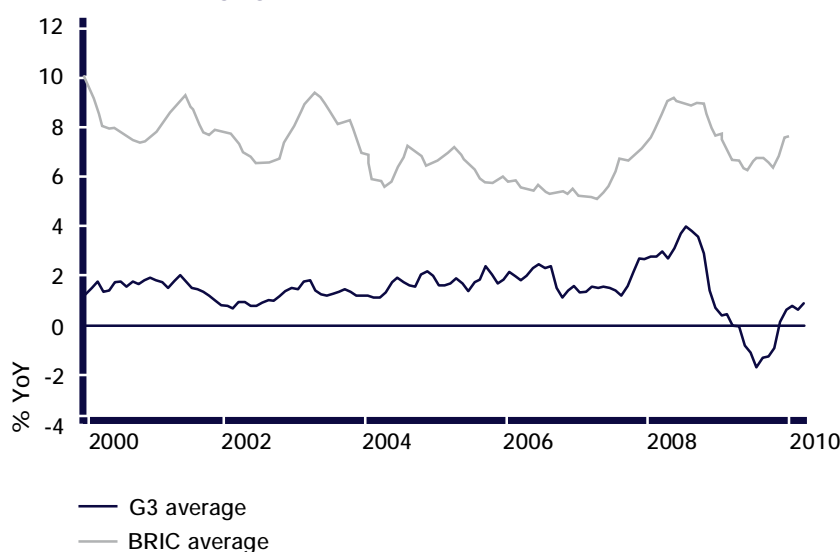
Demographic problems are structural rather than cyclical in nature

Furthermore, as these demographic problems are structural rather than cyclical, these problems will not even be resolved during a cyclical recovery. Employment and growth are unlikely to return to their pre-crisis levels in many advanced countries for the next few years. Therefore, unemployment benefits will also remain a drag on public debt for the foreseeable future.

Deflation, not inflation, is the biggest fear in the US and in Europe

Inflation will not rise in developed market countries as long as the amount of money which the governments are printing is offset by credit retrenchment in the private and corporate sectors and higher capital asset ratio requirements. In fact, core inflation is trending lower in the largest developed economies, namely Japan, Euroland and the US, although it has started to rise in commodity-export countries such as Canada and Australia (not shown in figure below). The rise in inflation in the UK was only short-lived and can be attributed to the VAT increase in January 2010.

Figure 19: Diverging core inflation among developed and emerging market countries



Source: Standard Chartered.

Furthermore, inflation has started to rise in emerging market countries such as Brazil<sup>20</sup>, China, and India. While the large Indian public-sector deficit is also growing rapidly, the situation is contained, as India is growing fast.

### Austerity measures are unavoidable, with potential risk of protectionism

Therefore, if the global economy continues to be weak, several austerity measures, similar to the measures the IMF implements on countries requiring IMF assistance, need to be implemented in Western countries in order to reduce government debt going forward. These measures should include:

<sup>20</sup> Although economists cut their inflation forecasts for Brazil for the next 12 months from 4.84% to 4.76% on speculation Europe's debt crisis and higher borrowing costs will cool growth.

- reduced social welfare
- reduced public wages/social safety net, i.e. unemployment payments
- higher taxes
- increased retirement age
- reduced/eliminated subsidies

## Cuts in current spending are more preferable than higher taxes

If history is any guide, cuts in current spending and transfers are preferable to higher taxes, but in the current environment we expect governments to do both. It remains to be seen whether various countries which have to undergo these harsh measures will accept them or not. We can already see protests in Greece coming from social workers, pensioners, etc., whereas the salary freeze for government employees in Ireland did not cause any protests. Furthermore, Greece has the problem that it does not have any companies operating on an international level which could compensate for the lost GDP growth.

During the last few weeks, several European countries have announced austerity measures in order to reduce their government deficit. And on 10 June 2010, the EU announced that starting in 2011, all national governments have to present their budget draft to the European Commission, before they obtain domestic approval.

