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Debt and Growth Crises in Ageing Societies: Japan and Italy

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Abstract

Increasing public debt and frustratingly low growth in Japan and Italy have a common root: an ineffective response to the challenges of demographic ageing and globalization. Both countries do not have large governments living beyond their means but have been running deficits to stabilize their economies while income generation shifted from young to old and demand shifted from industrial manufacturing to services. Essentially, slow-rolling debt crises in mature economies are growth crises that require proactive policies to shift the equilibrium from preserving wealth and vested interests to renewed income generation and innovation. This report follows the reactions of ageing corporations, households, and governments while adjusting to the "new normal" of slow growth, and takes a rather sober look at the options for overcoming current deadlocks and reigniting growth.

Keywords:

Structural Reform, Debt Crisis, Ageing Society, New Normal Growth, Growth Policy, Lost Decades

高齢化社会における債務危機と成長危機：日本とイタリア

マルティン・シュルツ、2015 年 4 月

要旨

日本とイタリアにおける増え続ける公的債務ともどかしい低成長は、共通の原因を持っている。つまり、人口の高齢化とグローバリゼーションという課題に対して、効果的な対応ができていないことだ。これら二国は、身分不相応に大きな政府を持っているわけではないが、収支は赤字で経済は安定している一方で、所得創出は若年層から高齢者層へ移っており、需要も工業生産からサービスへと移行している。本質的には、成熟経済においてゆるやかに進む債務危機は成長危機であり、富や既得権利を守ることから新たな所得創出とイノベーションへと均衡を移行させる先行型の政策が必要となる。このレポートでは、低成長という「ニューノーマル」に対応しながら、高齢化する企業、家計、政府の対応を整理し、現在の手詰まり状態を克服して成長エンジンに再点火するためのオプションについて慎重に検討する。

キーワード：

構造改革、債務危機、高齢化社会、ニューノーマル成長、成長戦略、失われた 10 年

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INTRODUCTION

Amidst a slowdown of growth and exploding public debt in mature economies around the globe, it is worthwhile to look for common roots in some of the issues that are haunting a number of OECD countries today. Japan and Italy are perhaps the two most interesting cases. Until the 1980s, both countries had been forerunners in economic growth in Europe and Asia for almost 30 years. This changed when an "Italian disease," linked to exploding pension costs, public debt, inflation, and devaluation, turned the Italian economy into an increasingly worrying case of political and economic deadlock. One decade later, a "Japanese disease" took root in Japan after a financial crisis in the early 1990s and infected the economy with exploding public debt, crippling deflation, and decreasing competitiveness.

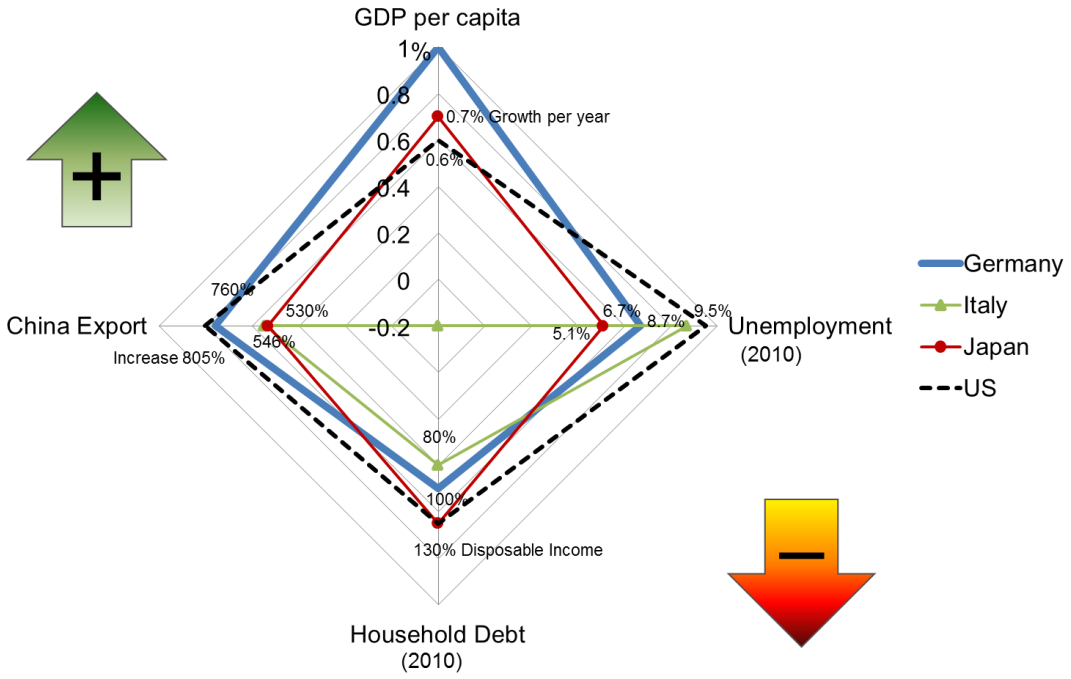
While much of the blame in both countries has been put on governments' inability to counter these issues with effective reforms, Japan's extreme experience of changing fortunes from boom to lasting bust has shed some additional light on a root common to both countries' unfolding debt crises: demographics and ageing societies seem to have played an important role. Japan had turned from being one of the youngest industrial economies to the being the oldest in just 20 years. Between 1994 and 2013, the group of 65+ years old had doubled to 43% of the working age population. In Italy many of the same forces have been at work earlier, albeit in a more slow-rolling manner: a rapid ageing and deindustrialization of society coupled with governments that tried to "lean against the wind" of such structural change by filling the gaps of slowing demand, corporate defaults, changing labor markets, and the looming retirement of a wave of baby boomers.

Although both Italy and Japan are today often seen as basket cases in terms of economic growth, both governments can claim some success in terms of stabilizing the economy on objectives that might be particularly important in their respective ageing societies: Italy managed to accumulate one of the highest levels of private assets in the world (872% net wealth to disposable income vs. 526% in the US), but was also able to preserve a high level of manufacturing output at small family-owned firms, which are the backbone of the economy. Japan managed to keep employment at very high levels (unemployment never exceeded 6%) and kept government consumption among the lowest in the OECD while weathering the greatest ageing-related drop in domestic demand of any economy.

However, there was a high price to pay. Costs and regulation are now haunting the economies, governments are trapped in managing their debt (service costs), and the economies remain burdened by uncompetitive industries and frustratingly low growth, profits, and (real) interest rates on household savings. Future-oriented, but costly policies that would increase the long-term potential of the countries by improving public education (especially universities), health-sector reform that allows for innovative services, and corporate governance improvements for faster internationalization have been on the backburner.

The positive and negative consequences of such policies are shown in the macro indicators below. Over the last decade, Japan has still been growing strongly when adjusting economic growth rates for population growth. While Japan was growing just 1% between 2000 and 2010 in real terms, significantly slower than the US at 1.6% and Germany at 1.2%, this relation changes for GDP per capita growth: Japan was growing 0.8% per year, a little faster than the US and only slightly slower than Germany (1.1%). In terms of per capita of working population, Japan was even growing faster than Germany, and, at 1.5%, almost twice as fast as the US, where immigration added strongly to working age population. But most of this strong performance has been achieved by an unsustainable expansion of public debt and finance. Italy, on the other hand, is already one decade ahead of Japan in terms of debt retrenchment, and was not growing at all during this period, which kept unemployment at high levels. Italy's household debt, on the other hand, is at the lowest level amongst its peer group. Finally, in terms of future oriented potential, both countries have been performing comparatively poorly on exports to China, the world's biggest emerging market.

Figure 1: Economic Performance Comparison 2000-2010



Note: GDP average annual growth rate; exports to China as percent increase 2000-10 in USD terms.

Source: © FRI 2012. Data: World Bank, IMF, Economist (2011.02.03).

Today, it even seems to be difficult to discuss and build future-oriented policies in both countries because the costs of the past weigh so heavily, and resignation about policy deadlocks has become ingrained. As Jean-Claude Juncker quipped so famously: "We all

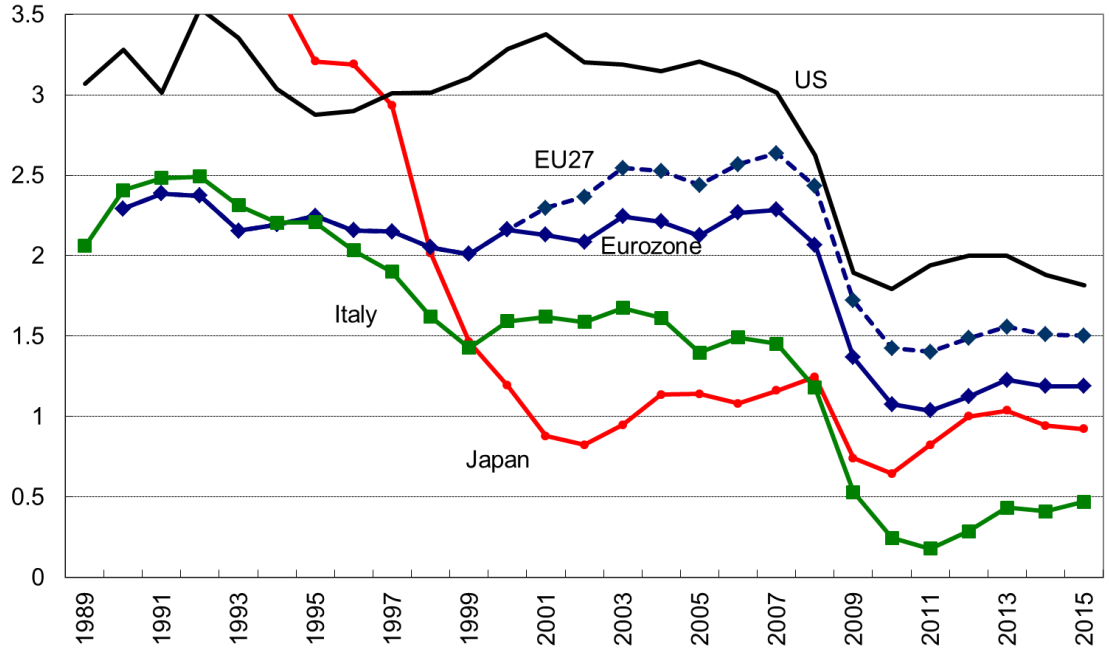
know what to do, we just don't know how to get re-elected after we've done it." In both countries, nobody seems to know how to break deadlocks with vested interest groups in order to get growth policies started. In Japan, a "come back" Prime Minister, Shinzo Abe, currently hopes to prove this resignation wrong, which has created an enormous interest and even a new term for kick starting growth in an ageing economy: "Abenomics." But the policies recopies remain very conventional: printing money for the government to spend, and hoping that the spending spree can be used to coerce powerful interest groups in agriculture, construction, energy, and health care into productivity oriented structural reforms and deregulations. It remains to be seen how many reforms will actually implemented under Abe, or if Japan will instead simply add inflation to the catalogue of its policy problems through the economic policies announced by the Japanese government since it took office in December 2012.

