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Will Europe Face A Lost Decade? A Comparison With Japan's Economic Crisis

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Center for Research in Economics, Management and the Arts

Will Europe Face A Lost Decade? A Comparison With Japan's Economic Crisis

Working Paper No. 2013-03

CREMA Südstrasse 11 CH - 8008 Zürich www.crema-research.ch

Will Europe Face A Lost Decade? A Comparison With Japan's Economic Crisis

by

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Abstract

After more than five years have passed since the start of the global financial crisis, many European countries are still suffering from financial instability, surging sovereign debt, economic stagnation or decline, high unemployment and political turmoil. We compare consequences and policy measures during Europe's current crisis with those in Japan in the 1990s after the burst of a real estate and asset price bubble. We show that despite marked differences, there are many similarities both in economic outcome and policy reactions. Given the complexity, severity and persistence of Europe's multiple crises, the threat of a Lost Decade similar to the one Japan has witnessed may not be unlikely. The paper concludes by presenting some of the lessons learned from Japan and Europe.

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1. Introduction

The current financial and economic crisis is the largest since the Great Depression of the 1930s. In 2009, the world economy contracted for the first time since World War II and trade declined by more than 10 percent. The IMF (2010) estimated that financial institutions faced crisis-related losses of \$2.2 trillion between 2007 and 2010 alone. As a result of rapid economic decline, more than 50 millions of jobs were lost (ILO, 2012).

Although central bank and government interventions were quick and unprecedented in scope, there were widespread fears about a second Great Depression. In spring 2009, an article by O'Rourke and Eichengreen (2009) received considerable attention, showing that in the first months since the start of the crisis, the decline in world industrial output and trade showed a similar pattern as during the 1930s. The decline in world stock markets was even more pronounced. On the other hand, central banks around the world lowered interest rates substantially and increased money supply while governments recorded much higher public deficits. An update by O'Rourke and Eichengreen (2010) described that after declining for almost a year and falling by 13 percent from peak to trough, world industrial production managed to rebound. After more than 20 months into the crisis, it was about 5 percent below peak levels whereas during the Great Depression it was around 25 percent. World trade and equity markets also exhibited clear signs of recovery despite remaining below pre-crisis levels.

However, the findings of Reinhart and Rogoff (2009) indicate that economic downturns after financial crises tend to be deep and prolonged. On average, real house prices declined by 35 percent over a period of six years, equity prices collapsed by 55 percent over three and a half years while output fell by 9 percent. In addition, unemployment rose by 7 percentage points and government debt by 86 percent. Historically, banking crises and sovereign debt crises are often closely linked as private debt is frequently transformed into government debt (Reinhart and Rogoff, 2011). Furthermore, following a period of strong credit expansion, sovereign defaults often occur in clusters (Panizza et al., 2009).

Nonetheless, the National Bureau of Economic Research in September 2010 declared that the US recession was officially over, lasting from December 2007 until June 2009 and marking it the longest recession since World War II. While the US recovery is slow by historical comparison, the economy is growing, unemployment is declining and house prices appear to have bottomed out. Furthermore, financial institutions have reported increasing earnings on a year-on-year basis for thirteen straight quarters (FDIC, 2012). In many cases they have paid back the money they received from the US government in full. Fiscal policy, private sector deleveraging and persistent unemployment remain important issues for policymakers, but

fears expressed during the height of the crisis about another Great Depression did not materialize.¹

In contrast, the financial and economic crisis in Europe intensified and turned into a sovereign debt crisis with recurrent bailouts for financial institutions and governments and rising unemployment. Rising government and private sector debt levels, current account imbalances and monetary inflexibility have become increasingly large challenges for the stability of the Euro area. Shambaugh (2012) argues that Europe is facing three crises at the same time: A banking crisis, a sovereign debt crisis and a growth crisis. Furthermore, these multiple crises are closely interlinked as an intensification of one crisis has large repercussions on the other two and vice versa. He argues that as long as the interdependence of these various problems is not taken into account, partial solutions will not help or be even counterproductive.

Given the severity and duration of the current crisis, several authors have wondered whether Europe and the United States are facing a “lost decade” like Japan in the 1990s, characterized by private sector deleveraging, rising government debt, unemployment and very low economic growth. The Economist (2008), Randazzo et al. (2009) and Koo (2009, 2010, 2011) all find striking similarities between Japan and the United States that include a burst real estate bubble and declining asset prices, large losses in the financial sector as well as expansionary fiscal and monetary policy. Koo (2011), Lanz (2012), Schnabl (2012) and the Economist (2012) came to similar conclusions about Europe.

We analyze economic outcomes and policy reactions in Europe over the past five years and compare them with those in Japan after the burst of the financial and real estate bubble at the beginning of the 1990s. Following a brief review of the causes and consequences of Japan’s burst bubble (section 2), we look at fiscal and monetary policy responses after the outbreak of the crisis (section 3). Economic developments such as economic growth, stability of the financial sector, unemployment, consumer and asset prices, current account balances and exchange rates and changes in competitiveness are discussed in section 4. In section 5, we briefly look at the political and social costs associated with the crisis. The paper concludes by presenting some of the lessons learned from Japan and Europe.

¹ On the other hand, alternative measures of unemployment that include marginally detached workers and employees that work part-time due to economic reasons, are still high. This extended unemployment rate published by the Bureau of Labor Statistics still stood at 14.4 percent in January 2013 after reaching 18 percent in January 2010 (BLS, 2013). Furthermore, the number of people who receive food stamps has risen to an all-time high of 47.7 million people in September 2012 and has triggered costs of almost \$72 billion in 2011 alone (USDA, 2013).

2. Causes and Consequences of Japan's burst bubble

After World War II, Japan experienced very high growth rates – similar to the ones China has recorded since the beginning of the 1980s – and quickly became the world's second largest economy behind the United States. Between 1951 and the first oil shock in 1973, the average annual growth rate was 10 percent while plant and equipment investment grew by 22 percent on average (Nakamura, 1995). High and persistent current account surpluses led to an appreciation of the Yen and made Japanese financial assets more attractive. This was particularly the case after the Plaza Agreement was signed in September 1985. The agreement between the governments of France, West Germany, Japan, the United Kingdom and the United States to depreciate the US Dollar in relation to the Yen and the Deutsche Mark by intervening in currency markets weakened Japan's export dependent economy and led to a recession (McKinnon, 1997). The Japanese central bank quickly lowered interest rates to stimulate growth and discourage speculative capital inflows (Schnabl, 2012). Market expectations that the low interest rates would continue for an extended period were widespread, although the economy rebounded rapidly. At the same time, financial deregulation led to aggressive lending by financial institutions and to overconfidence and euphoria, adding further fuel to the build-up of a bubble. Furthermore, taxation and regulations were biased toward accelerating the rise in land prices (Shiratsuka, 2003). The result was a speculative boom both in financial assets and real estate prices. According to Okina et al. (2001), the bubble period lasted from 1987 to 1990 because this period was marked by a rapid increase in asset prices, an expansion of monetary aggregates and credit and an overheating of economic activity. However, the so-called Heisei boom was also characterized by persistent economic growth and stable inflation rates (Shiratsuka, 2003). Between the beginning of 1985 and the burst of the bubble less than five years later, the Nikkei 225 index increased from 15'000 to an all-time high of 38'957 on December 1989 while land prices more than doubled.

The Bank of Japan considered this boom in financial assets and real estate prices to be unsustainable and started increasing interest rates sharply from 2.5 percent in April 1989 to 6 percent in August 1990. Real estate transactions were hindered through increased taxation and new regulation (Schnabl, 2012). In March 1990, the Ministry of Finance introduced "real estate loan restrictions" which forced financial institutions to publish monthly reports of their real estate loans and to limit the increase in such lending (Nakamura, 1995). The Nikkei 225 reached its peak in December 1989 while land prices in the six largest urban areas started declining in the second half of 1991. The Nikkei 225 lost more than 40 percent of its value in the first year after the burst and dropped by more than 80 percent altogether before reaching a low at 7'604 in April 2003. The decline in land prices was similar.

The rapid and vast decline in real estate and asset prices led to a recession in Japan and mounting losses for financial institutions. However, lending to insolvent firms continued as financial institutions tried to keep losses from materializing (Lanz, 2012). At the same time, banks became “zombies”, depending on large amounts of subsidies and boundless liquidity at almost zero interest rates (Caballero et al., 2008; Schnabl 2012). Consolidation of banks proceeded only gradually, eventually leading to only four national banks in Japan. The collapse within the Japanese economy in general occurred slowly rather than catastrophically. The 1990s were later referred to as the “lost decade” because the economy either contracted or grew only at a paltry rate. Saxonhouse and Stern (2003) argue that problems were even more serious after this decade as public debt increased dramatically and the balance sheets of commercial banks were even weaker than at the beginning of the 1990s. As economic conditions did not improve substantially in the following decade, the whole period from the 1990s and 2000s is sometimes referred to as the Lost Two Decades (“ushinawareta nijunen”).

Koo (2009, 2011) shows that Japan’s “lost decade” in the 1990s was not the result of an ordinary recession, but rather the outcome of a debt-financed bubble that burst. Debt deleveraging then took years and eventually caused a balance sheet recession as firms and households increased savings and payed off debt despite very low interest rates. As Japanese firms became net savers, massive fiscal stimulus by the government was the only way to maintain the level of GDP because monetary policy was facing a “liquidity trap”. According to Koo (2010), net debt repayment in some years was as large as 6 percent of GDP.

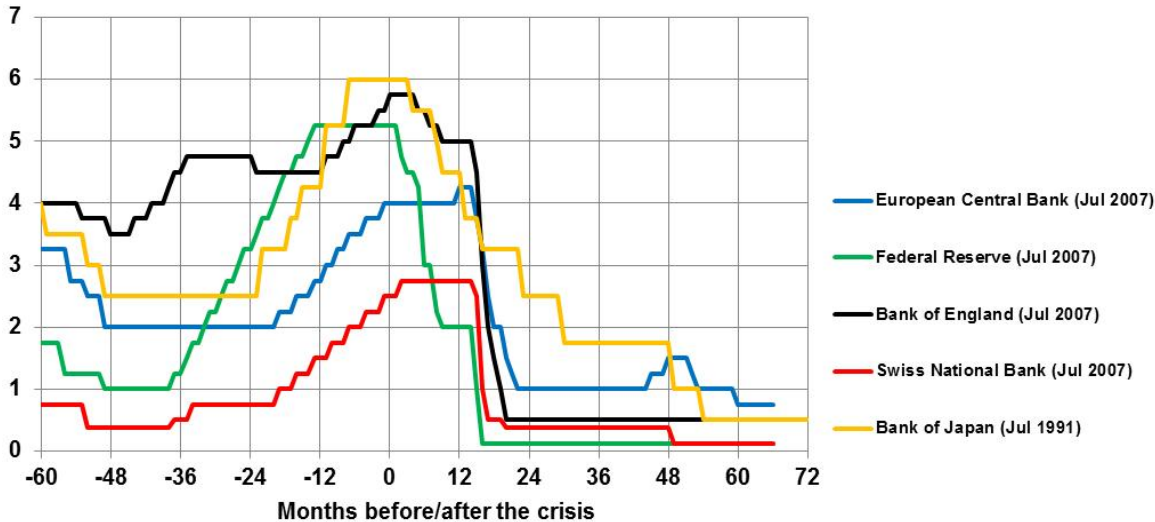
Koo (2011) argues that the Eurozone is currently in a balance sheet recession as well as the corporate sector and households have both been net savers since 2010. Simultaneous fiscal consolidation by governments would thus trigger a deflationary spiral and aggravate the economic situation. He argues that in such a situation, monetary policy is ineffective (liquidity trap) and the government would thus have to borrow and spend the private sector’s excess savings. Schnabl (2012) on the other hand argues that while expansionary monetary and fiscal policy are both able to stabilize the economy in the short run, their long term consequences are dire (political instability, economic stagnation, new bubbles, nationalization of large parts of the economy, declining prosperity). He suggests that Europe should learn from Japan’s experience and abandon its expansionary monetary and fiscal policy although such an exit is associated with substantial adjustment costs.

3. Monetary and fiscal policy

3.1. Monetary policy

Similar to Japan’s experience at the beginning of the 1990s, a strong and rapid increase in short term interest rates in the United States eventually led to the burst of the real estate bubble and ignited an economic downturn and large write-offs for financial institutions. Starting from an unusually low level of 1 percent, the Federal Reserve raised the federal funds rate 17 times between May 2004 and June 2006 to 5.25 percent. In Europe, the Bank of England, the European Central Bank and others soon followed suit as economic prospects improved and inflation rates were projected to rise (figure 1). While the Federal Reserve has been criticized repeatedly for its strategy to keep interest rates low for an extended period of time after a short and mild recession in 2001 and thus contributing to the causes of the global financial crisis, recent evidence indicates that the European Central Bank’s interest rates were exceptionally low as well. Wynne and Koech (2012) show that the ECB’s policy rate between 1999 and 2007 was always at the lower bound of the interest rate range proposed by the Taylor rule. While such a policy seemed appropriate for countries like France and Germany, it turned out to be too expansive for Europe’s periphery, resulting in unsustainable booms. The authors further show that economic differences such as unemployment or inflation rates in the Euro area are larger than in the United States, indicating that a one-size-fits-all monetary policy is less appropriate and presents one of the key challenges of the EMU.

Figure 1: Official central bank interest rates in percent



Sources: European Central Bank, Federal Reserve, Bank of England, Swiss National Bank, Bank of Japan.

In retrospective, the Bank of Japan’s monetary policy at the end of the 1980s resembles the Federal Reserve’s strategy ahead of the global financial crisis. Interest rates had been kept at exceptionally low levels for an extended period of time despite the fact that economic

growth was robust and strong price increases in various financial assets became evident. Interest rates in Japan were then raised repeatedly and decisively from 2.5 percent to 6 percent within 16 months (April 1989 to August 1990).