## The UK is going to be an interesting showcase

Apart from the PIIGS countries<sup>21</sup>, the UK is the next country currently walking on a thin line. The UK is not part of the Eurozone, it has its own currency and central bank, but the GBP is not a global trade currency. The only way the UK can dig itself out of the government debt pile is probably by printing money. Several commentators expected that the UK would not be able to sort out its deficit with the newly-elected coalition government. But the new government has moved quickly, as can be seen in the regained strength of the GBP. The UK has actually undergone fiscal adjustments in the 1980s and the 1990s, during the Thatcher era, when it had to adjust its primary balance in relation to GDP by 8.3%<sup>22</sup>. A major difference between the UK and other European countries is the fact that the financial sector contributes 20%<sup>23</sup> to the country's GDP, which is much higher compared to other European countries.

It goes without saying that the UK's austerity measures will have a direct impact on GDP growth. Bridgewater estimates that the austerity programmes announced so far will "create a direct impairment of almost 2.3% of GDP through 2011, a swing that is potentially a larger drag on growth than the previous stimulus programmes were a benefit".<sup>24</sup> In fact, they believe that "austerity never works in debt crises without significant default or devaluation

<sup>21</sup> Portugal, Ireland, Italy, Greece, Spain.

<sup>22</sup> Source: Standard Chartered, 13 May 2010.

<sup>23</sup> Source: Bloomberg, as at 14 June 2010.

<sup>24</sup> Source: Bridgewater Daily Observations, 18 May 2010.

to ease the pain. In the long term, [they] suspect that Europe will prove no different".<sup>25</sup>

## Previous IMF interventions

Hungary shows that harsh measures, when executed properly, can improve a country's debt situation significantly within a reasonable short period of time. At the end of 2008 Hungary applied to the IMF for an EUR 20 bn support package. As part of the measures to gain that support, Hungary increased its VAT by 5 percentage points to 25%, reduced its security contribution, reduced income tax, increased its retirement age to 65, slashed 13<sup>th</sup> month salary arrangements and reduced bonuses for the public sector. As a result, Hungary now has a government debt to GDP ratio of 80%, which corresponds to the EU-average. Furthermore, it is aiming to enter the European Exchange Rate Mechanism II by 2013; aims to fulfil the Maastricht criteria by 2015 (although hardly any country that is already part of the Eurozone is fulfilling these criteria currently), and if it is successful, it will probably manage to enter the Eurozone by 2016. In early June Hungary unveiled a new economic action plan which contains cuts in public sector wages, new tax on banks for the next three years, a flat income tax of 16% and a lower tax burden on small companies. Nevertheless, we think that Hungary is still on its path to recovery.

The table below shows the various countries that have experienced large fiscal adjustments in the past. According to market estimates, the size of the fiscal adjustments required by the US, UK and Japan, as well as Greece, Spain, and Portugal amounts to 8-12% of GDP (although the exact number depends on the assumptions on which these numbers are based).<sup>26</sup> According to the table, an adjustment of more than 8% has been achieved several times in the past, including Ireland's 20%, Scandinavian countries, as well as Canada in the 1990s.

Figure 20: Various countries have undergone fiscal adjustments in the past

Country	Year-end	Size of adjustment (in % of GDP)
Ireland	1989	20.0
Sweden	2000	13.3
	1987	12.5
Finland	2000	13.3

<sup>25</sup> Source: Dito.

<sup>26</sup> Source: Standard Chartered, 14 May 2010.

Denmark	1986	12.3
	2005	5.9
Greece	1995	12.1
UK	2000	8.3
Japan	1990	8.1
Italy	1993	7.9
Portugal	1985	7.5
US	2000	5.7
Spain	2006	5.2

Source: IMF, Standard Chartered. Note: Cumulative change in cyclically adjusted primary balance. Please note that this list shows selected countries which have either had high adjustment efforts or are currently facing huge government debts.

If these austerity measures cannot/ will not be implemented early enough, several developed market countries risk falling into deflation. In fact, several countries already have reached deflationary territory. Japan, Greece, Ireland, as well as Portugal and Spain face the risk of a multi-year deflation.

Emerging market countries have undergone severe financial crises in their history

Unlike developed market countries, most emerging market countries have undergone severe financial crises in their recent history. Often the IMF ended up having to support them and often that support was coupled with harsh conditions. As a result, these countries have relatively low levels of debt, and thanks to a more normal cyclical recovery and production, especially in EM Asia, they are growing well above pre-crisis levels. They can therefore run relatively loose monetary policy, even though their level of exports is mediocre.

What would be the consequences of a longer period of sustained deflation in Western economies? This question will be analysed in more detail in the following chapter.