Rather than comparing economic structures and policies in Japan and Italy, this chapter will therefore focus on analyzing more long-term ageing-related structural shifts and how they have been affecting government policies, growth and debt accumulation. This is aimed at contributing to a better understanding of the challenges of economic policy in ageing societies, and perhaps even to more sustainable "age conscious" growth policies.

1. Slowing Growth and Increasing Debt

The slowdown of growth in Italy and Japan has been rightfully blamed on a political inability to implement a broad range of structural reforms in labor markets, governance, and social security and taxes. But it certainly were not only wrong policy choices that turned the former leaders of economic growth into laggards. The slowdown of growth came first, and policy reactions that did not contribute enough to an economic "turn-around" came later. While the steep increase of public debt in Italy seemed puzzling at the time, Japan's much more extreme experience from the 1990s has now put the spotlight on a common factor in the slow-downs and political gridlocks in these "mature" economies. When demographic ageing turns a "demographic dividend" into a deficit, it is not just the ballooning costs of extensive social security that slows down the economies. Structural problems run much deeper. Demand shifts from (comparatively) high-productivity manufacturing production to highly regulated services such as health and finance. With fewer young people, overall demand slows and fewer employees and entrepreneurs "invest" themselves into companies at low wages for future (career) payouts. Risk capital starts to flow from corporations to government bonds and (relatively) unproductive real estate. Government policies shift from building up productive education and infrastructure to supporting declining industries and filling gaps in underfunded social security nets.

Figure 2: Slowdown of Potential Growth Rates in Mature Economies



Note: 10-year moving averages roughly correspond with long-run potential output growth. Pre-Crisis data are from IMF-WEO 2008.04, post-crisis data from IMF-WEO 2013.01.
Source: © FRI 2013. Data from IMF WEO.

Historically, the slowdown of potential growth rates in Italy and Japan during the 1990s were following other "shocks" such as increasing exchange rates after the end of the Bretton Woods system in the early 1970s and the following oil crises. But these factors weighing on the economies were mostly seen as "exogenous." The 1990s "stagnation" in Japan, on the other hand, was due to "domestic" causes. It followed a bursting real estate bubble in 1991, which turned into a banking crisis that lasted for a full decade, until potential growth rates stabilized at only 1% GDP. In Italy, which was still growing stronger than its European peers during the 80s, the growth crisis evolved in the aftermath of a real estate bubble (as in Japan and much of Northern Europe) and a European currency crisis. That, however, came less as a surprise than in Japan as public debt had been built up before and now had to be "cut." Potential growth therefore fell significantly, but less than in Japan and still within reach of its European peers. As we know today, growth in both countries never recovered to long-term EU levels of just above 2% or US levels of above 3% (which include almost 1% growth contribution from immigration).

The explanation of what happened is much easier for Italy, which went into its 1990s crisis with (at the time) extreme levels of government debt above 100% in net terms. This debt had been built up during the 1980s, when the government tried to stabilize growth, employment, and pensions that had suffered after the first structural slowdown during the 1970s. While political pressure to reduce deficits had been building along with those deficits and increasing debt service costs, the European currency crisis

became a decisive watershed because Italy was threatened to leave the European Monetary System (as Britain did). In 1992 and 1995 the Cabinet Office and the Treasury implemented reform packages to cut pension benefits (Alesina, Danninger, Rostagno 2001), in particular those for self-employed and public employees. As a result, Italy faced budget cuts and a slowdown of private demand when other European governments could buffer their economies with public spending when the market reforms for the run-up to the Euro threatened to slow growth during the 1990s.

While Italy's public debt exploded within just over a decade between 1982 and 1994, when net public debt increased from 50% of GDP to 110% (see Figure 2), the root of the problem had been evolving from the 1960s. At the time, strong growth and benign demographics resulted in a major expansion of the pension system, mostly driven by unfunded (pay-as-you-go) claims that became unsustainable when birthrates began to fall faster than growth rates in the 1970s. In the inflationary environment of the 1970s, when increasing costs and slowing growth seemed to be driven by external threats (exchange rates, oil prices) and not internal imbalances, the use of government debt to make up for "demand gaps" ran into little resistance.

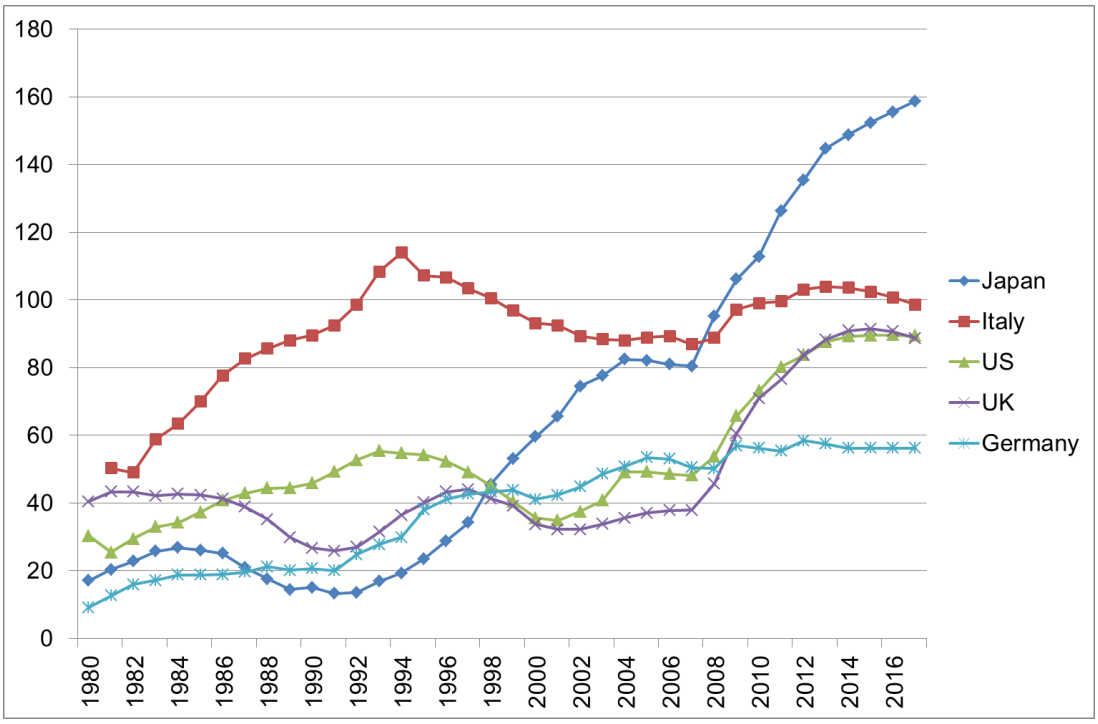
Furthermore, deficit spending seemed reasonable at the time because the government kept overall government consumption and the expansion of the "welfare state" at levels well below its European peers. Debt was increasing not in order to finance the government, but to buffer structural changes that were affecting Italy's traditional industries, in particular ageing SMEs and their owners. By funding pension contributions the government not only helped stabilize manufacturing employment in tough competition with a growing Asia, but it also offered a benign way of "retirement" for companies that felt too old for significant changes in their business models and had lost hope of staying ahead of the competition (see Figure 7 for the remarkable stabilization of manufacturing employment).

It therefore came as a rough awaking when spiking real interest rates in the middle of the 80s demonstrated how high the real costs of Italy's debt had actually become. As will be discussed below (see Figure 11) government debt had to be decreased while capital and labor costs were increasing rapidly (see Figure 6). Still, against all odds, the government managed to reduce overall debt levels below 90% net debt to GDP. But lower government deficits did not result in stronger growth, even when capital costs fell to very low levels after Italy joined the Eurozone and gained from growing capital inflows. Italy has therefore been particularly vulnerable to the global financial crisis 2008, which pushed debt levels up again. Today, Italy is among the countries that show how much unsustainable public debt levels can depress economic growth in the long run (Reinhard and Rogoff 2009, 2010; IMF 2012).

Japan's initial crisis and the following fall of potential growth rates were much more extreme than developments in Italy. Within one decade of Japan's (real estate) bubble bursting in 1991, growth rates fell from above 4% per year during the 1980s to levels of around 1% after 2001. And, unlike in Italy, this drop did not coincide with restrictive government policies that had to tackle an existing public debt overhang. Japan's "lost decade" evolved despite extremely expansionary fiscal and arguably monetary policies. In Japan, the economy had run into crisis with net public debt levels of just slightly

above 10% of GDP and a (still) very low social security cost burden. This benign situation changed very fast, however. Gross public debt skyrocketed from 66% of GDP in 1991 to 235% in 2012 – an astonishing growth of 8% per year for 20 years.[1]

Figure 3: Public Net-Debt as Percent of GDP



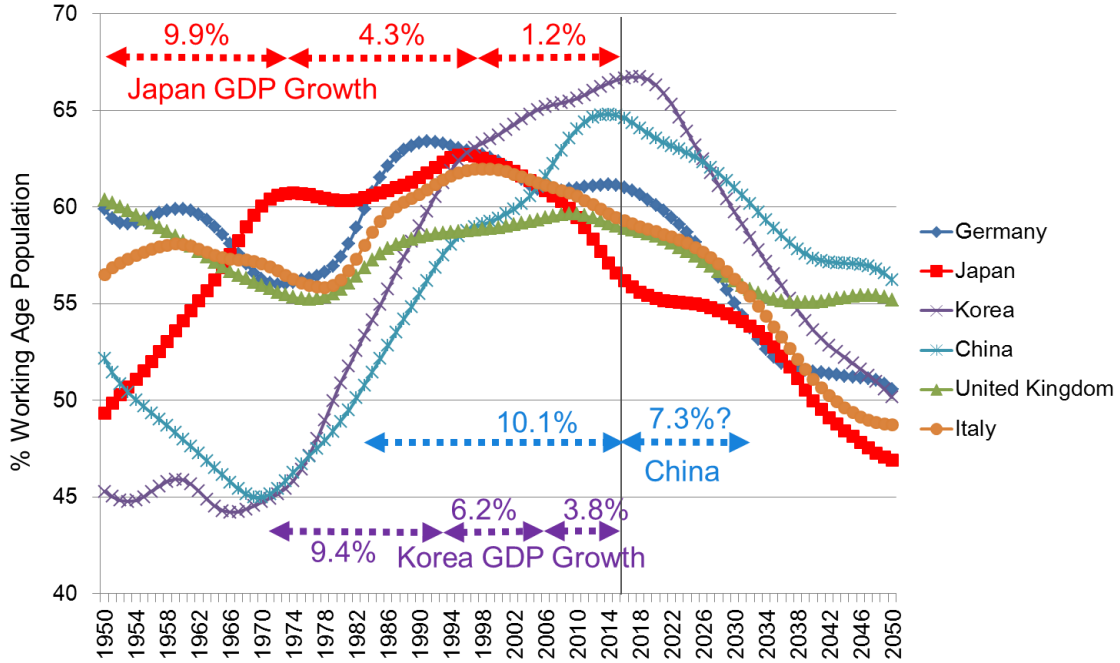
Note: Comparison on USD basis.
Source: © FRI 2013. Data: IMF (2013).