The policy response to the beginning of the crisis, however, differed. Within 15 months, the Federal Reserve slashed the federal funds rate from 5.25 to near zero in November 2008. Federal Reserve Chairman Ben Bernanke has repeatedly expressed concerns that one of the most important lessons from the Great Depression is that monetary policy had been too restrictive and procyclical, leading to deflation and a downward spiral in economic activity. The Federal Reserve has committed itself to keep interest rates near zero until the middle of 2015 even if economic activity should be stronger than currently anticipated. The Bank of Japan on the other hand reduced interest rates more slowly from 6 percent to 3.25 percent within the first 15 months of the crisis. Persistent problems in the financial sector, deflation and slow growth led the Bank of Japan to reduce interest rates further to 0.5 percent in September 1995, but it was not until September 2001 – more than 10 years after the outbreak of the crisis – when it reached its cyclical low at 0.1 percent.

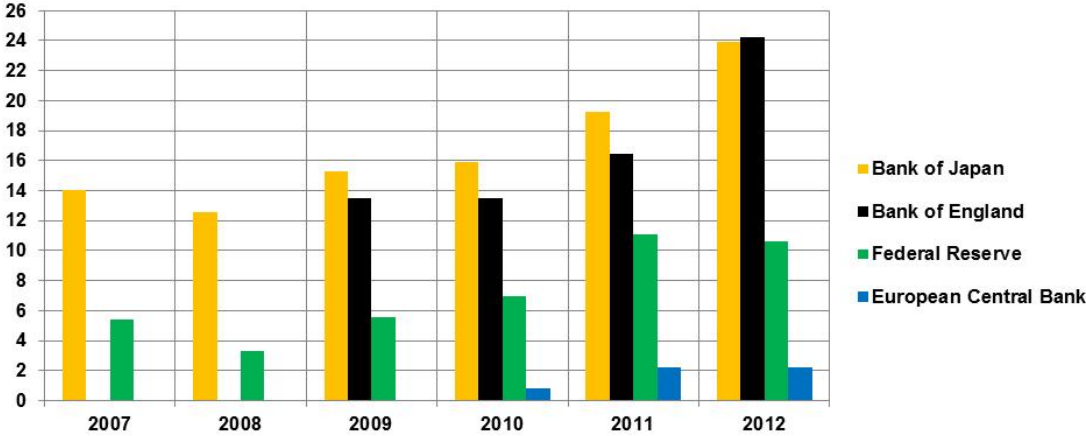
In Europe, the Bank of England, the European Central Bank, the Swiss National Bank and other national banks outside the Eurozone engaged in concerted action after the collapse of Lehman Brothers in September 2008, frequently lowering interest rates and providing large amounts of liquidity to struggling financial institutions at the same time. By May 2009, all official short term interest rates of the largest central banks were at 1 percent or lower. In the wake of Europe's sovereign debt crisis, both the European Central Bank and the Swiss National Bank lowered interest still further in 2011 and 2012.

While the Bank of Japan did not start purchasing government bonds, mortgages and shares until late in the 1990s, the willingness to resort to unconventional measures referred to as quantitative easing was and is widespread in today's crisis. The Bank of Japan has repeatedly tried to find an adequate exit strategy from the expansive monetary policy, selling government bonds at several points in time, but expanding its balance sheet further against the background of persistent fragility in financial sector and weak economic prospects (Schnabl, 2012).

Today, the Bank of Japan holds Japanese government bonds in the amount of about 24 percent of GDP, trailing only the Bank of England (figure 2). After Japan's new prime minister Shinzo Abe repeatedly urged the Bank of Japan to loosen monetary policy further, the central bank increased its purchases of government bonds in January 2013 to overcome deflation and support economic activity. It also set a new explicit inflation target of 2 percent. In the United States, after several rounds of quantitative easing, the Federal Reserve holds

Treasury bills worth \$1.7 trillion or about 11 percent of GDP on its balance sheet. In addition, the Fed has bought mortgage-backed securities worth \$1 trillion. In December 2012, the Fed announced that it would purchase mortgage-backed securities at a pace of \$40 billion per month and treasury bills worth \$45 billion each month to “support a stronger economic recovery”. For the first time, it also set specific thresholds for the unemployment rate at 6.5 percent and inflation projections at 2.5 percent. As long as unemployment remains above and inflation below the defined threshold, interest rates would stay at the current historically low level.

Figure 2: Stock of government bonds as a percentage of GDP, end of year (2007-2012)

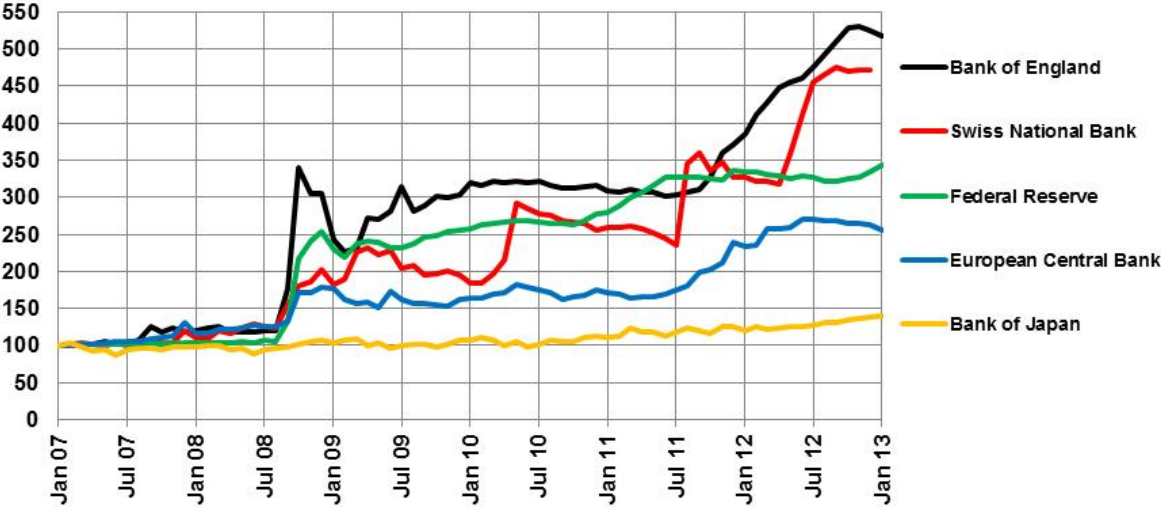


Sources: European Central Bank, Federal Reserve, Bank of England, Bank of Japan, International Monetary Fund.

Unlike other large central banks, the ECB has not been as aggressive in extending liquidity and cutting interest rates. In the tradition of the Deutsche Bundesbank, its legal mandate is limited and exclusively focused on price stability whereas the purpose of the Federal Reserve is “to promote effectively the goals of maximum employment, stable prices and moderate long-term interest rates” (Federal Reserve, 2005). In April and July 2011, the ECB even increased its policy rate twice by 25 basis points to 1.5 percent due to perceived upside risks for price stability. Nevertheless, the ECB started a Securities Market Program (SMP) in May 2010 and purchased government bonds from Eurozone member countries worth \$219 billion or slightly more than 2 percent of the Eurozone’s GDP. In December 2011 and February 2012, the ECB auctioned low interest loans (LTRO – Long Term Refinancing Operations) to European banks with a duration of 36 months and interest of just 1 percent. In the first auction, loans worth €489 billion were announced, while the second one resulted in additional loans worth €529.5 billion. Sovereign bond yields in the Euro area have been declining since July 2012 when ECB president Mario Draghi stated that “within our mandate, the ECB is ready to do whatever it takes to preserve the Euro. And believe me, it will be enough”. In September 2012, the ECB declared that the SMP would be terminated and that assets would be kept until maturity. The ECB announced a new Outright Monetary Transactions (OMT)

program that would operate without any time or size limit. The ECB intends to address perceived distortions in the government bonds markets to ensure the proper transmission of monetary policy. Although the ECB is willing to buy limitless amounts of government bonds, these operations are tied to the willingness of governments to adhere to their commitments. As a result of all these actions, the European Central Bank's balance sheet has more than doubled from an average of €1.2 trillion during 2007 to €3.1 trillion by October 2012. In comparison with the Federal Reserve, the Bank of England or the Swiss National Bank, however, this expansion is less pronounced (figure 3).

Figure 3: Total central banks assets (Index, January 2007 = 100)



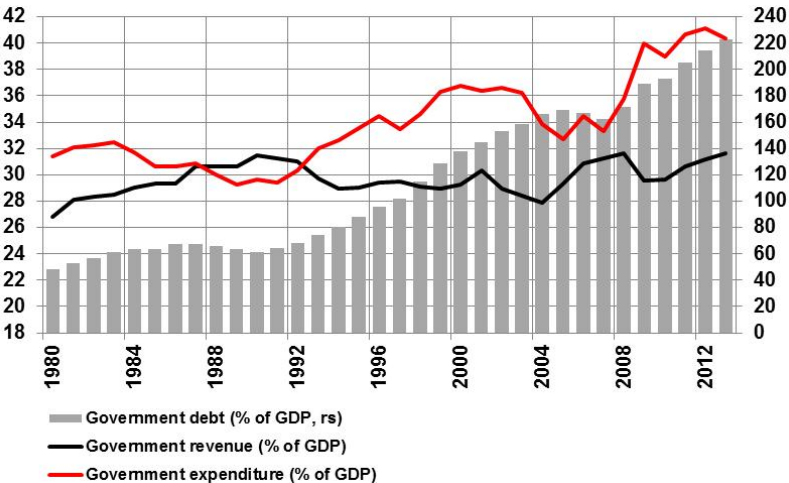
Sources: Bank of England, Bank of Japan, European Central Bank, Federal Reserve, Swiss National Bank.

3.2. Fiscal policy

The economic boom in Japan during the late 1980s led to a strong increase in government revenue, budget surpluses between 1988 and 1992 and a slight decline of the government debt to GDP ratio (figure 4). After the bubble burst, government finances quickly deteriorated – a result of both declining revenue through automatic stabilizers and increased government expenditure. As a response to the economic crisis, the Japanese government implemented a series of economic stimulus programs with an emphasis on infrastructure projects such as roads, bridges and rail tracks for bullet trains (Yoshino and Mizoguchi, 2010). The budget surplus of 1.9 percent in 1991 turned into a deficit of more than 4 percent of GDP from 1995 onwards. Combined with low or negative economic growth rates, government debt as a percentage of GDP increased dramatically from around 60 percent in 1990 to more than 220 percent in 2012 (OECD, 2012). Government revenue as a percentage of GDP did not reach pre-crisis levels until the emergence of the economic boom of 2005-08. Government expenditure on the other hand increased from around 30 percent to 36 percent of GDP between

1990 and 2000 and reached new highs of more than 40 percent during the Great Recession. Bailouts and capital injections for financial institutions also contributed to this increase. Fiscal stimulus between 1992 and 2000 amounted to a total of 27 percent of GDP, yet economic growth during that time span averaged just 1 percent (European Commission, 2009). The strong increase in government debt has led to a situation in which the Japanese government currently finances almost half of its expenditure through the issuance of new debt (bond dependency ratio of 49 percent) while national debt service is the second largest expenditure item behind social security (29 percent) at 24 percent. Despite the high amount of debt, average interest rates on government bonds have declined from around 6 percent at the beginning of the 1990s to slightly more than 1 percent today (Ministry of Finance Japan, 2011). This is primarily a result of persistent deflation, zero short-term interest rates and outright bond purchases by the Bank of Japan. In addition, around 95 percent of Japanese government debt is held by domestic residents, a result of a strong home bias and extreme risk aversion (Tokuoka, 2010). With rapid population ageing and a shrinking labor force, this trend is unlikely to continue much longer. The national savings rate has already declined by more than 10 percentage points since the beginning of the 1990s while the household savings rate declined from 12.9 percent in 1994 to 0.4 percent in 2008 (OECD, 2012). At the same time, even a slight increase in interest rates is a serious threat for Japan's fiscal sustainability. The rise in government debt is also a threat for financial sector stability as government bonds constitute 24 percent of all bank assets and are expected to rise to 30 percent by 2017 (IMF, 2012c).

Figure 4: Government expenditure, revenue and debt in Japan as a percentage of GDP



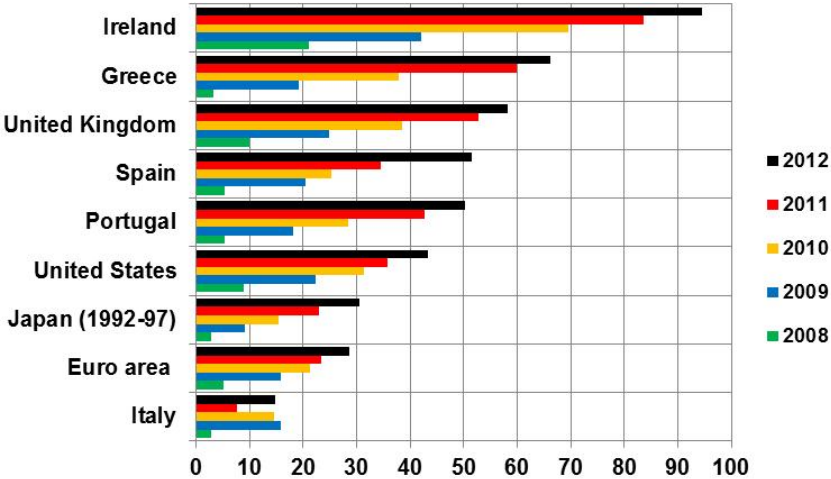
Sources: OECD Economic Outlook Database, IMF World Economic Outlook Database.

During the Great Recession, governments around the world acted swiftly and decisively, providing support and capital injections for financial institutions and implementing fiscal stimulus programs. Fiscal packages in the OECD averaged 2.7 percent of GDP during the 2008-10

period. A little more than 50 percent of fiscal packages were implemented in 2009. While countries like Australia, Canada, China, South Korea or the United States quickly agreed upon large fiscal stimuli of more than 4 percent of GDP, strategies among European countries differed. Denmark, Finland, Germany, Luxembourg, Spain or Sweden implemented substantial packages of more than 3 percent of GDP with several measures including lower taxes. Countries like Italy or Portugal distributed less than 1 percent of GDP (OECD, 2009, 2010). Others like Greece, Hungary, Ireland and Iceland were even forced to cut expenditure and raise taxes due to rapidly rising government debt and financial market pressure.