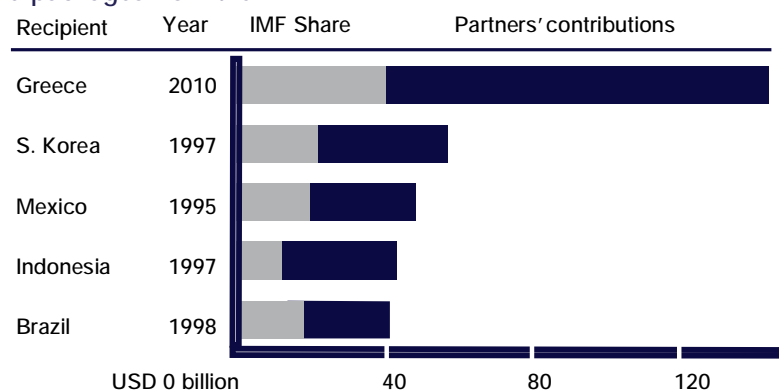
## Bailout can be a solution to prevent contagion effect but does not avert restructuring efforts

History suggests that bailing out one country does not prevent other countries from defaulting if they have real solvency issues: the intervention of the IMF in Mexico<sup>27</sup> in the 1980s did not prevent bailouts in Brazil, Venezuela, and Argentina; the support of the IMF in Thailand<sup>28</sup> after the Asian crisis did not prevent intervention in Indonesia, Korea, Russia, Brazil, and Argentina.

European bailout package calmed down markets, but for how long?

The EUR 750 bn bailout package for the peripheral European countries and the EUR 110 bn bailout package for Greece have certainly calmed down markets. The larger figure is big enough to cover the debt burden of Greece, Spain, and Portugal, as well as Ireland. But if these countries do not restructure their deficit within the next 1-2 years, the problem will arise again. While the bailout gave bond holders of the respective PIIGS countries time to get rid of their holdings at acceptable valuations, the debt problem can only be solved with a proper haircut, i.e. by writing down a certain percentage of the outstanding debt. In the case of Greece, a haircut of 30% seems to be realistic. The figure below shows how the bailout for Greece compares to previous historical bailouts.

Figure 21: Greece bailout dwarfs previous aid packages from the IMF



Source: Wall Street Journal, 4 May 2010. Notes: IMF contribution figures converted from IMF special drawing rights at the time of the bailout; bailout figures not adjusted for inflation; sources: Greek government (debt/deficit); IMF, Peterson Institute for International Economics, press reports (bailouts).

Sovereign defaults and restructurings tracked by Moody's since 1983 amount to USD 182 bn, with Russia 1998 and Argentina 2001 representing the biggest part, but the upcoming sovereign restructurings will dwarf this figure. Greece alone has EUR 300 bn (USD 371 bn) of government debt.

<sup>27</sup> Mexico 1982. The bailout amounted to USD 9 billion, including USD 4 billion from the IMF. Over the next few years, bailouts followed in Brazil, Venezuela, Argentina and Mexico again in 1987, totalling about USD 20 billion. These bailouts represented roughly 10% of total debt involved.

<sup>28</sup> Thailand 1997. The bailout amounted to USD 17 billion, including USD 5 billion from the IMF. Over the next few years, bailouts followed in Indonesia, Korea (both 1997) and in Russia, Brazil, and Argentina (all 1998), totalling about USD 134 billion. These bailouts represented roughly 10% of total debt involved.

The nature of holders of developed market bonds also differs from emerging market (EM) bond holders. While EM bonds are largely held by asset managers, hedge funds, and individual investors, developed market (DM) sovereign bonds are held by banks and insurance companies. If DM bonds are held to maturity, as opposed to marked-to-market on the trading books, any losses will be a direct hit to capital.

There is yet another major difference between today's developed market problem compared to previous Asian/LatAm crises: while historically, countries were indebted in a foreign currency (i.e. USD), countries nowadays are mostly indebted in their own currencies, and hence have the option to print money.

## Possible scenarios if world economic outlook remains mute

Where do we go from here? There are several possible scenarios we can think of. The following paragraphs will focus on three potential scenarios.