Within a decade, and almost exactly a decade after Italy, Japan had gone from being an "Asian economy" with a small government, little public debt, and high levels of private savings and investment, to being a "European economy" with slow growth, increasing social security transfers, and ever growing public debt. By the late 1990s, it had surpassed the debt levels of its European peers, and by 2007 it had caught up with Italy's debt levels. After the global crisis it went into overdrive and accumulated the highest debt levels of any major country. Today, net debt in Japan is in uncharted territory beyond 120% GDP (235% in gross terms), with prospects of a slowdown of debt accumulation only likely after 2016, when social security contributions will be indexed to economic growth and the value added tax has been increased from 5% to 10%.

[1] These public debt data are quoted as gross debt to GDP ratios, as is common internationally. Due to the nature of Japan's complicated public investment programs and multitude of government agencies, the following graph and the comparisons below will be expressed in "net" debt terms, i.e. excluding intra-government credit, which is particularly large in Japan, as well as counterbalancing government assets.

What went wrong in Japan? Over the last twenty years, explanations of Japan's troubles have shifted from the consequences of a burst financial bubble to insufficient policy reactions, and finally to a factor distinctive for Japan and largely ignored by economists before: the rapid progression of demographic ageing and its impact on long term growth even at the per capita level. Unlike Italy and much of Europe, where a slow progression of demographic ageing might have added to political and economic "sclerosis" with deteriorating growth and increasing debt levels, Japan passed the benchmarks of a "young" economy with 7% pension age population to an "old" economy with 14% beyond pension age in just 24 years.

Figure 4: Share of Working Age Population and Growth Rates in Asia



Note: Aggregates based on 2000 prices.

Source: © FRI 2012. Data: UN, National Accounts; SNA93.

Figure 3 shows Japan's extreme demographic development in comparison with those of other Asian countries as well as Germany and Italy. A young population strongly contributed to economic growth in the 1960s, not just by working and consuming, as Europe's high share of working age population had done already during the 1950s, but by saving money and investing themselves in a "life-time" employment concept with initially low wages. An increase of 10 percentage points in the working population held enormous potential under such conditions. Investment rates shot up beyond 30% of GDP, allowing new capital and technology to be adopted. Surplus production turned into exports, connecting the economy to international markets and opening sectors to competition and productivity gains. Young employees accepted low wages while investing their time and skills towards future income. Taxes were flowing into

productive infrastructure development. In short, Japan became the forerunner of Asian input-driven "miracle" economies.

Increasing exchange rates and the oil crisis of the early 1970s interrupted this growth story for the first time. "The collapse of the post-war growth model, built on increasing domestic inputs of labor and capital while exporting a growing share of final products, coincided with a slowdown in demographic growth, which pulled demand down even further. Japan's economy was overshooting its potential, wages exploded, a first housing bubble evolved, and strong inflation followed. Growth rates halved after this. The impact on Italy, where demographics had turned negative already, was a recession and a significant slowdown of potential growth. Fortunately, however, demographics turned positive again for Japan and Europe during the 1980s because a generation of "echo boomers," the children of the post-war baby boomers, entered the working population. Potential growth rates recovered to above 4% in Japan during this period, and growth in Italy accelerated beyond its UK and French peers.

The seeds of a more lasting recession and slowdown during the 1990s had already been planted, however. As will be shown below, corporations and households significantly shifted their strategies and behavior. Without significant changes in government policy, corporate strategies, household entitlements, demand and investment opportunities were not holding up with potential growth resulting in two very different but equally challenging structural changes. In Italy, where investment rates were falling almost as fast as in Japan, unemployment shot up and the government started to fill the demand gap by increasing the public deficit. In Japan, companies and households in their "prime" started to invest again, but this time not in increasingly scarce productive opportunities, but in real estate and overseas "trophy" assets. The result was a bubble that, when it burst, replicated the Italian demand vacuum and its counterbalancing policy reaction at an even grander scale.

2. Debt crises in mature country are growth crises that require new solutions

The slow-rolling sovereign debt crises in Italy and Japan are growth crises at heart, and demographic ageing played an important role. When growth slowed and economic structures changed, governments tried to "buffer" structural changes by boosting their expenditures, especially for social security, and by maintaining tight control over labor markets. Furthermore, the governments extended financial support to corporations and regions that had economically fallen behind. These have always been important government policies in "young" economies, where structural change can overwhelm agents (regional governments, corporations, and households) while the potentially negative effects on productivity growth and public deficits can be balanced by (more) stable future growth. The problem for ageing societies is that such policies remain among the preferred tools of governments, although losses in productivity cannot be recovered anymore without reducing future growth.

In ageing societies, “leaning against the wind” of structural change becomes even more tempting for governments because ageing households and corporations have become more conservative. They have become more interested in stability and weigh the risks of changes more carefully because it has become more difficult for them to recover when fortune turns against them. A disruptive growth crisis that results in the adjustment of claims, incomes, and opportunities has become less acceptable. But with lower growth and diminished expectations, the already accumulated level of existing debt and pension system claims quickly become unsustainable. More innovation and competition, the main pillars of effective “growth” policies, would have to fill the widening gap between potential and expectations, even in an age of diminished expectations.

Unfortunately, without pushing out “the old” it becomes increasingly difficult to bring in “the new” (Schumpeter). This produces a very challenging situation for governments: they face increasing demand for stability from their constituencies on a “microeconomic” level, while ensuring such stability on a “macroeconomic” level requires promoting productivity and change, with potentially less stability on the “microeconomic” or individual level. One solution of this dilemma is to encourage exports and globalization of existing products and technologies. Unlike Japan and Italy, Germany has successfully taken that road. However, while emerging countries naturally go this way when narrow domestic markets limit the growth of new and cheap products, ageing economies and producers find this route more challenging. While learning “new tricks” has become naturally more challenging for them, they also need to sell mature and expensive products into young and emerging countries. Governments would not only have to passively support such exports with free trade agreements, but to actively encourage such globalization by closely integrating their economies in internationalization (as Germany and Italy did in the EU).

At the same time, ageing economies are also facing the increasingly "vested" interests of established networks and deeply ingrained "rules of the game" that might not fit the new environment anymore. In Italy and Japan, this can clearly be seen when contrasting their governance models during their high growth periods with their current regimes. Then and now, while both countries relied on a strong bureaucracy and heavy-handed regulation, this was initially counterbalanced by young and dynamic markets where the private “rules of the game” counted more than government restrictions. This has changed today. While it is certainly very important that both countries have convincingly established the rule of law and won their battles against the mafia in Italy and the yakuza in Japan and corruption, they still need to find new ways to instill dynamism. In the “World Competitiveness Yearbook”, for example, Japan, the former No. 1 country in its manufacturing heyday, has fallen on overall “performance” from place 22 in 2008 to 27 in 2012. Italy, after major restructuring and internationalization within the EU, has improved from place to 46 to 40, but this is still frustratingly close to the bottom of the list.

Furthermore, in ageing societies interests naturally shift from the search for new markets and products towards the sophistication of existing products and methods. In Italy, this resulted in comparatively stable market shares for a large group of SMEs with sophisticated brand name products in traditional manufacturing; in Japan, it

resulted in a strong drive towards high-tech and highly complex products. Both strategies, however, require increasing internationalization because competition in traditional industries increases with new entrants from emerging markets, and the high capital costs of high-tech require global sales to return a profit. Nevertheless, in Italy and Japan internationalization is still at low levels, which results in falling profits from cut-throat price competition or even deflation, as in Japan.

Real innovation (in contrast to sophistication) is often pushed to the sidelines during such times. This is not only due to a lack of new ideas or "innovation" in an older society, it is also a simple result of a slowdown of investment into new technologies compared to the maintenance needs of an existing stock of capital. While young societies invest naturally into their potentials, companies and careers, old societies focus on securing wealth, maintenance of existing capital stock, and established markets. This becomes especially problematic for the opportunities of the young generation. While looking for opportunities and careers, they are expected to provide ever-faster productivity growth in order to serve growing public debt and pension claims. However, younger entrepreneurs, at the same time, get marginalized in terms of access to capital and growth markets, while younger employees face tight labor markets with job opportunities mostly in "irregular" services jobs and highly regulated markets (such as health care) with limited prospects for careers and income growth.

While traditional markets are slowing down, the importance of the government and of markets that have been traditionally government-controlled are increasing. Demand is shifting from manufacturing products to services, in particular health care, finance (banking and insurance), retail, and community services. Turning these "new" growth markets into dynamic markets that provide productive careers for the younger generation is a challenge for any government. Italy, for example, developed one of the world's most successful tourism industries, but careers remained mostly local and productivity gains limited because few major hotel chains, agencies and global service provider evolved. This is in strong contrast to the very successful fashion industry, which turned global early on and had been a success in the US already from the 1950s. In finance, Japan's experiments with financial deregulation failed already during the 1980s and have resulted in another wave of heavy regulation over the last decade. In Italy, the global financial crisis is currently having the same effect. In health care the sector with the strongest growth potential - government regulation remain rigid and often suffocating in both countries.