Fiscal stimulus, support for financial institutions, declining government revenue and very low or negative economic growth led to a surge in government debt (figure 5). Over the last five years, government debt in the Euro area increased by 29 percentage points of GDP. In Japan, government debt increased by 31 percentage points of GDP during the first five years of the crisis. In Europe, the increase was particularly dramatic in Ireland where debt as a percentage of GDP between 2007 and 2012 more than quadrupled from 29 to 123 percent of GDP. Of this increase, 38 percentage points are due to financial sector support (IMF, 2012a). The United Kingdom, Spain and Greece also witnessed an increase in public debt of 50 percentage points of GDP or more.

Figure 5: Cumulative increase in public debt in percentage points of GDP since 2007

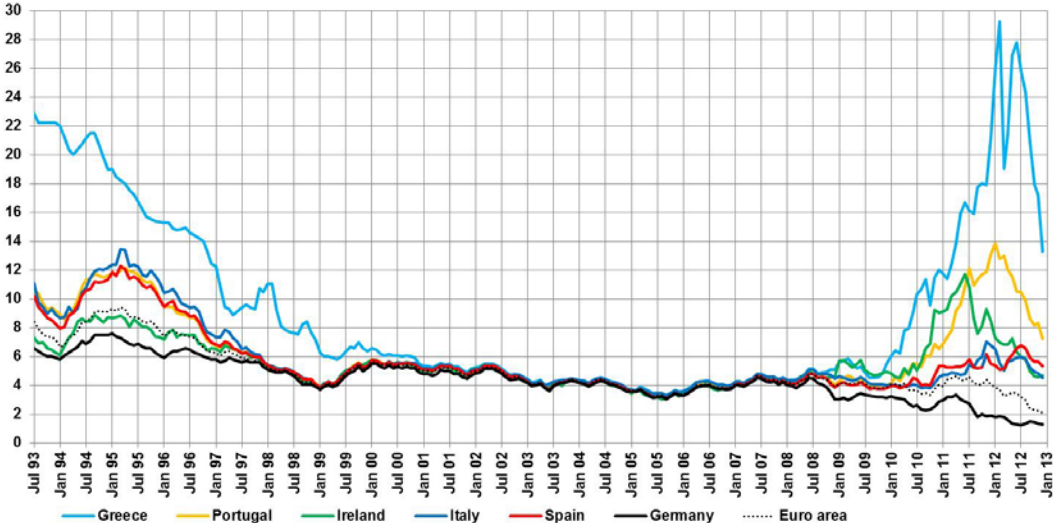


Sources: OECD Economic Outlook No. 92.

Similar to Japan, Ireland and Spain recorded budget surpluses before the burst of a major real estate bubble. In 2007, government debt was at 29 and 42 percent of GDP respectively, much lower than the average among all Euro area counties (72 percent). Greece and Italy on the other hand had been heavily indebted at well over 100 percent of GDP for several years. With the introduction of the Euro, long-term interest rates in Europe quickly converged (figure 6). Countries like Greece, Italy, Portugal and Spain who used to borrow at nominal interest

rates as high as 24 percent in the early 1990s, were now able to borrow at almost identical interest rates as other Euro area member countries. Between the middle of 2004 and late 2007, Greece was even able to borrow at lower rates than the United States. Real interest rates, computed as yields on ten year government bonds minus the annual inflation rate, were negative on several occasions between 2003 and early 2008 for Greece, Ireland and Spain. With the outbreak of the financial and economic crisis in 2008/09, financial markets started to differentiate among Euro area countries. Fears that countries like Greece, Ireland or Portugal would no longer be able to service their debt and would not receive any help from other EU countries led to a sharp rise in yield spreads (figure 6). Average interest rates have remained relatively stable over the past few years, but a loss in confidence and fears of contagion have resulted in capital flight in the southern countries and huge capital inflows in the northern economies like France, Germany or the Netherlands and including several countries outside the Euro area like Denmark, Norway, Sweden or Switzerland.

Figure 6: Long-term interest rates in the Euro area in percent (1993-2012)



Sources: OECD, European Central Bank.

Rising government debt and interest rates forced several European countries into austerity at a time when unemployment was still rising and economic growth low in some cases and negative in others. Starting in May 2010 with the first rescue package for Greece worth €110 billion, fiscal policy in many European countries suddenly shifted gears as fiscal stimuli ran out and fiscal adjustments started to be implemented. From this stage on, fiscal policy in Europe followed a completely different path than in Japan in the 1990s. It also differs from the strategy in the United States and Japan today and has been controversially discussed.²

² For a general discussion about the necessity and timing of austerity see for example a collection of essays edited by Corsetti (2012), Krugman (2012) or Jayadev and Konczal (2010). More recent evi-

Ireland received financial support worth €85 billion in November 2010 and Portugal followed in May 2011 (€78 billion). Greece then received a second rescue package and Spain received a €100 billion bailout package for its troubled banks in July 2012. In late November 2012, international creditors agreed to give Greece two additional years until 2016 to reduce the budget deficit. Because government debt is projected to reach 190 percent of GDP in 2014, interest rates on bailout loans were cut, interest payments were suspended for a decade and a bond buyback was initiated. Greece will receive an additional €43.7 billion of which €34.4 billion were paid out in December 2012. Cyprus may receive a bailout package as large as €17.5 billion or 100 percent of GDP. As of February 2013, the IMF, the European Financial Stability Facility (EFSF), the European Stability Mechanism (ESM) and all other commitments sum up to close to €500 billion for Greece, Ireland, Portugal and Spain. More than €340 billion or close to 70 percent have already been disbursed (table 1). As these loans are tied to strict conditions, fiscal policy shifted gears. However, fiscal policy among all Euro area countries was already contractionary in 2010. The cyclically adjusted primary deficit decreased by 0.8 percentage points in comparison with 2009 and was lowered further in 2011 by another 1.2 percentage points. Assuming that fiscal adjustments will continue to be implemented as projected by the OECD, the cumulative improvement of the cyclically adjusted primary balance in countries like Greece, Iceland, Ireland, Portugal and Spain is substantial and among the largest in the history of industrialized countries. In the past, substantial deficit reductions sometimes lasted more than a decade as in Belgium (1984-1998), Ireland (1979-1989) or Japan (1979-1990).

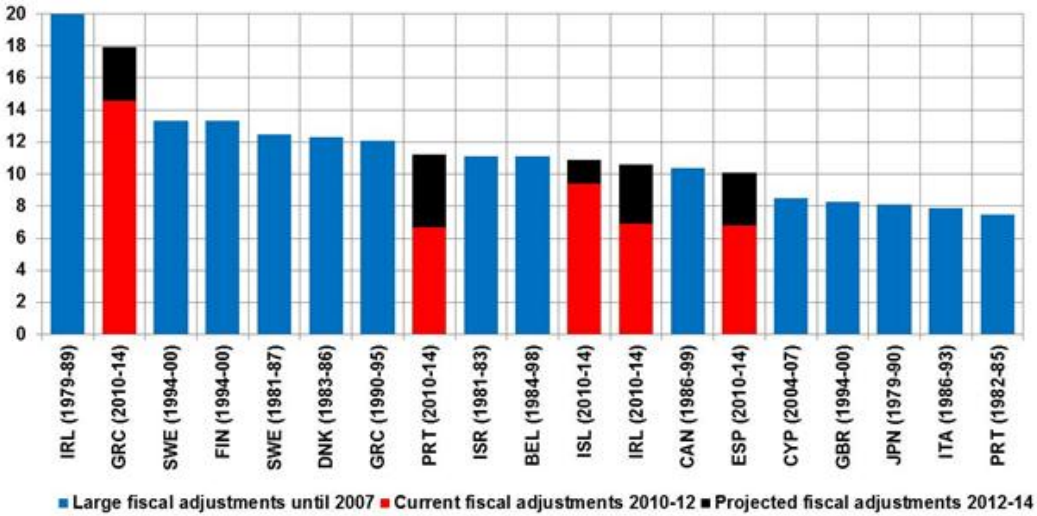
Table 1: Financial support for Eurozone countries in billions of Euros (as of February 2013)

	Time Span	Commitment	IMF Commitment	EFSF/ESM Commitment	Other Commitment	Disbursed	Share Disbursed
Greece	May 2010 - Mar 2016	245,6	48,1	144,6	52,9	186,0	75,7%
Ireland	Nov 2010 - Dec 2013	67,5	22,5	17,7	27,3	53,0	78,5%
Portugal	May 2011 - May 2014	78,0	26,0	26,0	26,0	62,0	79,5%
Spain	Jul 2012 - Dec 2013	100,0		100,0		41,4	41,4%
TOTAL		491,1	96,6	288,3	106,2	342,4	69,7%

Sources: CESifo, IMF, EFSF.

dence regarding the effects of fiscal adjustments on macroeconomic aggregates are presented by Alesina and Ardagna (2010), Alesina et al. (2012), Guajardo et al. (2011), the IMF (2010) or Schaltegger and Weder (2012).

Figure 7: Cumulative improvement of the cyclically adjusted primary balance (% of GDP)



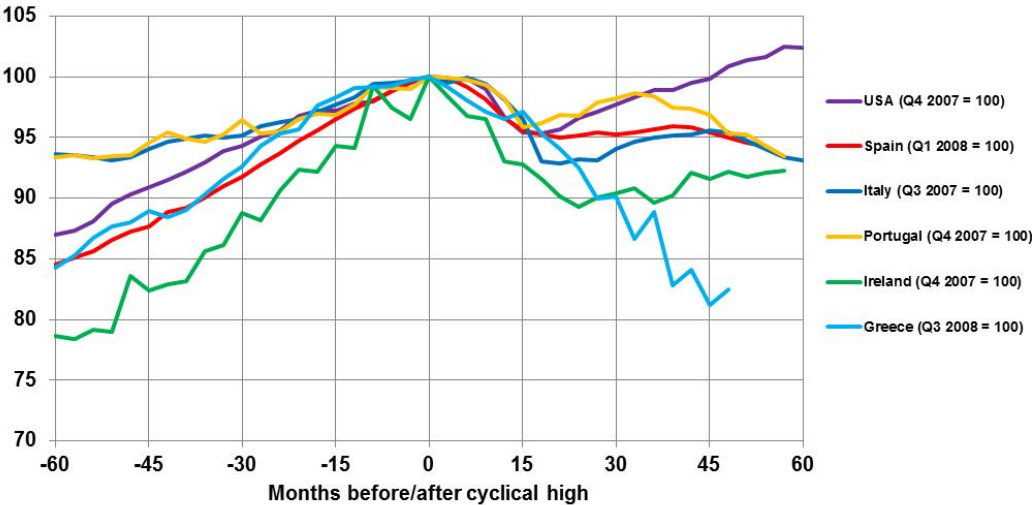
Source: IMF (2009), OECD (2012).

4. Economic developments

4.1. Economic growth

One of the characteristics of the Great Recession is the steep and fast decline in economic activity at the end of 2008 and throughout 2009. According to the IMF, the world economy contracted by 0.6 percent in 2009 – the first decline in output since World War II. The recession was particularly severe among advanced economies (-3.7 percent) and in the Euro area (-4.3 percent). Some Eastern European countries saw their GDP contract by more than 10 percent. World trade fell by more than 10 percent. Unprecedented intervention by central bank and governments helped to stabilize the world economy by 2010 when it grew by 5.3 percent while world trade expanded by almost 13 percent (IMF, 2012b). Despite a recovery of the world economy, several European countries have experienced a double dip recession or even an outright depression like Greece. While the seasonally adjusted real gross domestic product of the United States reached pre-crisis levels after almost four years since the beginning of the recession, Europe’s debt ridden countries are still far below that mark (figure 8). In Spain, real GDP has stagnated for almost three years now and is still more than 5 percent below its peak level from early 2008. Current projections even see a further decline for the next quarters. Italy and Portugal are once again back in recession and more than 7 percent below peak levels. Ireland has recorded modest growth rates over the last few quarters, but is still almost 8 percent from pre-crisis levels. In Greece, real GDP has been falling for more than four years with total output loss close to 20 percent. This decline resembles the situation in Argentina between 1999 and 2002 before and after the sovereign default.

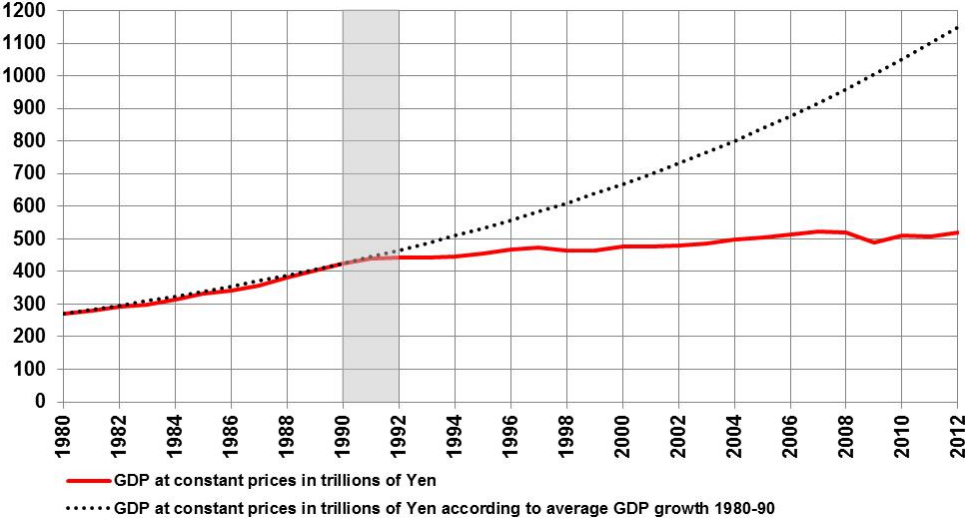
Figure 8: Seasonally adjusted real GDP (Index, peak value 2007/08 = 100)³



Source: OECD, Hellenic Statistical Authority (EL.STAT.).