### Scenario 1: Don't worry

**J**

Probability: 30%

While most commentators are getting more and more worried about the increasing government debt in developed market countries, this fear may be ill-founded. Government debts in excess of 100% of GDP were common after World War II: while the debt in the US reached close to 121%, the pile rose to about 300% in the UK, and countries such as Italy and Belgium both had net debt ratios above 100% of GDP for many years in the 1990s without a crisis. And none of this led to default. In fact, according to Reinhart/Rogoff<sup>29</sup>, the last default in the industrial world was Japan and Germany in the immediate aftermath of World War II. Since then, there have been no advanced economy defaults for more than half a century.

### Japan and the US are two special cases

Japan has been living with a debt-to-GDP ratio in excess of 100% for quite some time, and has still been enjoying low yields, although Japan is a special case as mentioned earlier. The US is also a special case because the USD is the global trade currency. As the global gross and net capital asset flow increased substantially over the last decade, this increased the vulnerability of the global financial system, but also national economies to adverse shocks.<sup>30</sup> On the other hand, in times of risk aversion, investors tend to move their money back into their home currency. With the American economy being the largest globally, this naturally leads to a strong move into the USD. As a result, increased UST issuance will not necessarily lead to higher yields .

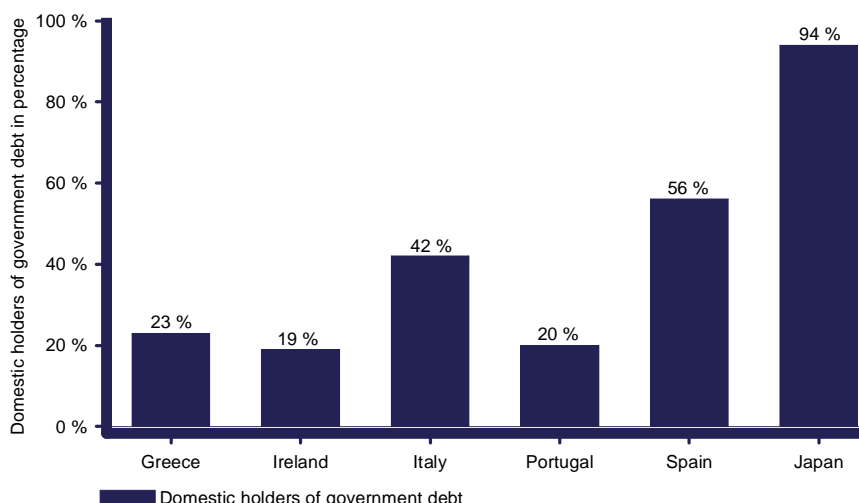
<sup>29</sup> Reinhart, C and Rogoff K: This time is different: a panoramic view of eight centuries of financial crises, Harvard University, 2008.

<sup>30</sup> Source: Deutsche Bank Research, 2 June 2010.

We think it is more relevant whether the investors holding government bonds are domestic or foreign. As soon as a high percentage of government bonds are held by foreigners, the indebted government is at their mercy. While more than 94% of JGBs are held domestically, only 52% of German government bonds are owned by Germans and 77% of Greek and 80% of Portuguese government bonds are held by foreigners.<sup>31</sup>

As long as countries can keep their reputation that they are able to repay their debts and have the majority of their government bonds held domestically, the increased government bond issuance should not necessarily lead to rising yields.

Figure 22: Domestic holders of government debt (peripheral Europe vs Japan)



Source: J.P.Morgan, 11 June 2010.

## Scenario 2: Sovereign debt crisis might lead to currency crisis

**L**  
Probability: 5-10%

But scenario 1 will not work for countries with a low domestic investor base. As a result of increased government spending on bailouts, government bond issuance will surge and bond yields will have to increase when investors demand higher yields to carry the increased risk.