Solving the growth problems of ageing economies requires an extremely disciplined and, in many ways, new government policies. Demand for traditional product manufacturing has shifted overseas, which requires a heavy wave of internationalization and a comprehensive approach to global market development, especially for SMEs. The domestic demand of an ageing population has shifted to more government services and towards high quality and safety standards, which requires a major productive boost in the government sector and significant deregulation in a sector with deeply vested interests.

These shifts in demand require very different government strategies than governments were used to employ during times of stronger growth in younger economies.

Governments have learned, for example, to support product-oriented R&D and technology development in manufacturing to boost productivity while throwing financial lifelines to companies that cannot catch-up. But companies in ageing economies would now need at least as much support to develop process innovations in new services and to internationalize their management and R&D to conquer new markets for traditional products. Instead of hoping for productivity boosts from high-tech and product innovation ("killer applications") that could be developed in government supported laboratories, there is now greater potential for productivity gains to spring from process-oriented innovation in services—from retail to health care—that so far have been left behind.

To complicate policies further, such structural changes do not seem to evolve "automatically" through deregulation, as they do in young societies. This is because, as long as ageing markets keep shrinking and the "entry" of young firms is not followed by the "exit" of old firms, competition from "old" firms will focus more on undercutting prices of new entrants instead of competing on innovation. This is possible because the large capital basis of incumbent firms needs to shrink to the new conditions while it is providing a solid basis for the internal financing of "cost cutting" for very long periods (see below). Necessary innovation for new products and services almost becomes an afterthought in such a deflationary process. Successful industry and competition policy would therefore not only require "picking losers" to a certain degree, but also support for new firms that try to enter the relatively closed markets.

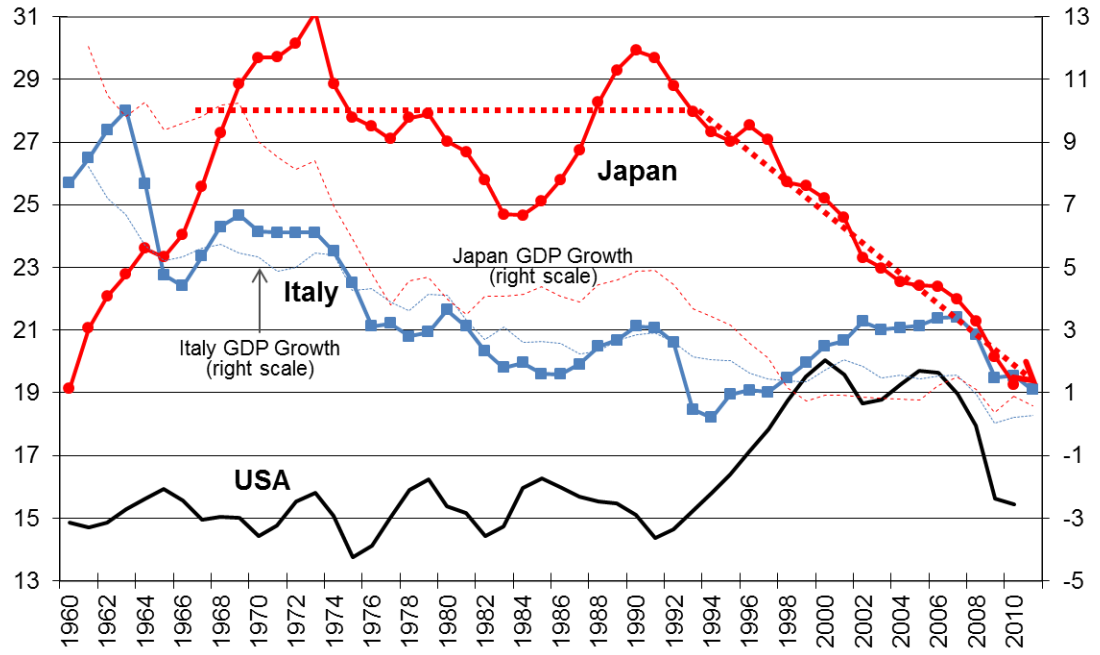
One part of the solution is to expand shrinking domestic markets by venturing into (emerging) overseas markets, which requires exports and the globalization of traditional manufacturing—no small feat in an ageing society. The other, and certainly at least as important, part is active support of productive growth and innovation in the highly regulated service sectors. Japan and Italy are lagging behind on both accounts, which explains why they have failed to deal with the challenges of their ageing societies in a more sustainable way. Japan might come out of a two-decade phase of cost-cutting and deflation soon, but it still faces enormous challenges in terms of internationalization and pushing productivity in domestic services. Italy, on the other hand, is already ahead in productivity development and international opportunities in integrating EU markets, but now faces a very frustrating phase of cost-cutting and (at least relative) deflation that Japan has been going through over the last decade.

3. Ageing corporations: from investment to cost-cutting

An often overlooked, but nevertheless strong impact of demography is that on corporate investment. During Italy's rapid growth phase, a combination of a young population and strong domestic migration from southern to northern parts of the country made the reconstruction of northern industry possible and contributed strongly to growth with almost "Asian" investment rates of up to 30%. In Japan, the effect was even more extreme. The youngest population of any industrialized country was entering the labor

force during the 60s. The combination of low wages and high saving rates (due to a lack of social security) provided an enormous boost to corporate investment, which shot up to rates beyond 30% of GDP, and pulled economic growth rates well beyond 10% of GDP. In Italy, the end of this demographic boom had already occurred in the 1960s, however, which brought growth rates down to a more "normal" 5%. In Japan the boom lasted into the early 1970s, when its end coincided with the jump in the exchange rate and oil prices after the end of the Bretton Woods system. The result was that investors could no longer find matching numbers of lucrative investment opportunities, and investment was "overshooting", producing a supply glut and inflation, but not the required growth rates.

Figure 5: Investment rates (% GDP) and economic growth



Note: Ratio of Gross Fixed Capital Formation over GDP in year 2000 prices. The dotted line is the centered 2-year moving average of the GDP growth rate.

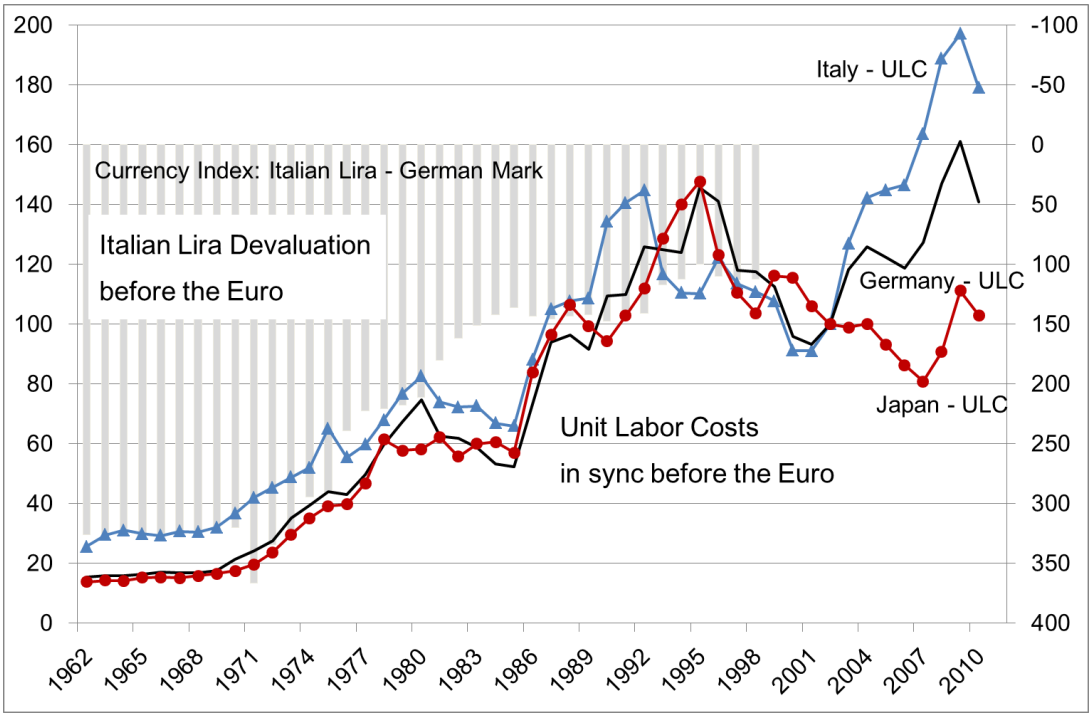
Source: © FRI 2012. Data: World Bank (2012), CEIC 2012.

This investment effect was particularly strong in Japan because the investment rush was deeply anchored in the investment goods industries, which leveraged earlier growth and made the adjustment particularly painful during the 70s. After stabilization during the 80s, the final leg of Japan's demography- and input-driven expansion caused a final investment bubble when Japan's tightly controlled banks were deregulated. Lacking better investment opportunities, capital flowed into real estate, producing the world's most iconic real estate bubble (Hoshi, Kashyap 2004). From then onwards, investment, demand, and growth went downhill fast and stayed there. Back then, demography, slowing demand, cost-cutting in investment, and price adjustment in real assets had all turned against the former poster child of economic growth. Japan

was on its way from being the world's youngest and fastest-growing major economy to becoming the "oldest" and slowest-growing in fast succession.

Italy, after the slowdown of the 1970s, with its further drop in investment rates and the shift in demand from high-value added manufacturing towards initially much less profitable services (not least in the booming tourism industry), experienced a less dramatic slide in growth. But demography had already turned against the economy for more than a decade, and especially the large number of traditional SMEs were "caving in" and tried to protect their declining businesses. When competition from Japan and Asia increased further, the government stepped in to reduce the negative impact. Stabilizing small corporations and protecting self-employed entrepreneurs ranked at the top of the agenda. Interestingly, policy tools were not limited to conventional labor market restrictions to slow the flow of employment out of industry, expansionary monetary policy to stabilize domestic demand, and lowering the exchange rate to improve international competitiveness. Policies also included a strong role for the pension systems to smooth the exit of employees out of the labor market and to keep (current) costs for employers below (agreed) pension benefits. Since such expansionary policies coincided in the 80s with a recovery in demand from a generation of "echo boomers" (the children of the post-war baby boomers), the result was a stabilization of growth rates well beyond comparative levels in France, the UK, and Germany, but also an explosive development of government debt, inflation, and a weak currency.

Figure 6: Unit Labor Costs (2002=100) and Lira-DM Exchange Rate (1995=100)



Note: BLS Unit labor costs for the manufacturing sector on USD basis. Currency index based on IMF Lira currency index minus German Mark currency index.