In Japan, the situation after the burst of the bubble was radically different. Although asset prices witnessed a sharp decline, the economy continued to expand – but at much lower rates than before the crisis. Five years after the beginning of the crisis, real GDP was 11 percent higher. Similar to Greece, Ireland and Spain, economic growth before the crisis was high by international comparison at 5 percent (table 2), but GDP grew by only 1.4 percent each year in the five years afterwards. Had economic expansion continued according to trend growth between 1980 and 1990, Japan’s GDP in 2012 would have been more than twice its size from 1991 (figure 9). Instead, GDP at constant prices expanded by only 18 percent between 1991 and 2012 – an average growth rate of 0.8 percent per year.

Figure 9: Development of Japan’s economy (GDP at constant prices, 1980-2012)



Source: IMF World Economic Outlook Database, own calculations.

³ Data for Greece from 2011 onwards are not seasonally adjusted due to a break in the time series.

Table 2: Real GDP growth in percent

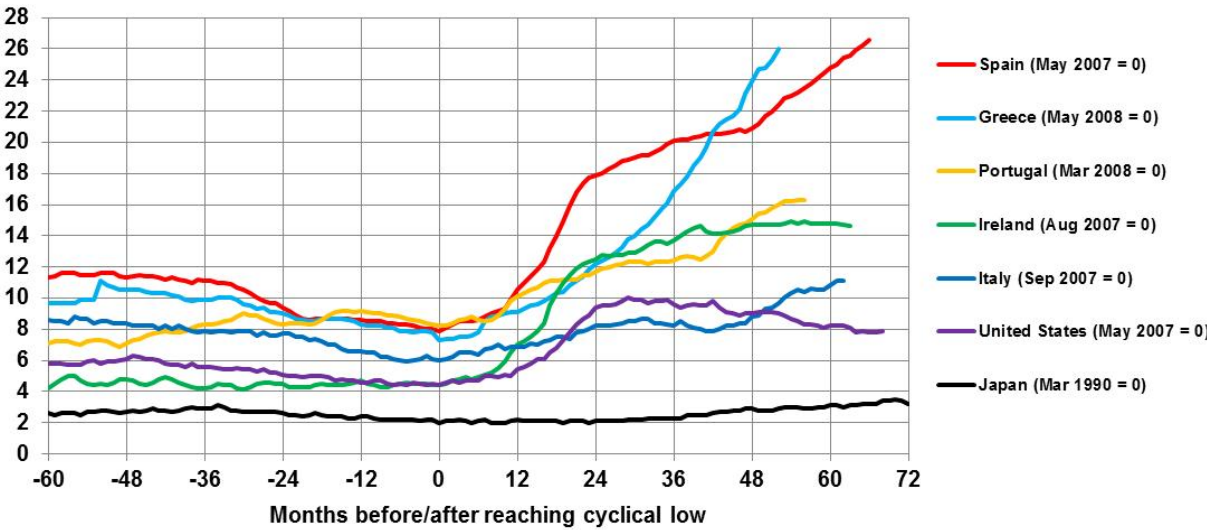
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		2003-07	2008-12
Austria	0,8	2,3	2,7	3,7	3,7	1,1	-3,5	2,2	2,7	0,6		2,6	0,6
Belgium	0,8	3,2	1,9	2,7	2,9	1,0	-2,7	2,4	1,8	-0,1		2,3	0,5
Finland	2,0	4,1	2,9	4,4	5,3	0,3	-8,5	3,3	2,7	0,7		3,8	-0,3
France	0,9	2,3	1,9	2,7	2,2	-0,2	-3,1	1,6	1,7	0,2		2,0	0,0
Germany	-0,4	0,7	0,8	3,9	3,4	0,8	-5,1	4,0	3,1	0,9		1,7	0,7
Netherlands	0,3	2,0	2,2	3,5	3,9	1,8	-3,7	1,6	1,1	-0,9		2,4	0,0
United Kingdom	3,5	3,0	2,1	2,6	3,6	-1,0	-4,0	1,8	0,9	-0,1		3,0	-0,5
USA	2,5	3,5	3,1	2,7	1,9	-0,3	-3,1	2,4	1,8	2,2		2,7	0,6
OECD	2,0	3,1	2,7	3,2	2,8	0,2	-3,6	3,0	1,8	1,4		2,8	0,6
Euro Area	0,7	2,0	1,8	3,4	3,0	0,3	-4,3	1,9	1,5	-0,4		2,2	-0,2
Greece	5,9	4,4	2,3	5,5	3,5	-0,2	-3,1	-4,9	-7,1	-6,3		4,3	-4,3
Ireland	4,2	4,5	5,3	5,3	5,4	-2,1	-5,5	-0,8	1,4	0,5		4,9	-1,3
Italy	0,0	1,6	1,1	2,3	1,5	-1,2	-5,5	1,8	0,6	-2,2		1,3	-1,3
Portugal	-0,9	1,6	0,8	1,4	2,4	0,0	-2,9	1,4	-1,7	-3,1		1,0	-1,3
Spain	3,1	3,3	3,6	4,1	3,5	0,9	-3,7	-0,3	0,4	-1,3		3,5	-0,8
Japan (1986-90/1991-95)	2,8	4,1	7,1	5,4	5,6	3,3	0,8	0,2	0,9	1,9		5,0	1,4

Source: OECD Economic Outlook No. 92, IMF World Economic Outlook Database.

In Europe, average growth rates between 2008 and 2012 are even lower and negative in its most troubled member states. This is primarily a result of low growth in 2008 and the steep decline during the Great Recession in 2009, but the most recent projections are rather bleak even for countries like Germany or the Netherlands and are marked by continued uncertainty (IMF, 2012b). The IMF's world economic outlook includes growth projections until 2017 that are consistently below 2 percent for countries like Belgium, France, Germany, Italy, the Netherlands, Portugal and Spain. They are somewhat higher for Greece and Ireland, but these countries are currently still below potential output, thereby benefiting from a catch-up effect.

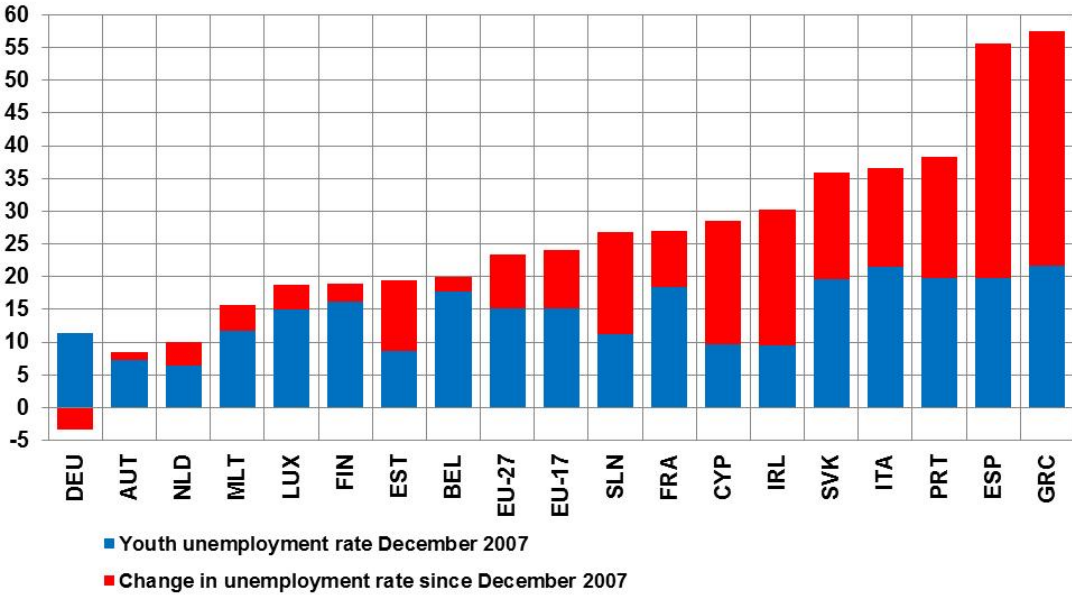
Economic growth is not only essential to consolidate public finances in the foreseeable future, but is also a key ingredient to reduce high unemployment rates that are still rising in several countries (figure 10). In December 2012, the unemployment rate in the Euro area still stood at an all-time high of 11.7 percent. It is currently 26.8 percent in Greece and 26.1 percent in Spain – similar to levels seen in the United States during the height of the Great Depression in the 1930s. Youth unemployment rates in Greece and Spain are even above 50 percent and close to 40 percent in Italy and Portugal (figure 11). Ireland's unemployment rate was only 4.4 percent in August 2007, but has climbed to 15 percent in late 2011. Italy and Portugal have also seen strong increases in unemployment in most recent months, while the United States is witnessing a slow but steady decline. The harmonized unemployment rate in the United States peaked in October 2009 at 10 percent and currently stands at 7.9 percent – still high by historical comparison and one of the main reasons for the Fed's continued expansive monetary policy.

Figure 10: Harmonized unemployment rates (percent of labor force)



Source: OECD.

Figure 11: Level and change in youth unemployment rates in the Euro area (2007-2012)



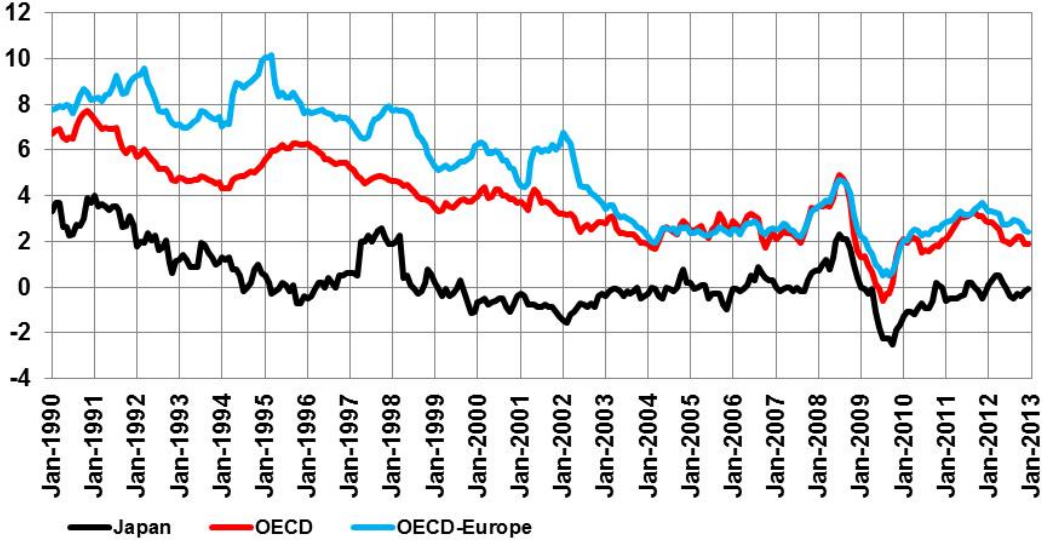
Source: Eurostat.

In Japan, the effects of the crisis on the labor market were much more limited. Known for very low unemployment rates in the Post World War II period, the unemployment rate reached a cyclical low at 2 percent in March 1990. It did not reach 3 percent until four years later in August 1994. Low growth and persistent problems in the financial sector eventually led to a further increase in unemployment, reaching 5.5 percent in 2002/03. Despite the relatively small rise since the outbreak of the crisis, the unemployment rate has never reached pre-crisis levels again, currently standing at 4.1 percent.

4.2. Consumer and asset prices

Despite the remarkable increase in money supply and historically low interest rates, consumer prices in Japan have been flat for more than two decades now. The consumer price index in December 2012 was even slightly lower than 20 years earlier. Inflation has largely followed global trends, but at a much lower level (figure 12). Consumer prices have declined on various occasions and have seen increases above 2 percent on only two occasions: In 1997/98 when the VAT was raised from 3 to 5 percent and in 2008 when higher energy and commodity prices around the world led to higher inflation rates.

Figure 12: Annual inflation in percent (1990-2012)



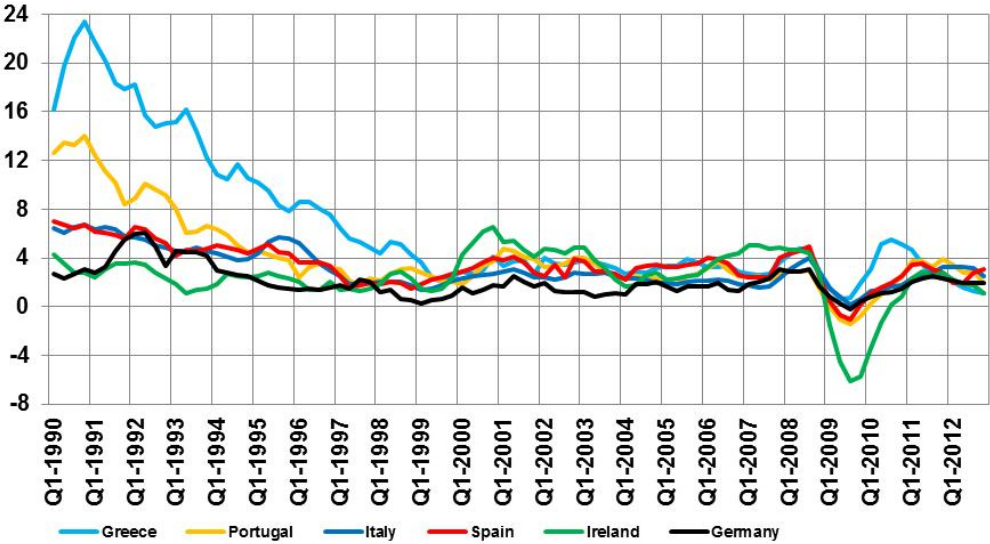
Source: OECD.

Along with interest rates, inflation rates in the Eurozone converged in the 1990s as European Union member states were committed to fulfill the Maastricht criteria requirements in order to be able to adopt the Euro as their new currency. While limiting government deficits to 3 percent of GDP and gross debt to 60 percent of GDP, member countries were required to have joined the exchange rate mechanism under the European Monetary System (EMS) for at least two consecutive years and were not allowed to devalue their currency during that period. Nominal long-term interest rates should not be more than 2 percentage points higher than in the three member states with the lowest inflation rates. Finally, inflation rates were required to be no higher than 1.5 percentage points above the average of the three member states with the lowest inflation rates.