As a recent BIS paper put it: "Failure to [tackle the fiscal problems] will raise the chance of an unexpected and abrupt rise in government bond yields at medium and long maturities, which would put the nascent economic recovery at risk. It will also complicate the task of central banks in controlling inflation in

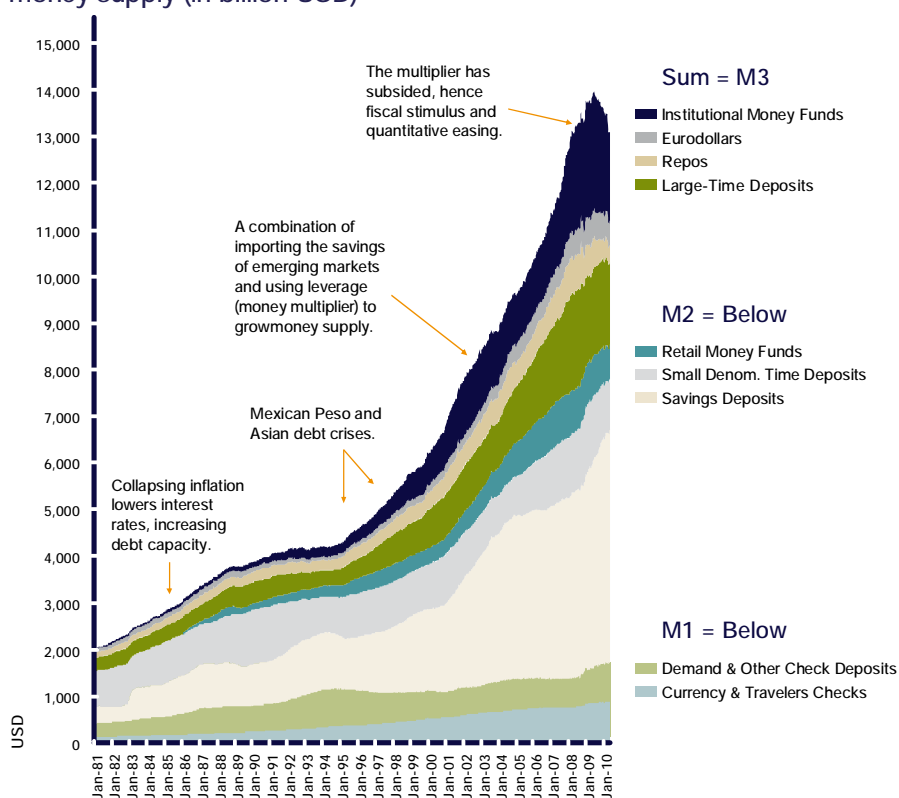
<sup>31</sup> Source: J.P.Morgan, 11 June 2010.

the immediate future and might ultimately threaten the credibility of present monetary policy arrangements.”<sup>32</sup>

Eventually, government bond yields will have to rise...

At some point, government bond auctions could start to fail. In a worst case scenario, China and Japan might refuse to keep buying UST, which would drive UST yields higher, despite the USD being a global trade currency and the biggest economy. The figure below shows how the M3 money supply has grown since 1981.

Figure 23: Growth of components of US M3 money supply (in billion USD)



Source: US Federal Reserve/ Stifel Nicolaus & Company, Inc. US Federal Reserve for M3 (SA) 1959 to 2005. For M3 2006 onward the following has been used: M2 + large time deposits + money market balance + Fed funds & reverse repos with non-banks + interbank loans + Eurodollars (regressed to historical levels versus levels of M3 excluding Eurodollars).

Creditors will continue to lose faith in the economic stability of the Eurozone, as one peripheral European country after another asks for financial support. Portugal and Spain, which have both been downgraded recently, will probably follow Greece. Last but not least Japanese pension funds will be forced by an ageing population to seek higher yields to fund their pension gap and they will turn away from JGBs.

<sup>32</sup> Cecchetti, S. G., Mohanty, M S, Zampolli, F.: The future of public debt: prospects and implications. BIS Working Papers, March 2010.

Such a scenario would end in a currency crisis, similar to the Russian Ruble crisis in 1998, the Thai Bhat crisis in 1997 and the Mexican Peso crisis in 1994.

A recent BIS article<sup>33</sup> found that output growth slows several years before a currency collapses, hence losses tend to materialise before the event. The authors argue that factors that lead to the depreciation are the cause for the reduced output, not the currency collapse itself. As such, the depreciation has a positive effect on the output, as growth tends to pick up in the year of the collapse and accelerates afterwards. Nevertheless, real GDP on average is around 6% lower three years after the event.

