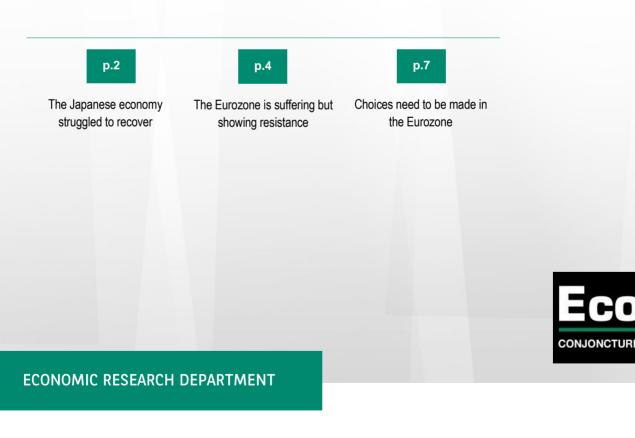
CONJONCTURE

November 2019: n°9

The Eurozone: a new Japan?

The slowdown in economic activity in the Eurozone and inflation structurally below the target rate have raised the spectre of "Japanification". This would mean effective growth running below potential, very low interest rates and negative inflation. In Japan, this combination of factors resulted from the bursting of the financial and real estate bubbles of the early 1990s. There is a range of factors that could cause "Japanification". Faced with the challenges of an ageing population and slowing productivity gains, the Eurozone will need to focus its efforts on boosting its potential growth and its resilience to shocks. Short- and medium-term economic policy choices will therefore be crucial in limiting, as far as possible, the risk of "Japanification".





The bank for a changing world

Louis Boisset

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The Eurozone: a new Japan?

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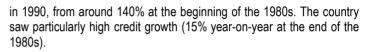
The 'Japanese Syndrome' can be defined as a combination of three economic phenomena¹: a real-terms actual growth rate below the potential growth rate ($g < g^*$); a zero policy interest rate in nominal terms or a real natural interest rate² below zero; and negative inflation (deflation).

Is the Eurozone heading for this kind of scenario? Increasingly discussed, the issue of "Japanification" in the Eurozone has now assumed a particular importance given the ongoing economic slowdown – which could deteriorate still further – and the weakness of inflationary pressures, despite significantly accommodative monetary policy. More broadly, the Eurozone has seen stop-start economic trends since its creation, and since the crisis of 2008 appears to have slipped into a regime of lower growth. A similar phenomenon has also been observed in other developed economies. For its part, Japan's economic history since the financial deregulation of the 1980s has seen a number of major shocks: the bursting of the real estate and financial bubbles in the early 1990s, from which the economy struggled to recover; the Asian crisis a few years later; and the great financial crisis of 2008-2009.

How has the Japanese economy remained over a long period in a position of weak growth, particularly low policy rates and low, or even negative, inflation? Is the Eurozone now suffering from the same macroeconomic weaknesses? This article will examine these questions and will attempt to outline the macroeconomic profile of the Eurozone. We will highlight both similarities and differences between the Eurozone and Japanese economies.

The Japanese economy struggled to recover

The financial deregulation in Japan during the 1980s and the overall relaxation of monetary policy encouraged a fall in bond yields and, more generally, a significant easing of credit conditions. The degree of relaxation of monetary policy drove rapid growth in credit, with outstanding loans³ in Japan rising to more than 210% of nominal GDP



These trends encouraged the acquisition of financial market securities and real estate, pushing prices up (Chart 1). As a result, the market capitalisation of listed companies in Japan increased fourfold over the 1980s, reaching around 140% of GDP by the beginning of the 1990s. An increase in the value of collateral tends to increase the solvency of borrowers, which appears as a risk-free gain, further fuelling growth in bank lending. Meanwhile, agents in the banking system face a more competitive environment and adopt a more aggressive lending policy, focusing on the real estate and financial markets, thus boosting the valuation of such assets⁴.

Burst of stock market and real estate bubbles



Over the course of the 1980s, economic growth clearly assisted these favourable conditions for financing. GDP growth, in real terms, was particularly robust and averaged 4.5% over the period. Japanese per capita GDP also rose strongly, gaining an average of over 4% over the same period.