After the Euro was introduced as an accounting currency in 1999 and notes and coins entered circulation in 2002, inflation rate differences were substantially lower than before, but persisted. While Germany's inflation rate remained below the ECB's target of 2 percent or lower for most of the time, Ireland's consumer price index increased by more than 5 percent

in both 2000/01 and 2007. Greece, Portugal and Spain also repeatedly witnessed inflation rates above 4 percent. Inflation rates in the Eurozone have been slightly lower on average since the outbreak of the global financial crisis, but have risen to more than 5 percent in Greece (2010) and above 4 percent in Portugal (2011) – mainly a result of strong increases in indirect taxation to consolidate the budget (figure 13).

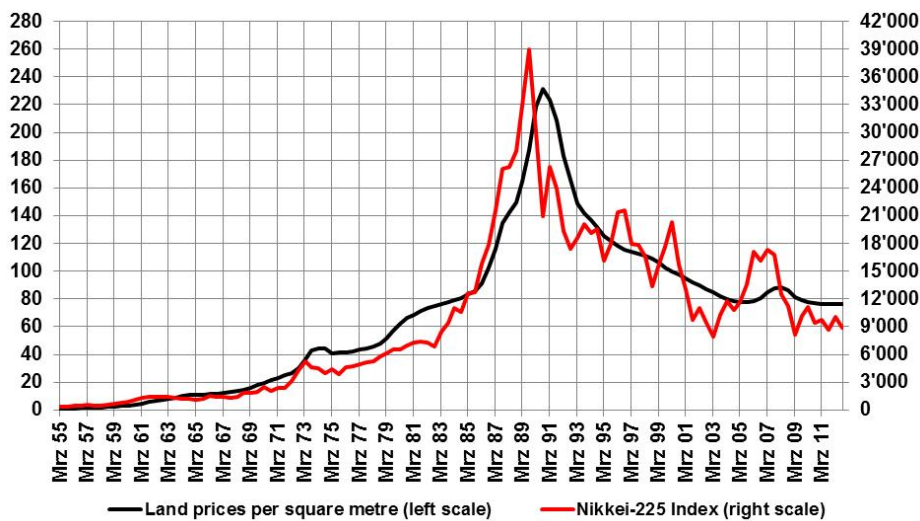
Figure 13: Annual inflation in the Eurozone in percent (1990-2012)



Source: OECD.

While increases in consumer prices before and after the outbreak of the crisis were rather contained, Japan’s asset price bubble was substantial by any measure. Within one decade, equity prices increased six-fold while land prices quadrupled (figure 14). Saxonhouse and Stern (2003) point out that many economists at the time considered this increase to be justified by strong economic fundamentals. Japan’s distinctive system of economic management at both the government and the firm level was perceived to be superior. The steep decline in asset prices since the beginning of the 1990s suggests that this increase was not justified. Today, more than 20 years after the burst of the bubble and despite strong increases in recent months, the Nikkei-225-Index is still more than 70 percent below its peak from December 1989. Land prices in the six largest urban areas are still declining, dropping more than two thirds from its high in late 1990.

Figure 14: Land prices and share prices in Japan (1955-2012)



Sources: Japan Real Estate Institute, Thomson Reuters.

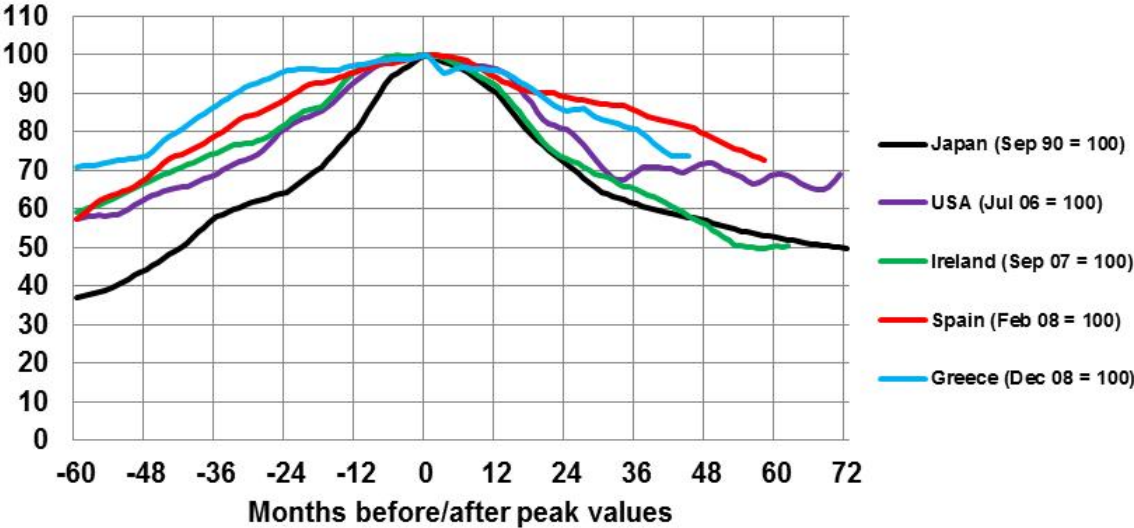
Comparing the rise and fall in land prices with the most recent developments in the United States and Europe, it is evident that with the exception of Ireland, real estate bubbles were less pronounced (figure 15). Despite the crisis, house prices in Italy and Portugal (not pictured) continued to rise until the year 2010. They have been flat in Italy since and have shown a slight decrease in Portugal. In Greece, house prices did not start to fall until the beginning of 2009. They have shed almost 30 percent of their peak value since, but this is more likely to be a result of economic decline rather than of a burst property market bubble. House prices grew around 7 percent per year in the five years before the decline started. Real estate prices in Spain have been falling for almost five years now, dropping almost 30 percent since December 2008. US house prices according to the S&P/Case-Shiller Home Price Index appear to have reached a bottom after falling by more than 30 percent since July 2006. After substantial government and central bank intervention, prices have been relatively stable over the past three years and have been rising since March 2012.

In contrast, residential property prices for all types of dwellings in Ireland have fallen by more than 50 percent since September 2007. After more than five years into the crisis, this decline is even more severe than in Japan's during the 1990s.⁴ Figure 16 pictures the development of prices for new houses in both the Dublin area and the whole country of Ireland since 1970 as well as the number of completed houses in thousands of units. In the second half of the 1990s, prices and housing completions picked up sharply, fuelled by high economic growth and low and falling real interest rates. Between 1995 and 2007, prices for new houses on average more than quadrupled from around 78'000 Euros to 323'000 Euros and increased almost five-fold in the Dublin area. This occurred despite the fact that housing completions

⁴ Kennedy and McQuinn (2012) suggest that Irish house prices may have overcorrected by 12 to 26 percent.

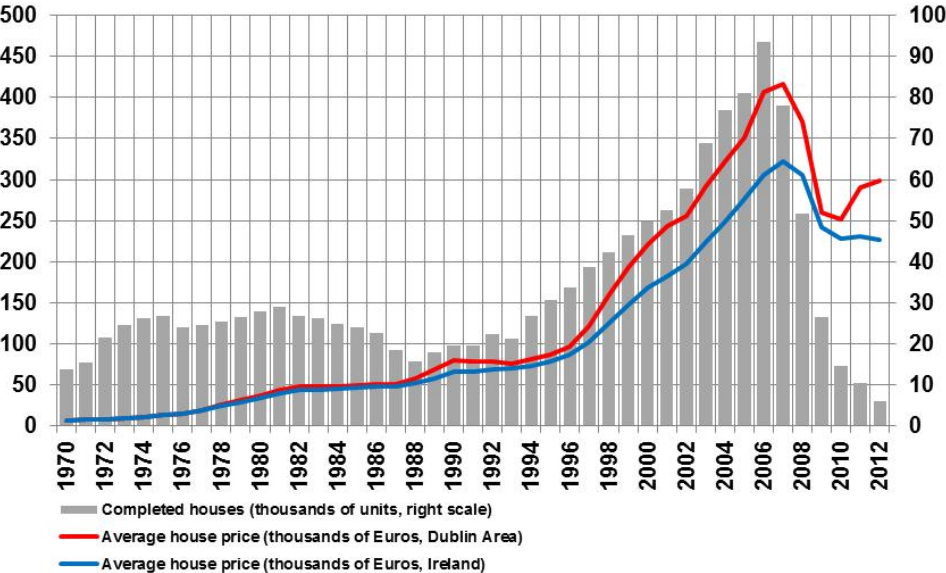
almost tripled in the same period from 30'575 units in 1995 to 93'419 units in 2007. Housing completions have dropped 89 percent between 2007 and 2011, putting numerous people out of work and significantly contributing to the marked rise in unemployment.

Figure 15: Real estate bubbles in selected economies (Index, Peak = 100)



Source: Bank for International Settlements (BIS), Property price statistics, January 2013.

Figure 16: House prices and house completions in Ireland (1970-2012)

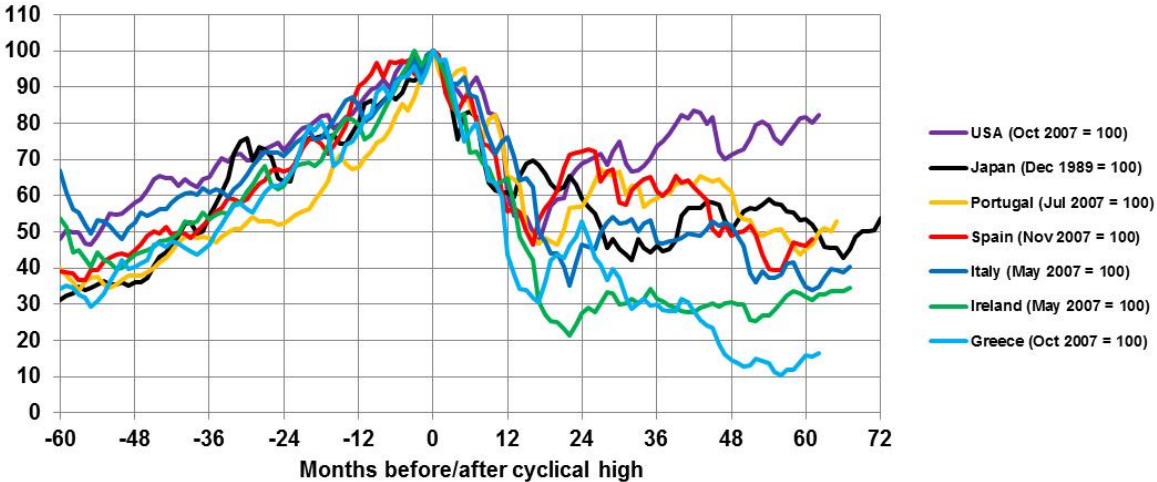


Source: Irish Department of the Environment, Community and Local Government.

In comparison with Japan at the end of the 1980s, share prices in Greece, Portugal and Spain also showed a strong increase, almost tripling in value in the five years before the crisis (figure 17). The rise was less pronounced in Ireland and Italy, but share prices still dou-

bled within five and four years, respectively. The collapse of share prices in 2008 and early 2009 was similar to the development in Japan as countries across the globe witnessed significant losses on financial markets. In Japan, the Nikkei-225-Index was about 50 percent lower five years later, while in the US share prices have shown a comparatively strong rebound. The reasons behind this recovery in the US are currently being discussed intensively, with many critics pointing out that economic fundamentals are still relatively weak while the Federal Reserve has provided vast amounts of additional liquidity.

Figure 17: Share prices before and after the peak (indexed values, peak = 100)



Sources: OECD.

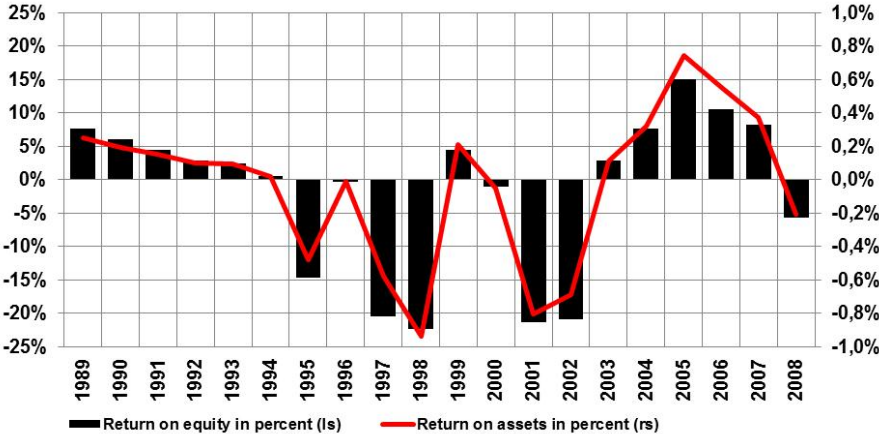
In Europe’s debt ridden countries, share prices have fallen much more than in Japan two decades earlier, dropping 90 percent or more in Greece and Iceland. Ireland’s share price index is still almost 70 percent below its level from May 2007. In Italy and Spain, share prices have shown a remarkable surge over the last few months, but are still far away from their peak levels in 2007, dropping about 60 percent before the recovery started.

4.3. Financial sector

After the collapse of Lehman Brothers in September 2008, central banks and national governments in many industrialized countries quickly intervened to stabilize the economy and financial institutions. Banks around the globe received almost unlimited liquidity, guarantees, capital injections and were partially nationalized in other cases. The meltdown of one of the world’s largest investment bank and its consequences forced central banks and government to immediate action. In Japan, the effect of the crisis on financial institutions was far less severe, particularly in the short run. The share of bad loans was rising in the 1990s, but banks remained profitable for the time being (figure 18). Despite asset price declines, banks continued to lend to firms and households. A stabilization and consolidation of the financial sector

did not take place until a new law was implemented in 1998, encouraging financial restructuring by requiring banks to publish detailed information about bad loans and allowing for the nationalization of institutions (Schnabl, 2012). As banks were finally adjusting their balance sheets, total loans declined by almost 30 percent. The continued process of “zombie lending” further extended and aggravated the crisis (Lanz, 2012).