Source: © FRI 2012. Data from Bloomberg (2012), IMF (2012), BLS (2012).

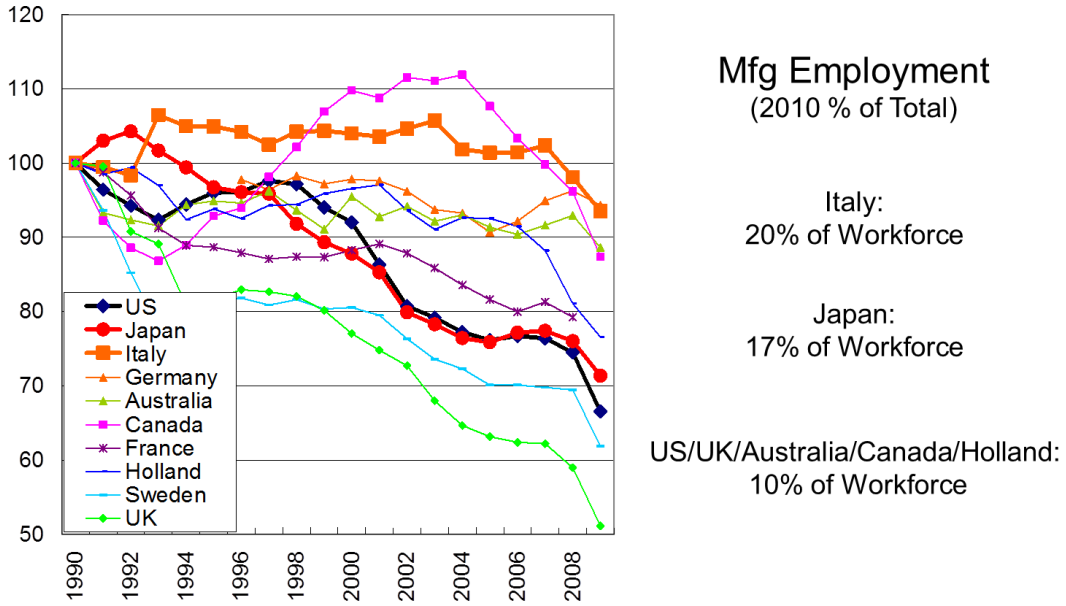
Figure 6 shows how serious the Italian government was about buffering the impact of increasing wages and international competition on small manufacturers. Unit labor costs increased in Italy in the 1970s not much more than in Japan and Germany. But this cost-competitiveness was achieved by continuous devaluation of the Lira (in the figure against the German Mark) and not through market reforms. The result was a stable manufacturing sector while the larger economy was paying the price through higher import prices and a hidden overall loss in competitiveness. After entering the Eurozone, when such policies became impossible, a dramatic increase in labor costs of 100 percentage points relative to Japan is therefore threatening the economy today. A very wave of "cost-cutting," and (relative) deflation will have follow.

In Japan, structural change and investment slowdown had even more severe consequences for the entire economy, albeit at a later stage than in Italy. The first wave of an investment slowdown in the 1970s, which had caused such strong government reactions during the 1980s in Italy, could still be balanced in the private sector in Japan. While companies were slowing down, pent up consumption demand of private households, which had mostly been working and saving during the high growth era, buffered the negative impact. Growth rates therefore stabilized at around 4% in Japan while they continued to fall in Italy, and companies even went on another spending spree, which resulted in an asset bubble, but not much additional growth.

When companies undertook a more lasting cut-back on investment in 1991, the situation had become more critical for Japan than it had been for Italy. Not only was demand falling for investment goods and manufacturing in general, but markets also already showed the first signs of overall shrinking. Companies therefore turned from "investment for growth" to "cost-cutting" in order to get by and to stay profitable in slowing markets - until today. The initial correction of the "over-investment" during Japan's period as a young society in need of infrastructure and capital goods coincided with a strong ageing-related slowdown of household demand and a shift of consumer demand from houses, cars, and TVs in the late 90s to government services and healthcare today.

Companies therefore reduced employment in manufacturing at a rate that matched the "Anglo-Saxon" countries during their shift towards "service economies." Between 1997 and 2010 Japan lost almost 30% of jobs in industry. Today, the share of manufacturing employment has halved to less than 17% of the workforce, and restructuring in particular in the electronics industries remains brutal. In Italy (and Germany too), on the other hand, manufacturing employment has been relatively stable at close to 20% (in Germany 22%).

Figure 7: From Industry to Services – Manufacturing Employment



Note: Index (1990=100) based on employed persons.

Source: © FRI 2010. Data from BLS (2010).

Despite the enormous shift in industry and labor markets, and unlike in Italy, unemployment in Japan never increased beyond 6%. The price for this success, however, has been even higher than it was in Italy: exploding government debt for subsidies and projects for construction, protection of agriculture, and financial support for failing SMEs. The price in terms of stagnating labor productivity gains has been at least as high. An important instrument for keeping employment levels high was the strict regulation of most service industries. In particular, safety regulations in construction, zoning regulations and licenses in retail, and public health services were keeping employment high and productivity low, resulting in a long-term underperformance of the economy.

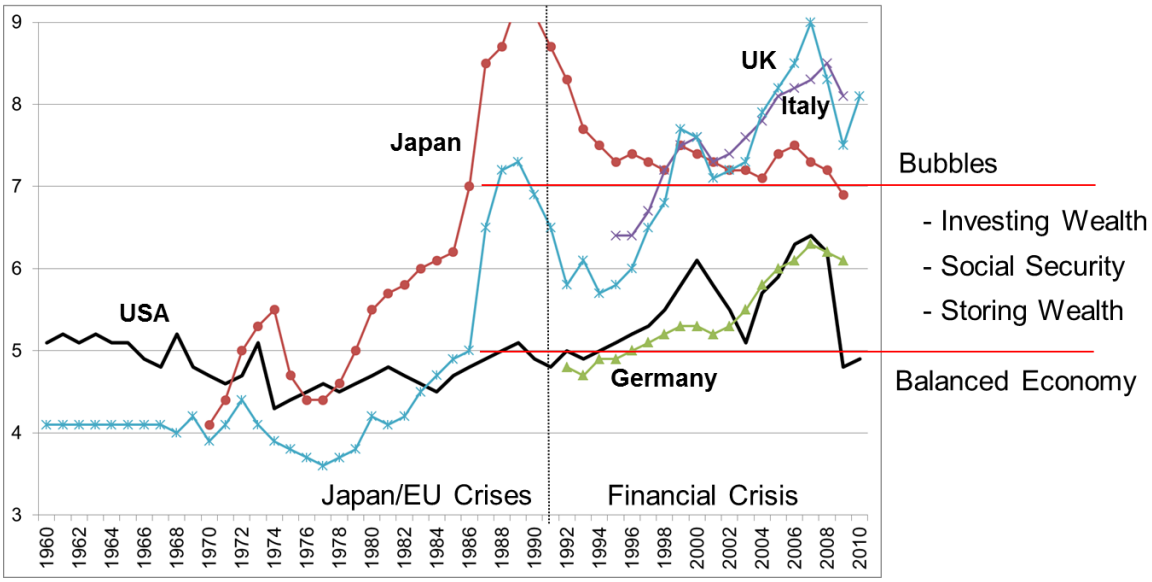
As pointed out above, such (lost) opportunity costs are particularly problematic in an ageing society because continuous improvement in labor productivity is needed to make up for the shortfall in demand and the increasing costs in relatively unproductive (health care) services. Both effects turned out to be particularly problematic in Japan. Almost a whole generation of young employees went into (relatively) unproductive service jobs that provided employment but no careers or income development. About 35% of employees today are non-regular or part-time employees, and over 40% are not contributing to the public pension system anymore, either because they do not earn enough income to do so or because they don't expect any positive return on their contributions. At the same time, while productivity in the large service industries remains depressed, the relatively small (manufacturing) export industry, which produces only about 15% of GDP, usually contributes about half of overall GDP growth. One of the smallest, but highly productive sectors has to make up for the lack of growth

in the otherwise stagnant (service) economy — a truly extreme and certainly unsustainable situation.

4. Ageing households: from income generation to wealth accumulation

While adjustments in the corporate sector to economic and demographic changes had the most visible direct impact on the economy, the adjustment of household income, savings, and wealth accumulation should be included as a cause. When households grow richer and older, objectives shift from income generation and growth to wealth accumulation and safety. The following graph shows this relationship as wealth-income ratios, based on data from the Credit Suisse "Global Wealth Report 2011" (Credit Suisse 2011)

Figure 8: Household Wealth to Income Ratios (Base=1)



Source: © FRI 2012. Data from Credit Suisse (2011) – Global Wealth Report.

The US (as a baseline) surprises with an extremely stable relationship of around a five-to-one ratio of accumulated wealth to income over the last fifty years. The comparatively tame demographics, open markets, and the large real estate market in the US made such exceptional stability in household balances possible, and longer-term deviations occurred only during major policy shifts. During the 1970s, expansionary policy resulted in inflation that added to incomes while reducing household (financial) wealth; this trend was reversed during the 1980s through more restrictive monetary policies. During the 1990s and 2000s, US households experienced two bubbles, first an IT bubble and later a financial/real estate bubble, both of which favored wealth accumulation over income growth. But even these extreme deviations by US standards

have been comparatively mild and trend-reverting in comparison to the other countries in the chart.

Japan is the extreme opposite case. During its high-growth period until the 1970s, Japan started with lower wealth ratios (or higher income growth) than in the US. A housing bubble in the early 1970s soon gave way to inflation that brought the ratio back to US levels. Wealth accumulation mostly followed income generation. But during the 1980s, households started to build up wealth massively while income growth was already slowing. At the end of 1980s, self-enforcing speculation on asset gains pushed wealth balances to an unprecedented peak of 10 times income. When this bubble popped in 1991, wealth–to-income ratios quickly returned to 7:1, where they remain until today. When adding European countries to the picture, it seems likely that this level of 7:1 wealth-to-income might be a "new" baseline for countries with narrower real estate markets and older demographics, which are both incentives for households to "lock" more income into wealth generation. Major outliers in this picture are Germany and the Nordic countries, which put strong emphasis on building up social security systems and providing government (health) services, which reduces the necessity (and ability) to build up private wealth.