At the end of the 1980s, as inflationary pressures rose, there was a widespread increase in interest rates in advanced economies. This contributed to a downturn in asset markets. The Japanese economy



¹ T. Ito, Japanization: Is it endemic or epidemic ?, NBER, February 2016

² The natural interest rate is the real interest rate at which inflation remains stable whilst actual GDP growth is at its potential level (the output gap is zero) in the absence of any temporary shocks.

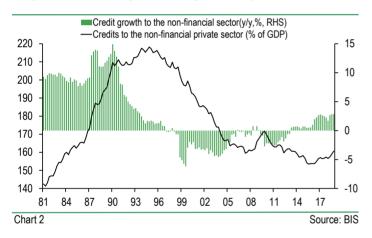
³ We are considering here total credit to the non-financial private sector.

⁴ E. Dourille-Feer et al., La crise japonaise, ou comment un pays riche s'enlise dans la déflation, CEPII, 2002

suffered the abrupt bursting of the real estate and equity bubbles, with market capitalisation dropping to below 60% of GDP in 1992. In addition, growth in credit fell sharply in the early 1990s (Chart 2), dropping below 1% y/y by the end of 1996 and remaining weak thereafter. Credit shrank nearly continuously from early 1997 to the end of 2012 (Chart 2).

Unlike other countries that have experienced similar crises but have recovered from the shocks relatively quickly, Japan suffered from poor macroeconomic conditions for a long time. One of the explanations for Japan's failure to recover was the slow and timid response from the authorities when it came to economic policy and the stabilisation of the banking system. On this point, Sweden is often identified as a counter-example⁵. Following the economic and banking crisis that hit the country in the early 1990s, the Swedish authorities responded immediately in order to address imbalances in the banking sector, through restructuring and the creation of 'bad banks'. Conversely, in Japan, the high level of non-performing loans on bank balance sheets was not addressed sufficiently quickly, hitting credit growth, domestic demand and, eventually, prices and growth.

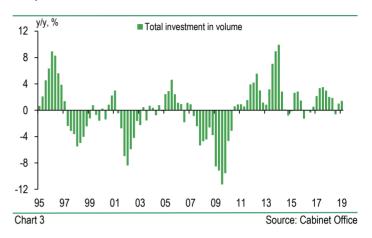
A significant and prolonged weakening of credit dynamic



The crisis that hit East Asian countries in 1997 represented a further shock for Japan, where macroeconomic imbalances had still not been absorbed. Emerging Asian countries saw their economic growth dip significantly over this period. At the end of 1997, the bankruptcy of Yamaichi, one of the country's biggest securities firms, increased instability in financial markets and Asian forex markets, triggering a chain reaction of bankruptcies at financial institutions⁶. The very limited monetary policy response⁷ did not fully address the substantial demand for liquidity that resulted. As a result, the Japanese financial system looked vulnerable and the banking system continued to struggle with high levels of non-performing loans. A short but significant period of panic was triggered, with the equity market falling again and deposit withdrawals further weakening Japanese banks. Widespread

uncertainty took hold. These events hit investment (Chart 3) and the labour market, damaging private consumption in its turn.

Sharp decline in investment in the late 1990s



The experience of protracted deflation

The deterioration of macroeconomic conditions (Japan went into recession in early 1998), against a background of falling domestic demand, hit prices. An increase in the consumer tax (equivalent to value added tax or VAT) in April 1997 also hit consumer spending, with some observers criticising the primary structural adjustment⁸ that Japan introduced in that year. Meanwhile the monetary policy response took the form of a very gradual reduction in the policy rate. This fell to 0% by the end of 1999, from a peak of 6% some 8 years earlier. The country nevertheless fell into a liquidity trap, with the Bank of Japan's supply of money at zero rates no longer having an effect on prices or economic activity. Other than in 2008, on the eve of the financial crisis, deflation (in the sense of underlying inflation⁹) took root in Japan between the late 1990s and the middle of 2013 (Chart 4). Falling prices tend to wipe out the positive effect of lower nominal interest rates, by pushing real interest rates upwards.