Figure 18: Banking profitability in Japan (1989-2008)



Source: OECD.

After mounting losses, 15 large banks eventually merged into four big financial institutions, three of which are considered to be “systemically important financial institutions” by the Financial Stability Board. Mizuho was founded in 2000 as a merger of Dai-ichi Kangyo Bank, Fuji Bank and the Industrial Bank of Japan. In 2001, Sumitomo Mitsui was formed out of the Sumitomo Bank and the Sakura Bank which had previously been built out of a merger from Mitsui Bank and Taiyo Kobe Bank in 1990. Resona Holdings was created in 2002, containing the Daiwa Bank, Kinki Osaka Bank, the Nara Bank and the Asahi Banks. Finally, Mitsubishi Tokyo Financial Group and UFJ Holdings merged to establish Mitsubishi UFJ Financial Group in 2005. Both parts of the banks had previously been created of earlier mergers (Mitsubishi Bank and Bank of Tokyo consolidated in 1996 while Sanwa Bank, Tokai Bank and the Toyo Trust and Banking merged to form UFJ Holdings in 2001).

After return on equity was highly negative between 1995 and 2002, Japanese financial institutions returned to profit between 2003 and 2007. The number of financial institutions decreased from 155 in 1990 to 123 in 2008. More than a third of all jobs in the financial sector – a total of 157’000 jobs – were lost between 1993 and 2003, according to OECD statistics.

In October 2012, the European Banking Authority (EBA) reported that Europe’s largest financial institutions managed to increase their capital positions by more than €200 billion between December 2011 and June 2012. In December 2011, the EBA had warned that the 71 European banks examined lacked €115 billion in capital reserves to manage the crisis, par-

ticularly in relation to losses associated with sovereign exposures. In order to restore market confidence, banks were required to establish an exceptional and temporary buffer by the end of June 2012. According to the EBA, these goals were more than fulfilled. Furthermore, banks achieved their target mainly through retained earnings and raising new capital. Fears that the requirements would lead banks to reduce lending and thus trigger a credit crunch were not confirmed. According to the EBA, the recapitalization exercise was thus an important, but not an ultimate step towards repairing EU banks' balance sheets.

In its latest Financial Stability Review, the ECB identified three major risks to Euro area financial stability. They include the potential aggravation of the sovereign debt crisis, bank profitability risks due to a weak macro-financial environment as well as fragmented financial markets (ECB, 2012). But the ECB also found that stresses on the Euro area financial system have eased considerably since summer 2012 which it attributes to its own commitments to counter unfounded concerns about the irreversibility of the Euro and the announcement of the Outright Monetary Transactions (OMT). Nonetheless, the ECB argues that while its actions helped to alleviate symptoms of financial market fragmentation, it has not and cannot address its root causes. Its exceptional monetary policy measures have rather bought time which governments and financial institutions need to use to tackle the causes of the crisis (ECB, 2012).

Developments in the Spanish banking sector and policy responses resemble those in Japan during the 1990s as government and central bank officials neglected problems and postponed structural reforms for years before mounting losses became apparent. In December 2010, Bankia was formed, a conglomerate of seven ailing regional savings banks, creating Spain's fourth biggest bank and the country's largest holder of real estate assets. In May 2012, Bankia requested another €19 billion bailout, after previously receiving €4.5 billion from the Spanish government. The profit statement for 2011 was subsequently revised. Instead of a profit of €309 million, it now recorded a loss of €4.3 billion. In October 2012, a stress test by Oliver Wyman for the Spanish banking sector indicated that in an adverse scenario, financial institutions faced additional capital needs of €59 billion – of which €24.7 billion are due to Bankia alone.

In Ireland, the government reacted much faster, but later depended on external support because of its immediate action. In September 2008 amid global financial turmoil, the Irish government issued an unlimited bank guarantee in favor of six banks. According to the IMF, these guarantees amounted to 198 percent of GDP, far more than in any country and beyond the government's financial capabilities (IMF, 2009). In 2009, the National Asset Management Agency (NAMA) was founded and took over large loans from financial institutions. However, by September 2010, banks were no longer able to refinance themselves and the bank guar-

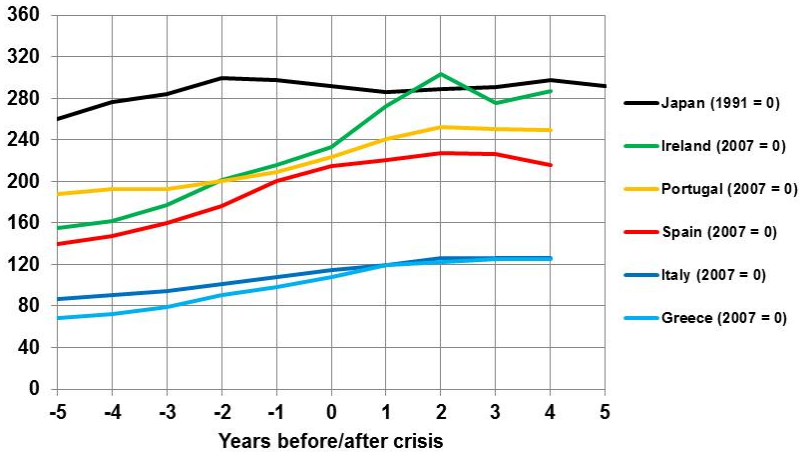
antee by the government was renewed for a third year, resulting in additional government outlays of €30 billion or 20 percent of GDP in 2010 alone. In November 2010, Ireland requested support from the European Union and the IMF. Irish financial institutions have posted staggering losses since 2008, losing more than 12 percent of risk-weighted assets in 2010. Loan loss impairments continue to be substantial and have led to a deterioration of profitability (Central Bank of Ireland, 2012).

In its most recent edition of the Global Financial Stability Report, the IMF (2012c) finds that risks to the global financial system have increased in the past months with the Euro area crisis continuing to be a main source of concern. Progress in reaching financial stability has been limited because reforms are still only partially implemented and because of ongoing crisis intervention. The IMF estimates that financial sector deleveraging between the fall of 2011 and the end of 2013 will amount to \$2.8 billion in its baseline scenario and could amount to \$4.5 billion if current commitments remain unfilled and financial fragmentation and financial repression continue.

Although several financial institutions have reduced their balance sheets and households have started to repay their debts, private sector deleveraging in Europe has barely started. In many advanced countries, total debt is still rising (MGI, 2012). With the exception of Ireland, private sector debt in Japan was much higher than in Europe, accounting for as much as 300 percent of GDP (figure 19). But private sector debt did not start to decline significantly until six years after the crisis broke out, dropping by more than 10 percentage points in 1997. In Ireland, debt continued to rise until 2009. In Greece and Italy, debt has stabilized at relatively low levels. The decline in Portugal and Spain has only been modest so far and will require several years to reach pre-crisis levels if deleveraging continues at the current pace.

As Cecchetti et al. (2011) show, household, non-financial corporate and government debt all increased significantly between 1980 and 2010. Among the 18 OECD countries examined, household debt rose from 39 to 94 percent of GDP (median average), non-financial corporate debt from 85 to 126 percent and government debt from 43 to 97 percent of GDP, signaling a major credit boom.

Figure 19: Private debt as a percentage of GDP (1991/2007 = 0)

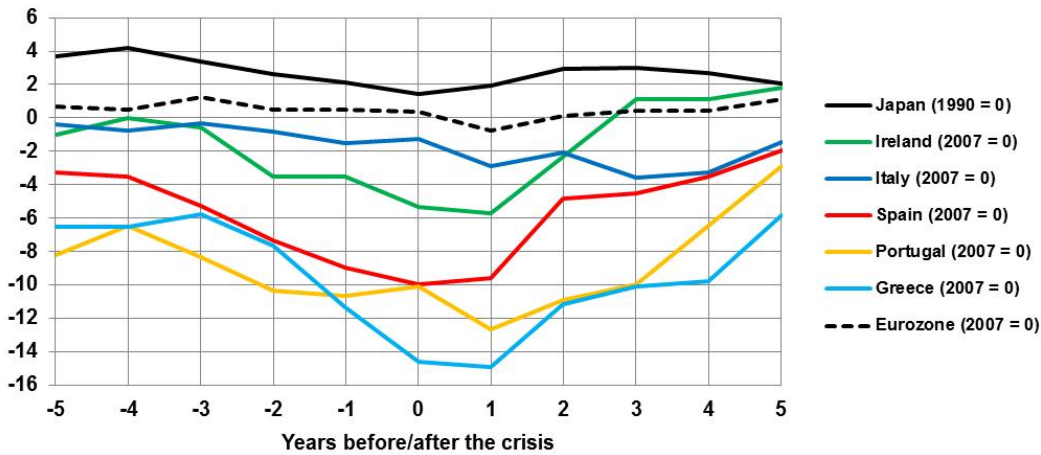


Sources: Eurostat / Cecchetti et al. (2011)

4.4 Current account balance and exchange rates

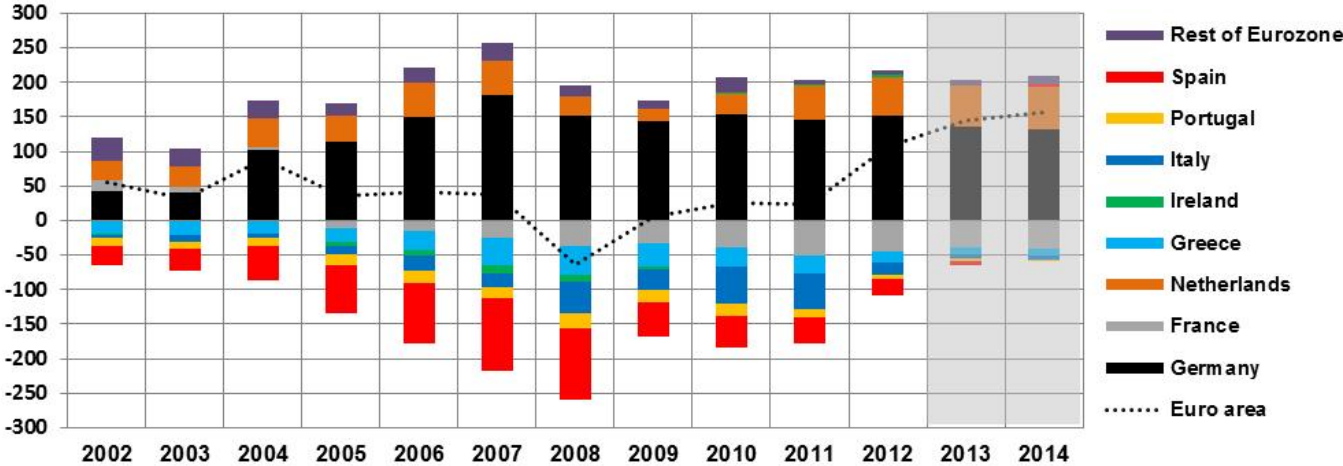
Before the outbreak of the global financial and Europe’s sovereign debt crisis, a one-size-fits-all monetary policy combined with different fiscal policies and unwillingness for structural reforms resulted in increasing imbalances between Eurozone member countries. While Germany’s current account surplus kept rising, Greece and Portugal were running substantial and increasing current account deficits. In 2003, Ireland was growing at high rates, but Germany experienced a recession. Since the economic boom came to a sudden stop in Europe’s peripheral countries, current account balances have shown signs of converging again (figures 20 and 21). After posting a deficit of close to 6 percent of GDP in 2008, Ireland is expected to record a surplus for the third straight year in 2012. Greece, Portugal and Spain have seen their deficit shrink by 8 to 9 percentage points since 2007/08. The reduction of current account deficits in Europe’s periphery has not been accompanied by a corresponding decline in current account surpluses among other Euro area members. Both Germany and the Netherlands continue to record substantial surpluses. With the exception of 2008, the Euro area as a whole has recorded a current account surplus every year. Furthermore, the improvement in the current account balance was primarily achieved through a strong reduction in imports rather than growing exports. In Greece, imports have declined by almost 50 percent between 2008 and 2012. A strong decline in imports is also observed in Portugal (-30 percent) and Spain (-15 percent). In Italy the decline was less pronounced and exports have been growing for the past three years. Growing exports also played a major role in turning Ireland’s current account deficit back into a surplus, but growth rates have been lower than the Euro area average (IMF, 2012b).

Figure 20: Current account balance as a percentage of GDP



Source: IMF World Economic Outlook Database, October 2012.

Figure 21: Current account balances in the Euro area in billions of Euros



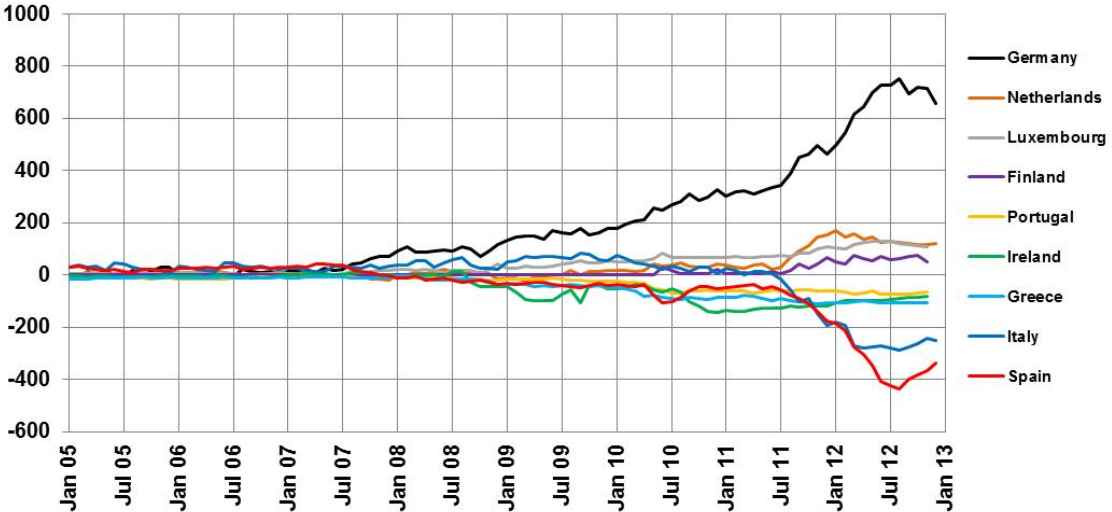
Source: European Commission.