We do not have sufficient data for Italy until the mid-1990s, but UK data trends have been moving closely together with Italian household wealth ratios from the 1990s, and might give an approximate idea of Italy's wealth/income ratios of the time. As in Japan, massive wealth destruction during WWII and the following economic boom kept wealth ratios below that of the US, even well into the 1980s in the case of the UK. Also as in Japan, slowing income growth and a real estate bubble in the 80s changed this. The burst of the bubble and the European (currency) crisis of the 90s initially brought household wealth down again, but not as sustainably as in Japan. Households remained committed to accumulating wealth relative to their incomes. The IT bubble boosted household wealth beyond Japan's post-bubble level of around 7 times income, and the combined financial and real estate boom pushed them even higher.

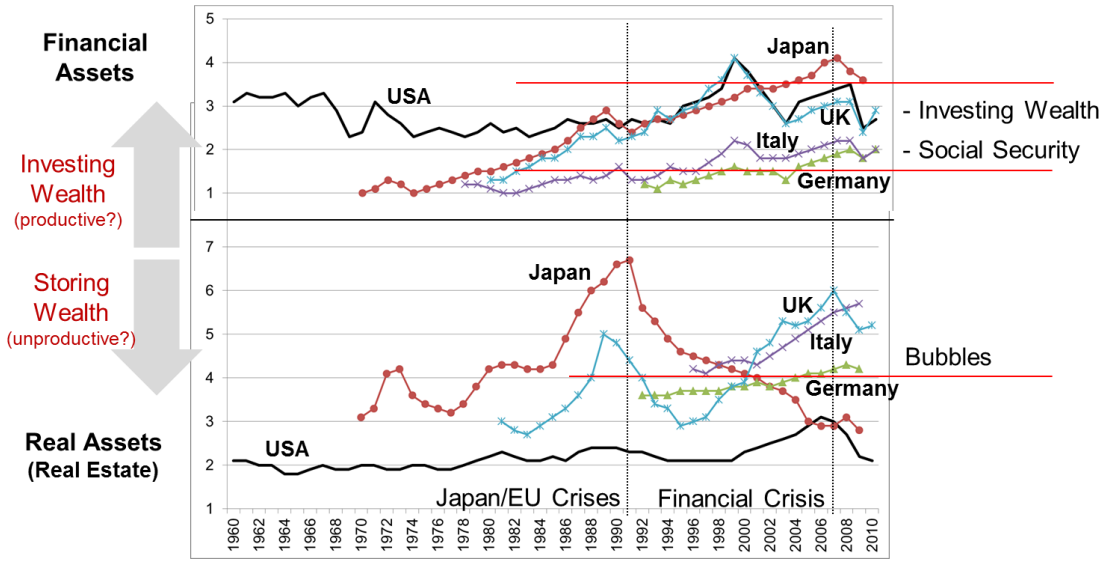
In all these countries, a combination of slowing income growth, narrow markets for real estate as a store of household wealth, and a comparatively small or unreliable role of government in supporting old-age finance led to this massive built-up of wealth. It is too early to define any level of wealth-to-income as an upper ceiling, and it is possible that Italy and other European countries can sustain higher wealth levels than the 7:1 wealth-to-income ratio that Japan has fallen back to. But there are inevitably limits to wealth accumulation relative to income generation. Households basically have a choice between real estate and financial assets for accumulating private wealth. Both have falling rates of return on investment, however. When income generation slows down in ageing societies, wealth accumulation might even increase in relative terms, but it will eventually slow down and start to fall because the demand and return on assets ultimately depends on the incomes of households.

Real estate, the main asset in most households' portfolios, is particularly affected by demographic trends. Middle-aged households buy homes for living and as a "safe" asset. But in ageing societies real estate demand starts to retreat because less space is needed for production and living. Financial assets, the other main asset class, are potentially

more productive and have higher rates of return because the range of possible investments is much wider. In ageing societies, demand for financial assets tends to increase because households shift to more liquid assets and because financial wealth can be invested in fast growing young societies that provide higher rates of return. As can be seen in Japan and Italy, however, financial wealth accumulation also runs into a barrier of diminishing returns because demand and supply of "safe" assets remain concentrated in the slowing domestic market instead of diversifying into "risky" emerging countries. This "home bias" (Feldstein, Horioka 1980) of asset demand becomes more problematic when slowing growth also reduces the supply of financial assets from productive corporations, and the supply of "safe" government bonds fills the gap. While demand for government services and financing increases in ageing societies, a growing role of government in financial markets and asset allocation (investment) will usually reduce the return on assets and, ultimately, household incomes. Such a deterioration of return on assets and income can turn into a vicious cycle, when government debt balances become unsustainable, and increasing taxes for debt service and/or asset devaluation through inflation threaten accumulated household assets at the same time as they undermine income generation.

The following disaggregation of household wealth into the two main household asset classes, real assets (mostly real estate) and financial assets (bonds, cash, private insurance) draws a clearer picture of household positions and reactions while their economies "matured."

Figure 9: Household Wealth-to-Income Ratios (Base=1)



Source: © FRI 2012. Data from Credit Suisse (2011) – Global Wealth Report.

In the US, the balance of real assets to income is amazingly stable and, at a ratio of two to one, also extremely low. The huge US real estate markets kept housing prices low while a constant stream of immigration added to (overall) income generation. The recent real estate bubble has been the sole, and already corrected, exception from this

stable trend. Japan and Europe, with their much smaller real estate markets, started off at wealth levels of around three times income, but saw several cycles of booms and busts from the 1970s. Serious real estate bubbles developed during the 1980s when rich baby boomers invested in housing, financial deregulation increased credit availability, and credit driven corporate demand drove up market prices. In the UK, real asset-to-income ratios shot up from 3:1to 5:1, and in Japan from 4:1 to almost 7:1—an incredible boom for such a broad asset category. By the mid-1990s the bubble in the UK had been corrected, and wealth was back at a baseline three times greater than income. In Japan, not least because of the size of the bubble, government efforts to keep the market from imploding, and significantly falling incomes, the deflationary correction took much longer and was not achieved until 2004. Today, real asset valuations seem to be stuck around three times income, as in the 1960's and 70's.

Unlike Japan, households in Europe soon started to build up their real asset balances after the correction in the 1990s again. By 2000, when the US bubble evolved, real household wealth in the UK, Italy, and Germany was already at around four times income again. From there, serious asset bubbles beyond five times income emerged in the UK and Italy, which are still uncorrected to this day. The explanation for this diverging development needs to be based on a broader set of arguments. In Japan, demography and de facto zero immigration has already turned against the housing market while the government boosted financial wealth to finance its deficits. The fall in real asset prices therefore coincided with significant growth in financial assets. In the UK, rather unbalanced growth around the City of London and limited public pensions increased demand for real assets. In Italy, doubts about the sustainability of public debt, low income growth and low corporate credit demand, as well as relatively low tax collection on real assets led to a boom in this asset category. Germany, finally, has so far avoided a build up in real estate wealth because of a strong emphasis on public social security savings and few urban agglomeration centers.

Financial wealth accumulation evolved much more smoothly, not least because financial assets are much more transparent and easily tradable, so market overheating and bubbles in bond markets are rare events. The US market, again, has been by far the broadest and the most stable. In the US, financial wealth showed some slight trends off three times income during the 1970s and 80s when inflation and disinflation phases had to be absorbed. Only two significant shifts evolved during the 2000 IT bubble and the recent financial bubble. In contrast to the US, financial wealth in other countries first had to be build up during the after war period from very low levels of just 1:1 financial wealth to income. In Japan and the UK, the strong emphasis on private finance of post-retirement life led to strong growth in financial assets well beyond income growth. Both countries had caught up with US levels by the mid-90s, after which trends diverged. UK financial markets and household wealth balances converged with those in the US and trended together, including the two bubbles in the 2000s. In Italy and Germany financial wealth and markets evolved much more slowly because both countries had put strong emphasis on pushing private savings into public pension systems. Japan became an outlier by pushing household financial wealth accumulation into uncharted territory. Although there had been a strong correction in

the stock markets, households continued to invest their savings into public bond markets despite close to zero returns on financial assets.

The similarities between Italy and Japan in private wealth accumulation are as interesting as their differences. In both countries, wealth-to-income ratios peaked above 7:1, in Japan during the bubble in 1990, and in Italy today. As pointed out above, such high wealth accumulation, in particular when it coincides with a "flight to safety" in wealth preservation, limits the investment and growth opportunities in both countries. This trend leverages the negative impact of slowing population growth or shrinking in absolute terms. In Japan, the more extreme case, the fall in relative wealth occurred in two stages. First, the real estate market underwent a lasting collapse. Second, financial assets lost their productivity when more and more debt became locked into the government sector. Japan's financial asset accumulation is now moving into a final phase with increasingly tighter limits because the debt service on the government debt needs to be financed by increasingly higher taxes, which further slows growth and reduce incomes

Italy has already seen this phase, when concerns about increasingly unreliable public finance situations led to much lower demand for financial assets and higher interest rates, which increases the costs of government finance. But options to store wealth remain limited for households. A flight to safety in the real estate sector cannot be productive in an ageing society as long as the government remains unable to promote a significant influx of foreign capital, production and emigration that could boost demand and usage of real estate at higher prices. In Italy the risks of a deflationary Japan-style depression are therefore high. The share of working age population is falling today as fast as it did in Japan in the 1990s, with further acceleration expected from 2022, which further reduces private demand and increases government social security costs. At the same time, deflationary pressure from the restructuring in the Eurozone after the financial crisis requires more structural reforms and more competitive prices in much of Italy, too. The result is a very risky mix of deflationary pressures, potentially falling real estate prices, and policy paralysis that has been so poisonous to government finance in Japan.

In both countries, too much capital has been chasing too little opportunity, which feeds into asset bubbles for both major asset classes. Today, Japan's public bonds and Italy's real estate prices look unsustainable. Without a significant correction, both will further undermine income growth, which would result in an even more painful correction of asset prices at a later date if the governments remain successful in stabilizing finance on current negative growth trends. If, on the other hand, such rebalancing is left to "the markets," solutions will most likely include a series of crises that will wipe out unprofitable companies and reduce household wealth along with unsustainable government debt. The key to sustainable future growth will therefore be an extremely difficult balancing act of improving income generation opportunities (through investment and corporate income), long-term household wealth stabilization (through pensions and income), and government policy that focuses on productivity and growth (through tax incentives and structural reforms).