### Scenario 3: Bond market crisis with potential defaults

**L**  
Probability: 60%

... followed by currency depreciations and protectionism

In a worst case scenario, the respective currencies would depreciate massively. Depreciation of currencies inevitably leads to reduced asset values and reduced GDP. Capital flow restrictions would probably be implemented. Furthermore, when currencies depreciate investors typically seek to be compensated with higher yields. In order to stop this devaluation spiral, we expect central banks in these respective countries/regions to start printing money in order to keep bond yields in check. The ECB announced in May that it would start buying the private and public sector debt of the Eurozone's peripheral economies. By early June, the ECB had reportedly already purchased EUR 40 bn<sup>34</sup> in bonds on secondary markets which commentators believe to have been focused on Greek, Portuguese, Irish and Spanish government bonds. If the Eurozone slips into deflation the ECB's QE programme will have to be expanded. Unlike previous Asian and LatAM crises, where the countries had high exposures to foreign currencies (usually USD), these developed market countries have the advantage that they can print money.

A currency cannot be devalued for ever, however. Printing money will increase the depreciation of a currency and lead to inflation if central banks do not manage to remove the excess liquidity early enough from the system. Eventually, similar to what happened to the German Papiermark 1922/23, a new currency would have to be introduced to the market.<sup>35</sup>

Countries also have the choice of defaulting, as Russia did in 1998. If, for example Spain defaulted, we might see Spain moving politically back to a Franco-like area. History tells us that in times of economic crises, right- or left-wing politicians can come to prominence, which would be a dangerous development for the world economy.

<sup>33</sup> BIS Quarterly Review, June 2010.

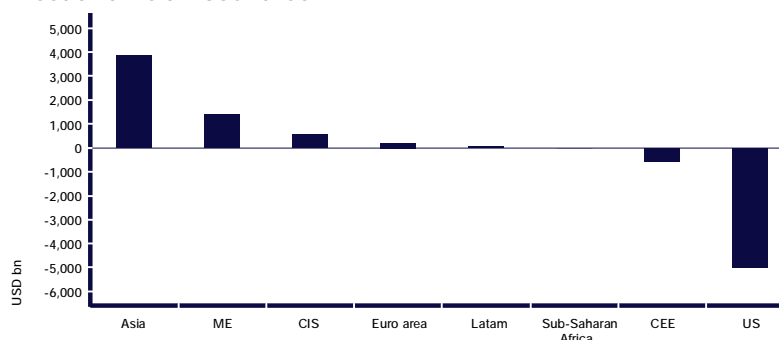
<sup>34</sup> Source: BIS, Quarterly Review, June 2010 .

<sup>35</sup> After the Papiermark experienced hyperinflation in 1922/23, the new German Reichsmark was introduced on 30 August 1924, with a conversion value of 1.000.000.000.000:1.

## Savings imbalance between the West and Asian countries

This situation would exacerbate the savings imbalance between the West and Asian countries. While the financial crisis narrowed global trade imbalances, as commodity prices declined, a massive expansion of money would again increase the imbalances between the West and Asian countries. Due to the deflationary environment, the US has been able to reduce its current account deficit and hence the savings imbalance has improved vis-à-vis Asian countries. It remains to be seen whether that was only a temporary phenomenon.

Figure 24: Savings imbalances between the West and Asian countries



Source: IMF, Standard Chartered. Time period analysed: 2002-2009.

If developed market countries print money, emerging market countries will also have to print money to protect their export industries as otherwise their currencies would appreciate too much vis-à-vis developed market currencies. As a result, faith in fiat money would decrease massively, leading to a surge in the gold price. As a knock-on effect, commodity currencies would rise and the world would face additional inflationary pressure once growth picks up again and capacity utilisation rates recover.

Printing money has the attraction that it reduces domestic currency debt. If inflation runs higher than government interest costs for a few years, the debt ratio will come down, as long as the primary balance<sup>36</sup> has a small deficit or is in surplus. But inflating out of a heavy government debt burden is no longer an easy solution because a significant amount of government spending, including pensions and some public sector wages, is indexed to inflation. Eventually, all the central banks will have to stop printing money before inflation spirals out of control. This can be achieved in several different ways, with the most common ones listed below:

- central bank sells government bonds it acquired during the money printing phase