Weak domestic private demand, reflecting the deleveraging of economic agents, partly explains the long period of deflation experienced in Japan. But there were other more structural macroeconomic factors that flesh out the explanation. Growing competition from other Asian countries and emerging economies, together with the increasing duality of the labour market, with rising numbers of workers in insecure jobs, put pressure on wages and prices. In addition, the deflationary climate encouraged risk-averse, wait-and-see behaviours¹⁰. Lastly, the ageing of the Japanese population (to which we will return later) also put downward pressure on growth and inflation. Demographic trends in Japan have, for instance, driven down



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⁵ La crise nordique des années 1990, Séminaire scandinave, DG Trésor April 2012

⁶ Statement by the Governor concerning the Yamaichi Securities Co., Bank of Japan,

² June 1999

⁷ See footnote, page 4

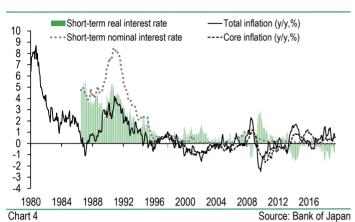
⁸ The primary structural adjustment represents the change in the primary structural budget balance, that is to say corrected for cyclical effects.

⁹ The measure of underlying inflation excludes products with volatile prices, such as oil products and food. The underlying inflation index thus helps identify underlying trends in price movements.

¹⁰ E. Dourille-Feer, La difficile sortie de la déflation au Japon, Billet du CEPII, 2014



Deflation sets in from the 2000s



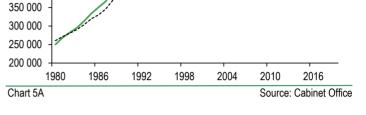
Note: Both total inflation and underlying inflation have been adjusted for changes in indirect taxes. The real interest rate is deflated by the total inflation rate (adjusted)

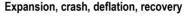
The major economic crisis of 2008-09 caused a third significant shock to the Japanese economy. Growth in Japan was hit particularly hard, with contraction of 1.1% in 2008 and then 5.5% in 2009, before rebounding in response and then getting carried forward by the introduction of 'Abenomics' ¹². This brought about economic improvements, most notably the end of deflation, one of the programme's priorities, and a recovery in economic activity. Inflation and growth have nevertheless remained at low levels, despite the extremely high levels of public debt (gross public debt is close to 240% of nominal GDP) and monetary accommodation, specifically through the launch of a Quantitative Easing programme (the Bank of Japan's balance sheet is now 100% of the country's GDP and continues to expand).

In total, Japan's nominal GDP was more or less stable from the early 1990s until the introduction of Abenomics (Chart 5). This reflected both limited growth in volume terms and the weak, or negative, growth in prices. Volume growth fell very sharply after the 1980s, to an average of less than 1% in the 2000s, whilst the GDP deflator averaged -1.2% over this period. Since 2012, the recovery has been noticeable but timid. On average, growth in real terms has been barely above 1%. In addition, prices have risen on average, but again this has been a slow process (Chart 5b).

Japan's experience of deflation is unique in recent economic history. The bursting of the financial and real estate bubbles, and the only partial response of economic policy, still weigh heavily on the economy.

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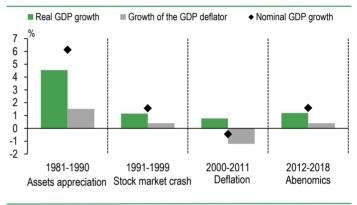


Chart 5B

Source: Cabinet Office

The Eurozone is suffering but showing resistance

An environment of low inflation, feeble economic growth, negative interest rates across a fairly wide range of maturities, non-conventional monetary policy, decreasing but still high government debt, and structural weaknesses (ageing population, slowing growth in total factor productivity,...) provide a combination of factors for the Eurozone economy that might, at first sight, tempt one to draw parallels with the macroeconomic situation in Japan.

Over the past 20 years, since the creation of the single currency, economic activity in the Eurozone has had a bumpy ride, hit by two crises and two recessions of different magnitudes. In 2009, the zone's economy saw a real terms contraction of 4.5%, whilst the debt crisis saw GDP shrink by 0.9% in 2012 and 0.2% in 2013. However, the Eurozone enjoyed a notable recovery in nominal terms after 2009, despite a second crisis a few years later (Chart 6).