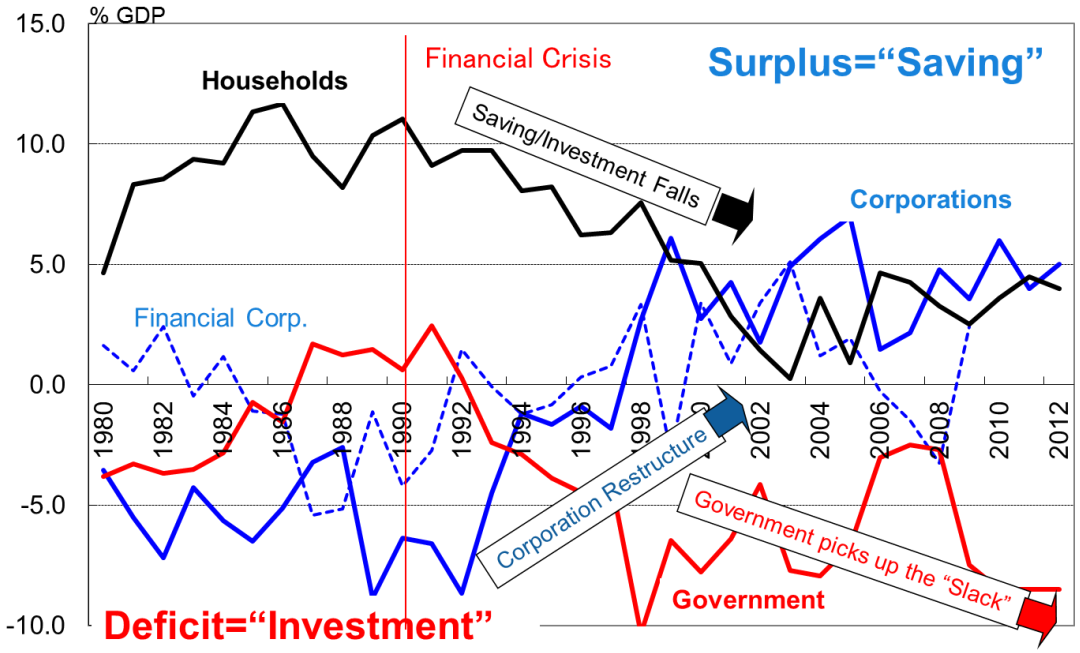
5. Ageing governments: from growth policies to buffering structural change

Structural change and societal ageing provide an important role for government. When corporations have to cut down on investment, when demand shifts from manufacturing goods to services, when households shift their attention from increasing income generation capability to wealth accumulation and protection, governments often face the need to "buffer" changes in the market economy to allow corporations and households to catch up. Subsidies to manufacturers, transfers to social security systems, and restrictions for firing-and-hiring in labor markets are typical examples of such government policies that have been widely used in Japan and Italy to buffer structural change and the slowdown of their economies. But while such "leaning against the wind" of structural change automatically results in a slowdown of growth as a side effect that might be acceptable during periods of transition, the long-term shift of government policy from supporting growth to "avoiding" structural change soon becomes problematic in ageing societies.

In particular, when policies become entrenched and are taken hostage by vested interest lobby groups, government policy might become a key factor in creating imbalances and putting the economy onto the wrong long-term track. Support for manufacturers, for example, also tends to hold back change in the service industries; transfers to social security mask the costs of ageing and slow down income growth; and inflexible labor markets hinder structural change and productivity growth in general. Slowing down structural change and productivity growth becomes even more problematic at a time when major emerging counties are opening up and growing faster, which does not only provide for more opportunity but also for more competition.

While it is beyond the scope of this chapter to compare the different policies and their shortcomings, the following will show how much policy has been driven by structural changes in the private sectors. We can use inter-sectorial flow of funds data for Japan, which record shifts in saving and investment behavior among households, corporations, and government to show how slowing growth and a financial crisis can push a government ever deeper into debt financing. Unfortunately, we have such data only available for Japan. Italy, on the other hand, can be used as a case that shows the constraints to government policy when interest rates and debt financing costs go up, which almost certainly will happen in Japan quite soon, too.

Figure 10: Shifts in sectorial financial balances



Note: Financial Surplus & Deficit by Sector as % of GDP (Saving-Investment Balances). Aggregates based on 2000 prices.
Source: © FRI 2012. Data: National Accounts; SNA93.

As pointed out above, while growth in Japan was slowing down significantly during the 1980s, the government deregulated much of the banking sector and relaxed interest rate controls to boost economic growth. Japan's major banks ("city banks") were therefore able to extend credit to SMEs, but required real estate as security for the credit to new customers. As real estate prices rose, corporations became the driver of a speculative investment cycle that finally burst in 1991. After decades of strong growth, this problem was initially seen as temporary, so policy reactions focused on "Keynesian" deficit spending to buffer the fall in demand. On the other hand, the most significant imbalance in the economy, the increasingly fragile state of the banking sector, remained largely unresolved due to the fact that the banks were seen as the main culprits for the speculative bubble in the first place and therefore banking support and bailouts proved to be politically difficult. Despite enormous fiscal programs from the middle of the 90s, the unfolding credit crunch therefore resulted in a growing avalanche of corporate bad debt that further undermined banks' balance sheets, resulting in a vicious circle.

Figure 10, which shows saving-investment balances, clearly demonstrates the unfolding of Japan's public debt and sectorial imbalance problems. In the upper part of the graph are the "surplus" sectors, which contribute with their savings to (corporate) investment in the lower part of the graph. Net savers are usually the households, and Japan's households have been avid savers for decades. But when income and wealth started to fall after the bubble burst, households cut back on savings while trying to maintain their level of consumption. Within a decade, by 2002, households' savings had fallen to

almost zero. The most significant initial reaction, however, came from the financial sector. When the bubble burst, banks tried to repair their balance sheets by cutting investment and trying to shift into surplus （Koo 2008）. After that, banks rarely became net-investors again and turned into net-savers in most years to date. Corporations were the next to react. They tried to write off their bad debts from failed investments, deteriorating customer relations, and falling asset prices. By 1994, investment was in free fall for the first time, requiring counter-balancing public investment programs to avoid a complete breakdown of demand.

Starting in 1998, when the rest of Asia was suffering from the Asian crisis, Japan's crisis took a turn for the worse as its remaining overseas businesses were hit hard. Corporations reacted almost as strongly as they had following the bubble, but this time not only did they cut back on investment, they also cut back on future growth and long-term expansion plans, too, and turned into net-savers with growing cash reserves. Private (net) investment had imploded in Japan. After 1998, all private sectors had turned into net-savers, trying to restructure their balance sheets by generating surpluses (Koo 2008). Such restructuring would have been (technically) impossible without counter-balancing government deficits and would have resulted in a much more serious breakdown of demand if the government had not stepped in.

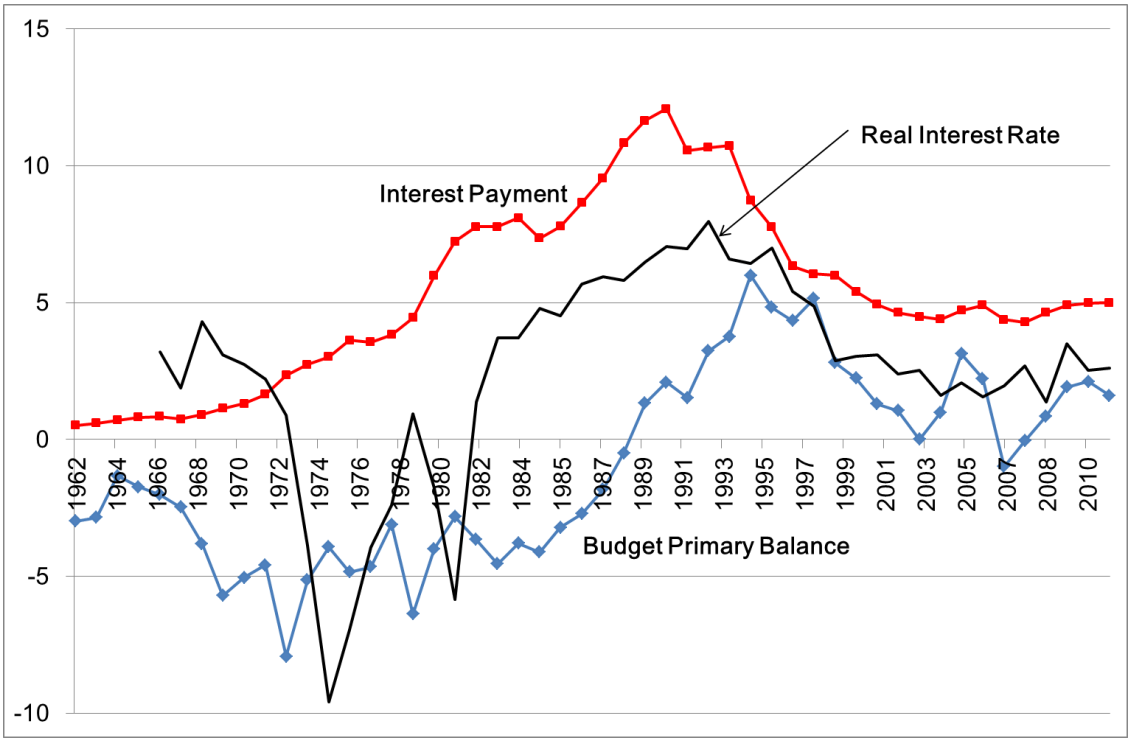
During this first decade of the crisis, when the economy remained unbalanced, the government not only expanded its traditional role in infrastructure investment, it also began to increasingly interfere in finance. On the supply side, it developed credit (guarantee) programs providing credit for SMEs and tried to promote low-interest mortgages to households. On the demand side, it had to reluctantly pump more and more money into banks and into the deposit insurance system when an ever bigger number of banks were threatened by insolvency. After 1997, banking recapitalization and nationalization could no longer be avoided. In 1999, a "bad bank" (the resolution and collection corporation) was established to write off defaulting credit. When the bursting IT bubble started to threaten even major city banks in 2001, the government had to refinance and reregulate the entire sector. Since Japan's huge city banks were "too big to fail" but also too costly to rescue, the government engineered mergers between the banks that basically left only three "mega banks" and a small number of second-tier banks in business.