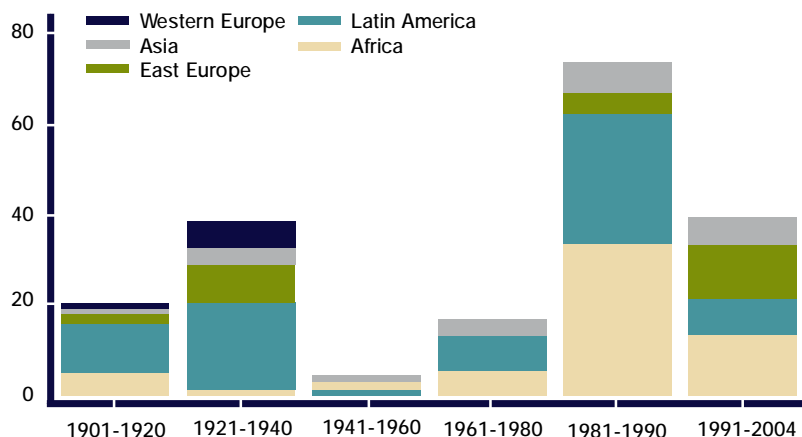
<sup>36</sup> Primary balance equals the difference between the government revenues, i.e. tax receipts etc., and current expenditures, excluding interest payments.

- repo financing will be discontinued
- FX reserves are sold
- gold is sold (although most central banks reduced their gold reserves substantially over the last few years)
- central banks reduce their capital

In the end, the world would be facing a global bond crisis, and this would have a devastating effect. A simultaneous yield increase in several developed market countries would affect all institutional clients as they have exposure to government bonds in their portfolios. As of 2009, the size of the global bond market, i.e. total debt outstanding, is an estimated USD 82.2 trillion<sup>37</sup>, roughly double the size of the global equity market.

But would the global government bond market collapse? Probably not. History tells us that while in theory, defaults should be costly, there were several occasions when governments considered the benefits of defaulting to outweigh the costs. As the figure below shows, as many as 257 sovereign defaults were registered between 1824 and 2004, with 74 defaults occurring in the time period between 1981 and 1990 alone.

Figure 25: Overview of historical sovereign defaults



Source: IMF, The Economist.

The most common effects after a default are:<sup>38</sup>

- higher bond spread
- credit-rating downgrade of nearly two notches
- decline in external credit to private companies in the country that defaulted

<sup>37</sup> Source: Bank of International Settlements, 31 March 2009.

<sup>38</sup> Based on: Borensztein E., Panizza, U.: The costs of sovereign default, IMF Working Paper, October 2008. De Paoli, B., Hoggarth, G., Saporta, V.: Costs of sovereign default, Bank of England, July 2006.

- people's savings are wiped out, with the older generation being more affected
- economy shrinks

However, the study also found that market participants seem to have a short memory (less than ten years). Only the most recent defaults seemed to have an after-effect on bond spreads and credit-rating downgrades.

A collapse in government bonds would potentially have a positive effect on corporate bonds. In fact, several international companies such as Spain's Telefonica, Portugal Telecom and UK's Unilever already have CDS spreads that are lower than those of the countries they are headquartered in.<sup>39</sup>

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<sup>39</sup> Source: Bloomberg. CDS 5Y SR as at 24 June 2010: Spain 266.40 vs Telefonica 163.00, Portugal 331 vs Portugal Telecom 171, UK 77.6 vs Unilever 44.7.

## Conclusion

The world is facing a new situation, whereby developed market countries are confronted with huge government debt piles and risk falling into a prolonged deflationary phase, while emerging market countries are enjoying healthy growth and seeing first signs of inflation. The quantitative easing measures applied during the crisis were unprecedented so the outcome is unclear.

While the global financial crisis exacerbated the government debt in advanced economies, it was already fairly large before the crisis. The crisis served as a catalyst to pinpoint an overdue restructuring issue. We think that some European countries have to undergo a real debt restructuring within the next 12-24 months, otherwise, a "Eurozone light" currency for some of the peripheral EU countries seems a fairly realistic scenario to us. If structural issues are not resolved over the next 3-5 years, a bond crisis cannot be excluded.

While the Western world can certainly benefit from Japan's lessons learned, Japan only serves to a certain extent as an example, due to the fact that most JGBs are held domestically and the country enjoys a very high savings rate. It remains to be seen whether Japan can lend its way out of deflation now that corporations have paid back their debts.

As long as the USD enjoys the status of a global trade currency, we are more positive about the US economy than European economies. The UK will be an interesting case to watch, as it has its own monetary policy but the GBP does not have the status of a global trade currency.

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#### Important information

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