Sinn and Wollmershäuser (2012) argue that the Euro crisis is a balance of payments crisis similar to the Bretton Woods crisis. They show that rising Target balances in Germany, Netherlands, Luxembourg and Finland helped to finance current account deficits and compensate for capital flight in Europe’s troubled economies Greece, Ireland, Italy, Portugal and Spain.⁵ Transferring central bank money from one country to another results in receivables and payables vis-à-vis the European Central Bank. Since Target balances by definition always sum up to zero and can only be constructed from national central banks’ balance sheets and balance of payments statistics, they remained unnoticed for a considerable amount of time. Target imbalances were close to zero before they starting growing in the middle of 2007 – just when the interbank market in Europe showed first signs of tension. Ac-

⁵ Target is an abbreviation for Trans-European Automated Real-time Gross Settlement Express Transfer System. In November 2007, Target2 replaced the previous Target system. Target2 is an interbank system used for cross-border transfers in the European Union.

According to Sinn and Wollmershäuser (2012), the ECB tolerated and actively supported voluminous money creation and lending by central banks of Europe’s periphery – at the expense of money creation and lending in the core of the Eurozone. By June 2012, Germany, the Netherlands, Luxembourg and Finland had amassed claims worth almost €1.1 trillion of which more than €700 billion is attributed to Germany alone. On the other hand, Spain has piled up liabilities worth more than €400 billion and Italy more than €270 billion (figure 22). Public capital thus essentially replaced private capital flows. Under the Bretton Woods system, the process of shifting refinancing credit turned out to be unsustainable and the system eventually collapsed. In recent months, target balances have converged slightly.

Figure 22: National central bank target balances vis-à-vis the Eurosystem in billions of Euros

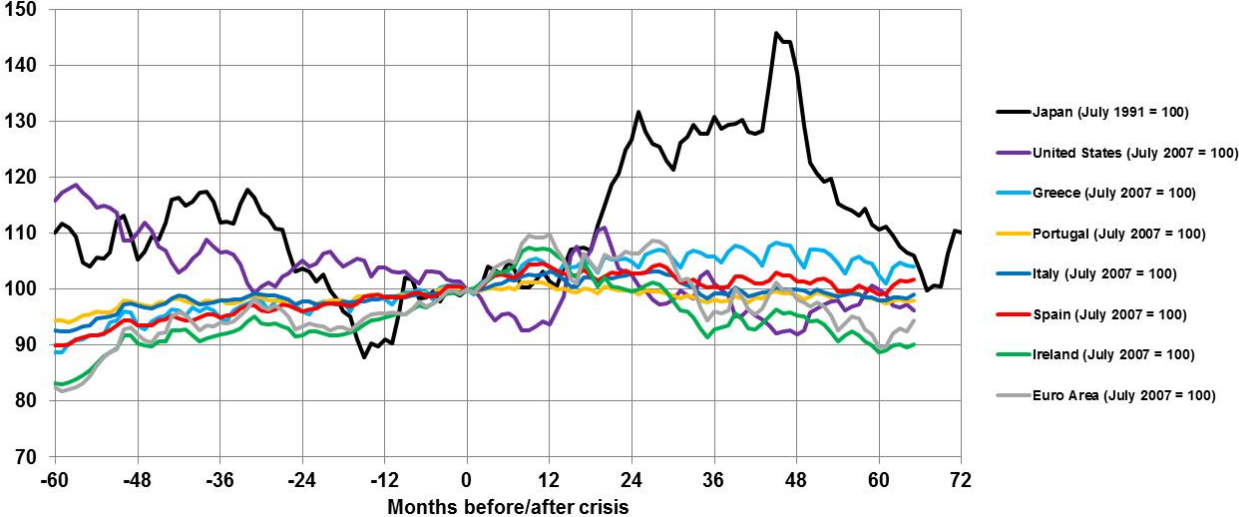


Sources: Sinn und Wollmershäuser (2012), cesifo.

Japan’s current account balance in the 1980s and 1990s was much more stable as the economy continued to record a surplus of more than 2 percent of GDP in the five years after the bubble burst. Japan’s steady current account surpluses in the early 1990s occurred against the background of a real and trade weighted increase of the yen of more than 40 percent between December 1990 and April 1995 before falling again sharply (figure 23). As opposed to the wide swings in the US dollar and the yen, real effective exchange rates have turned out to be remarkably stable for all Euro area member countries – even during the most recent sovereign debt crisis. The price tag of this stability in foreign exchange circumstances is the inability of troubled member countries to devalue their currency despite low growth, high debt and current account deficits. The Eurozone’s most troubled economy, Greece, even saw its real effective exchange rate appreciate by almost 5 percent between December 2007 and April 2011. Italy, Portugal and Spain saw exchange rates depreciate only very little, increasing the pressure for internal devaluation (i.e. lower wages, pensions and unemployment benefits) and structural reforms to regain competitiveness. However, internal devaluation is associated with several challenges and there are not many successful

examples (Shambaugh, 2012). In Ireland, real effective exchange rates showed a similar movement as the Euro area average, dropping around 15 percent since December 2007.

Figure 23: Real effective exchange rates

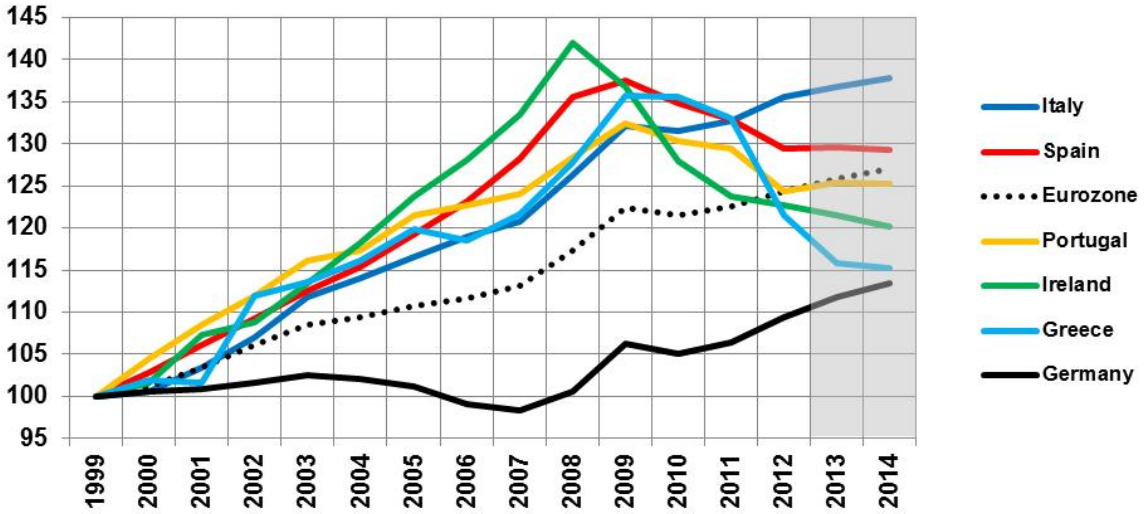


Source: Bank for International Settlements (BIS), Effective exchange rate indices, January 2013.

4.5 Competitiveness

With the Eurozone's crisis, imbalances and differences in competitiveness have received increasing attention by academic scholars, economists and politicians. As globalization intensifies (i.e. rapidly growing world trade and foreign direct investment, significantly lower corporate income tax rates), Europe is struggling to keep market shares and to remain attractive for firms and individuals. One of the main causes for the relative loss in competitiveness by countries like Greece, Ireland, Italy, Portugal and Spain compared to other Euro area members appear to be strong increases in labor unit costs (figure 24). Between 1999 and 2008, labor unit costs have risen by 26 to 42 percent in Greece, Ireland, Italy, Portugal and Spain while they remained virtually unchanged in Germany. Changes since 2008 and projections up until 2014 show that labor unit costs have started to adjust. While the Euro area average continues to rise, labor unit costs have already fallen by more than 10 percent in Greece and Ireland and by about 6 percent in Spain from their peak levels in 2008/09. In Germany on the other hand, labor unit costs are projected to rise by 13 percent between 2008 and 2014, further contributing to the realignment of economic terms and conditions.

Figure 24: Nominal labor unit costs (Index, 1999 = 100)



Source: European Commission.

More comprehensive measures of competitiveness show a more detailed picture. The World Economic Forum (WEF) for example publishes a detailed Global Competitiveness Report based on more than 110 variables and various sources such as Executive Opinion Surveys and publicly available data from international institutions. The variables are organized into twelve different pillars of competitiveness, including the quality of institutions and infrastructure, macroeconomic environment, health and education, market size, business sophistication and innovation. The WEF then constructs a Global Competitiveness Index using a scale from 1 (worst) to 7 (best). Table 3 shows the Top 10 list of the last six editions of the Global Competitiveness Report as well as the rank and score for Greece, Ireland, Italy, Portugal and Spain. Switzerland has been ranked as the world’s most competitive nation for the last four years. The United States have lost six notches since the outbreak of the global financial crisis while Japan has remained in the top 10 in all of the past six editions. Finland, Germany, the Netherlands, Singapore and Sweden have also been ranked among the top 10 throughout the last few years.

According to the WEF’s Global Competitiveness Reports, Greece, Ireland, Italy, Portugal and Spain have all lost several spots between 2007 and 2010 – a sign of diminishing competitiveness. However, the sample has been expanded as well, rising from 131 countries in 2007 to 144 nations in 2012. In the past two years, Ireland, Italy and Spain have managed to rebound. Italy is currently ranked higher than it was in 2007 whereas Spain has climbed six notches since 2010. Portugal and Greece on the other hand have fallen further behind. Greece dropped from #65 to #96 between 2007 and 2012, trailing countries like Cambodia, Iran, Kazakhstan, Lebanon and Rwanda who are all ranked much longer in the United Nations Human Development Index. Table 3 highlights that despite some improvements in the

past few years, differences in competitiveness among Euro area members are large, making an adequate monetary policy for all countries an almost impossible task.

Table 3: Global Competitiveness Index 2007-2013

GCI 2007-08		GCI 2008-09		GCI 2009-10		GCI 2010-11		GCI 2011-12		GCI 2012-13							
1	United States	5,67	1	United States	5,74	1	Switzerland	5,60	1	Switzerland	5,63	1	Switzerland	5,74	1	Switzerland	5,72
2	Switzerland	5,62	2	Switzerland	5,61	2	United States	5,59	2	Sweden	5,56	2	Singapore	5,63	2	Singapore	5,67
3	Denmark	5,55	3	Denmark	5,58	3	Singapore	5,55	3	Singapore	5,48	3	Sweden	5,61	3	Finland	5,55
4	Sweden	5,54	4	Sweden	5,53	4	Sweden	5,51	4	United States	5,43	4	Finland	5,47	4	Sweden	5,53
5	Germany	5,51	5	Singapore	5,53	5	Denmark	5,46	5	Germany	5,39	5	United States	5,43	5	Netherlands	5,50
6	Finland	5,49	6	Finland	5,50	6	Finland	5,43	6	Japan	5,37	6	Germany	5,41	6	Germany	5,48
7	Singapore	5,45	7	Germany	5,46	7	Germany	5,37	7	Finland	5,37	7	Netherlands	5,41	7	United States	5,47
8	Japan	5,43	8	Netherlands	5,41	8	Japan	5,37	8	Netherlands	5,33	8	Denmark	5,40	8	United Kingdom	5,45
9	United Kingdom	5,41	9	Japan	5,38	9	Canada	5,33	9	Denmark	5,32	9	Japan	5,40	9	Hong Kong	5,41
10	Netherlands	5,40	10	Canada	5,37	10	Netherlands	5,32	10	Canada	5,30	10	United Kingdom	5,39	10	Japan	5,40
22	Ireland	5,03	22	Ireland	4,99	25	Ireland	4,84	29	Ireland	4,74	29	Ireland	4,77	27	Ireland	4,91
29	Spain	4,66	29	Spain	4,72	33	Spain	4,59	42	Spain	4,49	36	Spain	4,54	36	Spain	4,60
40	Portugal	4,48	43	Portugal	4,47	43	Portugal	4,40	46	Portugal	4,38	43	Italy	4,43	42	Italy	4,46
46	Italy	4,36	49	Italy	4,35	48	Italy	4,31	48	Italy	4,37	45	Portugal	4,40	49	Portugal	4,40
65	Greece	4,08	67	Greece	4,11	71	Greece	4,04	83	Greece	3,99	90	Greece	3,92	96	Greece	3,86

Source: World Economic Forum (WEF), Global Competitiveness Reports 2007-2012.

5. Political and social costs

5.1. Political costs

The Global Recession, the increase in government debt and the subsequent austerity measures have increased political instability and led to widespread social unrest in many European countries. Citizens in all of Europe's debt ridden countries voted to oust their old governments starting with Greece in October 2009. Hungary and the United Kingdom followed in 2010, Portugal, Ireland and Spain in 2011. In December 2011, Belgium finally managed to form a new government after 541 days of disagreement and negotiations. Greece and Italy both received technocratic, unelected government officials. Elections in France and Greece in 2012 also led to changes in government. In the Netherlands, although less affected by the crisis, the government fell apart and early elections were held after disagreements within the coalition to implement austerity measures.

Ponticelli and Voth (2011) find a clear correlation between fiscal retrenchment and instability in a cross country analysis covering the period from 1919 to 2008. Their findings indicate that expenditure cuts significantly increase the risk of riots, anti-government demonstrations, general strikes, political assassinations and attempts to overthrow the established order even when controlling for economic growth. The most recent developments in Europe seem to confirm this finding as demonstrations, riots and general strikes have been frequent – particularly in Greece, Portugal and Spain.