Through the consolidation of Japan's banking sector, the financial sector had been partly nationalized and partly entrusted to a heavily regulated oligopoly. But even this turned out to be insufficient to end the crisis, as bad debt kept growing on the corporate side, where profits remained depressed. An "Industrial Revitalization Corporation" was therefore added to the financial mix to refinance insolvent corporate groups. To aid credit generation, the central bank implemented a "zero interest rate" policy, soon to be joined by a "quantitative easing" policy. The central bank had effectively started to print money and gave it away for free, mostly to finance the swelling government debt. Thereafter, the government never managed to step out of the financial markets again. Attempts to privatize the largest bank, Japan's postal bank, and restructure public finance under the Koizumi government in 2004 were soon abandoned and ended in more deficit spending.

This enormous shift from private to government finance has been heavily criticized in Japan, but only this combination of (at the time) extreme financial measures finally purged the financial crisis ten years after it started. It is also this case study of a slow-rolling financial crisis that significantly shaped the strong US policy reaction after the "Lehman Shock" in 2008. In particular, it was the urging of US central bank chairman Bernanke, who, as a university professor, had been an avid student of the Japanese financial crisis, which led to an early (and forced) refinancing of banks, a major financial package for corporate support, and the swift implementation of quantitative easing policy well beyond what Japan had done. The EU response to the financial crisis, on the other hand, has so far been closely following the Japanese playbook deeper into the financial crisis. It is quite possible, for example, that the aftermath of the real estate bubble in Spain and stretched real estate prices in Italy will lead to a Japan-style credit crunch in the banking sector that is flowed by accelerating bad loans in the corporate sector, leading to a deep recession. Unlike in Japan, however, the government would not be able to counter-balance falling demand in the corporate for long because government coffers are empty already. For much of Europe, the ultimate test of the financial crisis will therefore be the speed and successful implementation of stepping out of markets after the acute phase of the crisis is over. That Japan never managed to do this important step back into a balanced "market economy" is certainly not adding to Japan's credibility of being able to adopt necessary structural reforms.

Italy is already well beyond its phase of government debt buildup and demonstrates the costs and consequences of long-term government intervention in the economy. During the crisis in 1990, Italy pushed public debt beyond the level (of around 100% GDP) at which it starts to hurt the "real" economy as Rogoff and Reinhart are arguing (Reinhart, Rogoff 2009). Japan broke through this same barrier during the global financial crisis in 2008. While the Japanese government debt has been built up to buffer structural change to avoid excessive adjustment costs for other sectors, the Italian case shows how fast such policies can become costly and eventually unsustainable. Most of Italy's public debt built up in the 1980s was actually due to interest payments when real interest rates jumped in 1982. Such income transfers to private asset holders severely limit the government's other policies and objectives.

Figure 11: Italian Budget Deficits, Real Interest Rates and Debt Service (%)



Note: Real interest rates based on OECD data, long-term interest rates, and CPI. Primary budget balance and interest payment as % of GDP.
Source: © FRI 2012. Data: OECD (2012).

While public debt and interest payment for debt servicing were increasing gradually throughout the 60s and 70s in Italy, real interest rates were often negative, and consistently lower than GDP growth until 1982. Financing the deficits was therefore fairly easy and, compared to more tax hikes, might even have seemed cost-effective to the government. Compared to increasing taxes when the economy was slowing down or building up costly tax authority capacity to increase the tax yield, financing the debt at low and often negative credit cost must have been a very attractive option. All this changed after the second oil shock hit and the US started to shrink global liquidity by fight inflation, which increased interest rates internationally and pushed debt financing cost beyond 5% GDP. Since this set the stage for additional debt financing on top of government transfers to social security, by 1987, interest rate payments rose beyond 10% of GDP, which pushed Italy further towards the unfolding currency crisis.

During this period, the government reacted with surprising speed and resilience to reduce budget deficits. Between 1984 and 1989, in just five years and despite exploding credit costs, the government managed to turn the primary deficit, i.e., the deficit excluding interest payments, into a surplus. Unfortunately, however, this did not seem to help much initially. Credit costs continued to increase until interest rates finally peaked in 1992 during the currency crisis. A reduction in public debt therefore became possible only after 1994, ten years after the government had started budget reforms. At that time, the primary budget showed an amazing 6% surplus. But this was still not

the end of the adjustment process, as cutting government stimulus reduced trend growth to around 1.5% after 1995.

Despite the strenuous deficit reduction difficulties during this period of debt retrenchment, Italy was still in a comparably strong position at the time. During the core phase of budget reforms, Italy's demographics had turned positive for a period when more working-age people were entering the labor market again. The next round of budget reform and debt retrenchment will have to be implemented at a time when demography has turned against growth even in absolute terms. Japan finds itself in this situation today. The Japanese government is still only paying less than 1% of GDP in interest cost for the world's highest debt load, but that will certainly change, and the stage will be set for a debt crisis of the kind that is already threatening Italy today.

6. How will the debt crises in Italy and Japan play out – and what is the solution?

Japan and Italy are facing debt crises quite different from those in young and fast-growing societies. In the 80s and 90s, South American and Asian banks and governments tried to boost growth with foreign capital, but both booms ended when profitable investment did not follow and asset bubbles emerged. These crises ended when some of the debt defaulted, price had been corrected and growth began to return. Italy and Japan built up their debt at a time when their economies were slowing and growth is unlikely to return to levels necessary for smooth debt repayment anytime soon. Since government defaults in mature countries are not an option until all resources are depleted, a long phase frustrating cost redistributions with limited scope for other policies is looming. This process involves a long series of realignments, most likely driven by "mini" crises that push all actors to accept lower valuations for assets and higher taxes for debt services.

A major crash of public debt, as it has often been feared in Italy and Japan, is unlikely, however. As long as domestic investors—mostly banks, life insurance companies, and households—are willing to buy and hold government bonds, a country might run into serious sectorial imbalances, but it does not develop a threatening overall debt overhang. In a closed economy, every public bond (debt) is a private asset, so the government only "extends the balance sheet" by creating as much debt on the government side as the private sector is adding assets. The result is not an unsustainable expansion of public debt but a shift of spending power from the private sector to the public sector, just as if the government had raised taxes instead. This is also why, in economic theory, public debt and taxes are often seen as equivalent (as explained in the Ricardian Equivalence).

The "real" impact of public debt thus depends on three important factors: first, on how effectively the government is spending the money, second, on how strong the re-distributional effects between asset owners and tax payers are, and third, on how the financing of the debt load will ultimately be organized. As discussed above, both the

Italian and Japanese governments were relatively successful in stabilizing their economies and keeping re-distributional effects at bay. Both countries do not have large governments living beyond their means, which might have caused instability. Both countries have been running deficits as a side effect of avoiding costly and painful adjustments in the corporate as well as household sectors. Instead of pushing for changes and reform, the governments have been using available leverage to avoid adjustment crises in mismatched pension systems and shifting industrial structures. All this contributed very little to growth, however, in particular long-term growth, which might have come from investment into top-level public education and internationalization of their economies, for example. They also did not manage to fix the imbalance of (social security) cost and opportunity between the generations, which puts the younger generations at a disadvantage and reduces investment and productivity. Ironically, the stability that both governments tried to maintain in their economies while stretching government finance and accumulating debt to do so has now become one of their main problems. The stability that both governments managed to provide has cemented vested interests and stagnant expectations that now hinder necessary adjustment and incentives for effective reforms.

While growth-inducing structural reforms are lacking in the long run, financing and reducing the debt load has already become an urgent problem. With growth almost nonexistent, the two countries are left with few options. Italy has already tried to lower public debt and mending generational imbalances by increasing the value added tax, which is affecting retiring households more than the productive younger generation or corporations, to international peak levels. Japan, on the other hand, chose to keep borrowing against the assets of the older generation beyond levels that might be possible to repay under reasonable assumptions for economic growth in an ageing economy. The current push of the government to increase inflation by monetary expansion might very well be the first step to devalue public debt through inflation. As Alesina (2012)) points out, any solution will involve a struggle among debtors (the government), asset owners (banks and, ultimately, retired households), and, last but not least, tax paying younger households and corporations. While the main problem in Italy and Japan is, therefore, not the looming prospect of a debt crisis "crash" as in Greece, both face a long phase of internal friction that will almost certainly further reduce growth prospects. From this perspective, the debt crises in the two countries have already been unfolding for years.

Both countries have already taken important steps that will affect the paths of their debt crises. Italy has joined the Eurozone, which effectively takes monetary policy out of the hands of the Italian government and prevents the use of inflation to reduce the debt load. As a result, the government now needs to focus much more on effective tax policies and structural reforms in order to increase income. By pushing Italy's government debt into the Eurozone and setting the stage for structural reforms that will likely result in lower inflation, and perhaps deflation, asset owners have won this round of the debt crisis. The next round will depend on the government and its ability to induce reforms, as well as the willingness of income earners and corporations to accept more "pain" in order to sustain the government's solvency while growth prospects are only improving in the longer run.

Japan has not suffered a sovereign or exchange rate crisis so far, and the government is only gradually realizing the severity of the situation. If anything, the smoldering debt crisis has affected only growth prospects, which kept interest rates and prices from rising. However, the last two Prime Ministers (Naoto Kan and Yoshihiko Noda) have already lost important elections, not least because they tried, and eventually succeeded, to increase the VAT consumption tax from 5% to 10% (by 2015). In particular, low-wage earners and retired households are heavily opposed to increasing their tax load in order to finance the government's debt service to asset owners. The current Prime Minister, Shinzo Abe, is therefore focusing on monetary policies to induce inflation and lower the government's debt load while increasing tax income (through "cold" progression of income taxes). While it is still unclear if he will succeed with this not-so-new concept of monetary policies dubbed "Abenomics", it seems almost certain that asset owners (ultimately, retired households) and households on fixed pensions will oppose such policies before they result in strong inflation and have a significant negative impact on their wealth balances. As Italy before it, Japan is therefore probably set to run into a series of government crises before sustainable growth policies and tax reform can be established.

Unfortunately, as pointed out above, both countries are quite unlikely to establish a convincing set of growth policies anytime soon. Italy will first have to focus on cost cutting, as Japan has been doing for about 15 years, and Japan will have to try to boost investment by lowering real interest rates and balancing the debt load, as Italy did for the last 15 years. Both are important short-term steps, but they do not offer long-term solutions for their ageing economies. Calls for expanding on the countries' strengths, in particular for growing sales into (emerging) overseas markets, and active support of productive growth and innovation in the highly regulated service industries will therefore surely grow. Italy, with its close integration into the EU, and Japan, with its close proximity to the Asian growth markets, have excellent opportunities at hand to boost investment, productivity, and growth. How much "crisis" (or how many) they will need to suffer in order to get going, we will likely know much better after the dust of the current financial crisis has settled.

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