Political costs in Japan after the outbreak of the crisis were much more limited. The Liberal Democratic Party of Japan (LDP) has constituted the government from 1955 to 2009 with only one brief interruption in 1993-94 that lasted 11 months. In the 2009 elections, the LDP was defeated and the Democratic Party of Japan (DPJ) took over. However, political gridlock and bickering within and between political parties has made it impossible to implement much needed structural reforms in important areas such as social security or public finance. Japan has seen 17 different prime ministers since 1989. Junichiro Koizumi (2001-2006) was the only prime minister in office for more than three years. In December 2012, the LDP recorded a landslide victory over the DPJ and Shinzo Abe became prime minister for the second time (first term during 2006-2007).

5.2. Social costs

Since the outbreak of the financial crisis in 2007/08, several sources indicate that suicide rates in Europe have risen considerably. Stuckler et al. (2011) found that after declining in the previous years, suicide rates rose 7 percent in 2008 in Europe's old member states and showed further increases in 2009. Of the 10 countries included in the analysis, only Austria had a lower suicide rate in 2009 than in 2007. Countries with a strong deterioration in financial conditions like Greece and Ireland exhibited a particular pronounced increase in suicide levels of 17 and 13 percent, respectively. The Greek Ministry of Health reported that suicide rates in the first half of 2011 were 40 percent higher than a year before.

Eurostat tables about social and living indications in the European Union on the other hand do not show a clear picture (table 4). The share of severely materially deprived people for example has decreased from 9.1 to 8.8 percent in the EU from 2007 to 2011. It has risen substantially in several Eurozone countries, but has decreased in Portugal. The share of people at risk of poverty or social exclusion – using 60 percent of median income as the statistical threshold – has increased slightly in both the EU and the Euro area. On the other hand, poverty risk has declined in Ireland, Italy and Portugal. Income distribution statistics as measured by the Gini coefficient or income quintile ratios and based upon equivalent disposable income do not show a clear trend within the European Union since 2007. In the Euro area, statistics show a slight increase in income inequality as the Gini coefficient between 2007 and 2010 rose from 29.9 to 30.5. In contrast, income inequality has decreased in Greece, Italy and Portugal. However, since statistics so far are only available through 2010 or 2011 and large parts of austerity measures were implemented afterwards, it appears premature to draw any conclusions about the social costs of the crisis in Europe.

Table 4: Changes in income inequality and poverty in Europe (2007-2011)

	Gini-Coefficient		Poverty risk		Material deprivation	
	2007	2011	2007	2011	2007	2011
EU-27	30,6	30,7	16,5	16,9	9,1	8,8
EU-17	29,9	30,5	16,3	16,9	5,3	6,6
Greece	34,3	33,6	20,3	21,4	11,5	15,2
Ireland	31,3	33,2*	17,2	16,1*	4,5	7,5*
Italy	32,2	31,9	19,8	19,6	6,8	11,2
Portugal	36,8	34,2	18,1	18,0	9,6	8,3
Spain	31,3	34,0	19,7	21,8	3,0	3,9

* Data for 2010. Source: Eurostat.

Jenkins et al. (2011) show that recessions typically reduce real income across all income levels and lead to higher poverty rates. But the impact of recessions on income inequality is not clear cut because government policies and welfare states differ and because some social indicators are relative measures thus making interpretations difficult. While the Great Recession has not led to substantial changes in household income and inequality in the 21 OECD countries analyzed, the authors expect more pronounced effects on distribution in the medium and long run. In Greece, the economic crisis has thus far not led to a substantial change in income inequality. The highest decile of the income distribution suffered the largest income losses – both in relative and absolute terms. With unemployment and long-term unemployment still rising, poverty rates are expected to increase further (Matsaganis and Leveti, 2011). Recent empirical research examining the effects of fiscal adjustments on inequality indicates that austerity measures in the past led to a more uneven income distribution (Agnello and Sousa, 2012; IMF 2012a).

Perhaps the most pronounced and most widely noticed effect of the crisis on society has been the dramatic increase in unemployment. Annunziata (2012) argues that extremely high unemployment rates among the young cannot be attributed to austerity alone. In Italy and Spain, youth unemployment rates have averaged around 30 percent over the past three decades, reflecting structural weaknesses of the labor market and the education system even if some of them may be working in the informal sector. This “wasted youth” problem is associated with a deterioration of the human capital stock, depressing economic growth still further. In Europe, the employment rate among the young aged 15-24 years was less than 34 percent in 2011, the lowest level ever recorded. Unemployment in this age group has also increasingly affected people with higher education. The economic loss of this disengagement is estimated to be €153 billion for 2011 or 1.2 percent of European GDP (Eurofound, 2012).

Research also shows that the costs of unemployment include permanent income loss, negative impacts on health and subjective well-being as well as social cohesion (Altindag and Mocan, 2010; Clark and Oswald, 1994; Dao and Loungani, 2010; Di Tella et al., 2001; Giuliani and Spilimbergo, 2009)

Social costs of the crisis in Japan include a strong increase in poverty and income inequality, an increasing labor market dualism and sinking labor market and household income. Poverty rates were published for the first time in Japan in October 2009 by the Ministry of Health, Labor and Welfare (Takanami, 2010). The poverty rate, measured as the ratio of people who live below the poverty line, has jumped to 14.9 percent and is the fourth highest among all OECD countries, trailing only Mexico, Turkey and the United States. Income inequality has risen above the OECD average (OECD, 2010). Population ageing and labor market changes are seen to be the two driving forces behind the increase in poverty (Takanami, 2010). Another reason is the limited effect of tax and social spending policies. Moreover, social spending is largely concentrated on pension and health care programs that primarily benefit the elderly (Jones, 2007). For a wealthy nation that is known for its large middle class and homogeneous population, these developments are staggering. Labor market rigidities have put particular pressure on the young, as indicated by the high youth unemployment rate and a marked increase in irregular work. Known as freeters, men and women between the age of 15 and 34 are often forced to work only part time and at minimum wages. The share of non-regular employees among the young has more than doubled in the last 20 years and is now at 23 percent for men and 47 percent for women (Ministry of Internal Affairs and Communications, 2007).

6. Conclusion

Europe's current economic situation looks eerily similar to Japan's crisis of the 1990s – in its causes, its consequences and increasingly also in its policy reactions. As Koo (2011) and others have pointed out, several European countries are in the middle of a balance sheet recession as a result of burst credit and real estate bubbles. While debt overhang and deleveraging in Japan during the 1990s was primarily related to the financial and corporate sector, Europe's countries at the periphery have to deal with high government debt as well. Real estate bubbles in Ireland and Spain were of similar magnitude as in Japan and significantly affected public finances, banks and unemployment rates both before and after the crisis. Monetary policy has entered uncharted territory in both Europe and Japan with the ECB increasingly willing to follow the unconventional strategies of the Federal Reserve, the Bank of England or the Bank of Japan. After two years of fiscal stimulus in 2008/09, high government debt and increasing market pressure forced many European countries into fiscal adjustments – the most marked difference with Japan's policy reactions to the crisis. Unlike

Japan, Europe with its monetary union and its structural weaknesses faces additional problems. Although Greece, Ireland, Italy, Portugal and Spain have made remarkable progress in improving competitiveness and reducing government and current account deficits, these adjustments are associated with high economic, political and social costs. Furthermore, the strong linkage between sovereign debt crisis and financial instability is still unresolved. A banking union might help, but is no substitute for further consolidation and additional capital buffers in the financial sector. One of the key lessons from Japan's crisis is that governments, central banks, financial institutions as well as other firms have to do their homework in order to restore confidence and lay the foundation for economic growth. Procrastination by policymakers in Japan, particularly as far as recapitalizing, regulating and consolidating financial institutions is concerned, led to an unnecessary extension of the crisis and eventually resulted in a lost decade. Furthermore, fiscal policy has seen repeated strategy changes between fiscal stimulus and shy attempts of fiscal adjustment as government debt eventually spiraled out of control. Europe in contrast is particularly focused on budget consolidation, while reforms and stability of the financial sector as well as private sector deleveraging have received far less attention. Without fundamental structural reforms, Europe risks following Japan's dangerous path towards a lost decade and permanent crisis intervention. Considering that a disproportionate share of the costs of the crisis have fallen on the young in both Europe and Japan, these are indeed bleak prospects for Europe's future. The results of the analysis are summarized in the following six suppositions.

Supposition #1: Like Japan in the 1990s, several European countries are in a balance sheet recession, resulting in economic struggles for an extended period of time. While the United States seems to have overcome the worst of the crisis, Europe's problems are much more severe. Financial, sovereign debt, economic and political crisis coincide. Disagreements about the diagnosis and the cure of these multiple crises lead to a further erosion of investor and consumer confidence. If history and Japan are any guideline, deleveraging will take many years, potentially resulting in a "lost decade" before debt or unemployment levels reach pre-crisis levels again. Recent statements by various politicians that the crisis in Europe is already over appear premature and unfounded. Despite decreases in government bond yields in recent months, Europe's structural problems remain and the ECB's actions and strategy are no cause for complacency.

Supposition #2: Monetary policy has mitigated some of the costs of the crisis, but prolonged quantitative easing is associated with high risks of its own. Low interest rates and unlimited liquidity helped to stabilize the financial sector and to facilitate fiscal consolidation. But expansionary monetary policy also suffers from decreasing marginal returns, be-

coming increasingly ineffective. Timely exit strategies are therefore essential. Extended quantitative easing will result in moral hazard behavior, postponing fiscal consolidation and structural reforms in the financial sector. Vast increases in money supply are likely to result in high inflation, asset price bubbles, financial repression or even currency wars. They also tend to lead to an erosion of central bank independence. Retaliatory measures by affected countries include capital controls or new trade barriers (protectionism).

Supposition #3: Reducing public deficits and debt is essential to overcome the crisis. In countries with massive debt overhang, an ordered sovereign default might be inevitable and better suited than prolonged austerity. While the extent and pace of fiscal adjustment depends upon country specific circumstances and financial market pressure, most industrialized countries will have to reduce deficits further in the foreseeable future. Although the United States and Japan are currently able to borrow at very low interest rates, fiscal profligacy cannot be sustained forever. Because Euro area countries are unable to devalue and their most important trading partners are adjusting at the same time, budget consolidation negatively affects growth. On the other hand, if debt ridden countries refuse to adjust or postpone necessary measures, financial market pressure will increase, raising interest rates, negatively affecting growth and budget deficits. Unlike Japan in the 1990s, Europe is thus not only facing a liquidity trap, but also a debt trap. An ordered sovereign default might thus be necessary to reach fiscal sustainability, particularly if an exit from the Euro area is not possible due to political reasons or because economic costs associated with it are considered to be too high to be risked. At least for Greece, a second default seems inevitable and should include write-offs by the IMF, the European Central Bank and European countries.

Supposition #4: Without stability in the financial sector, a sustained economic recovery is illusory. Japan's problems in the 1990s showed that after a financial crisis, structural reforms and stability in the financial sector are essential for economic recovery. Japan waited too long to consolidate and recapitalize its financial institutions and was thrown back further after the 1997/98 Asian crisis and the following recession. Spain appeared to follow a similar strategy, merging ailing banks instead of breaking them up into "good" and "bad" banks and dissolving the latter over time and downplaying the need for write-offs and recapitalization. Ireland on the other hand created a "bad bank" as early as in 2009, but overextended itself by proclaiming unlimited guarantees to financial institutions. The establishment of a European banking union and deposit insurance might be advisable, but not enough for stability in the financial sector as long as the sovereign debt crisis persists.

Supposition #5: Economic growth is essential to overcome the crisis, but likely to be low for many years to come. Without economic growth, fiscal consolidation and deleveraging in the private sector will become increasingly challenging. However, debt overhang in both the private and public sector will work as a drag on growth. Tighter banking regulation will result in lower profit margins and lower lending. Simultaneous adjustments in multiple countries make a recovery more difficult. Although structural reforms have been implemented, a lack of competitiveness continues to be an issue as EMU countries are not able to devalue their currency. Population ageing results in increased costs for pensions and health care, putting further pressure on public finances and growth as the “demographic dividend” is slowly turning into a “demographic liability”. Average annual GDP growth per capita has been declining in Europe every decade since the 1960s – despite a rapid increase in government, corporate and household borrowing (table 5). From today’s point of view, the high growth rates in Greece, Ireland and Spain before the crisis were not sustainable, making balance sheet adjustments necessary.

Table 5: Average annual real GDP growth per capita in percent

	France	Germany	Greece	Ireland	Italy	Japan	Portugal	Spain	United Kingdom	USA	EU-12	Europe	World
1961-70	4,4	3,5	7,7	3,8	5,1	9,3	6,4	7,5	2,2	2,9	3,7	4,0	3,0
1971-80	2,6	2,7	3,1	3,2	3,1	3,3	3,9	3,8	1,8	2,1	2,5	2,6	1,9
1981-90	1,8	1,2	1,1	3,3	2,2	3,4	3,0	2,7	2,4	2,2	1,8	1,9	1,3
1991-00	1,5	1,7	1,9	6,2	1,4	1,0	2,5	2,6	2,2	2,1	1,8	1,9	1,6
2001-08	1,1	1,2	3,8	3,3	0,7	1,2	0,6	2,9	1,9	1,1	1,3	1,5	2,9

Source: Maddison (2010). Historical Statistics of the World Economy: 1– 2008 AD.

Supposition #6: The depth and the costs of the economic crisis have also led to a crisis of government and confidence. Extended democratic rights should be considered. More pronounced than in Japan in the 1990s or in the United States during the Great Recession, the multiple crises in Europe have led to social unrest and discontent about the government’s inability to cope with a crisis that unlike natural disasters was completely self-inflicted. Lack of democratic participation in decision making, lack of accountability, multiple offences against institutional rules and contracts as well as corruption have led to furious and disenchanted citizens. Overstrained governments are also a result of exaggerated expectations about their capability to deal with complex challenges (demographic ageing, environmental problems and climate change, migration, terrorism, poverty alleviation to name a few). Extended democratic rights (i.e. the ability to vote on political issues) may help to restore confidence and political stability. Repeated emergency measures by central banks, the European Commission or technocratic and unelected government officials cause the opposite.

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