The bank for a changing world

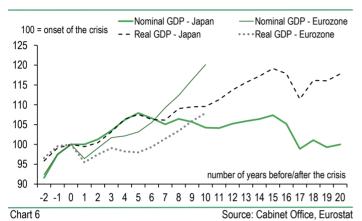
Nominal stagnation of the Japanese GDP

¹¹ D. Anderson et al, *Is Japan's population aging deflationary* ?, IMF working Paper, August 2014

¹² Introduced in Japan in 2012, the 'Abenomics' stimulus programme has three pillars: an expansionist fiscal policy, a non-conventional monetary policy (including purchasing of long-term sovereign debt) and structural reforms, in particular to address the ageing of the population.

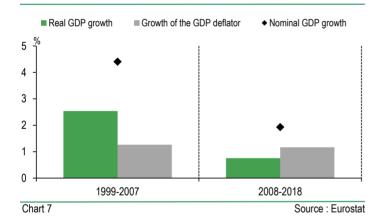
On average, prices continued to rise after the 2008 crisis but at a slower pace (Chart 7). The trend in the GDP deflator has remained constrained, but has not fallen significantly (on average, the GDP deflator has risen by a little over 1% since the 2008 crisis). Economic activity, meanwhile, slowed significantly, as it did in Japan, after the subprime crisis, and the zone appears to have been under a low-growth regime since then.

A fragile nominal recovery in Japan



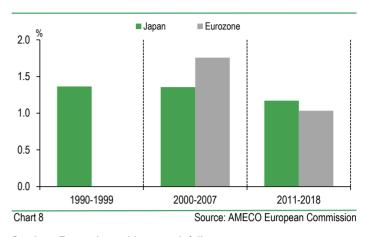
Note: The basis of 100 corresponds to the start date of the crisis (1992 for Japan and 2008 for the Eurozone). The x-axis shows the number of years before or after the onset of the crises. Thus, 20 years after the crisis, Japanese nominal GDP was barely back to its 1992 level.

Significant slowdown in activity in the Eurozone but no deflation

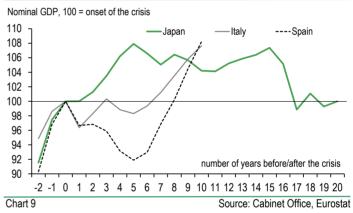


On a per capita basis, over the post-crisis period, growth in real GDP was weak in the Eurozone just as it was in Japan, where moreover it displayed a remarkable stability (Chart 8). The aggregate figures for the Eurozone mask significant national differences. In particular, the countries of southern Europe, particularly Italy and Spain, were hit harder by the 2012 debt crisis and endured two consecutive deep recessions (Chart 9). In real terms, Italy (unlike Spain) had not returned to its 2008 GDP level by 2018.

GDP growth per capita in real terms



Southern Europe is catching up painfully



One of the initial causes of the prolonged difficulties in the Japanese economy lay in the bursting of asset bubbles, particularly the real estate bubble (see Chart 1 above). The lack of any rebound in prices is symptomatic of the situation in the Japanese economy since the early 1990s. And this is one of the differences between macroeconomic trends in Japan and in the Eurozone. The Eurozone, taken as a whole, in contrast to Japan, has seen only a modest fall in asset prices, notably for residential real estate. These were fairly stable overall between 2007 and 2015, admittedly after significant increases over the course of the 2000s. In 2015, real estate asset prices started to rise again (Chart 10). The slowdown, or indeed decrease, in the supply of credit (2009 and the second half of 2013) came alongside the fall in real estate prices. Growth in credit has resisted, however, despite the difficulties in certain banking sectors, particularly in southern European countries. The narrow M1 measure of money supply¹³, provides a good indicator of the slowing of economic growth or recession in the Eurozone¹⁴, given that its growth also fell during the two crises and then recovered rapidly.

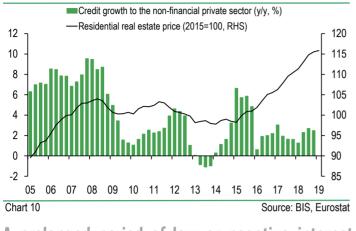


¹³ M1 money supply includes notes and coins in circulation and sight deposits.

¹⁴ R. Fendel et al, *Predicting recessions using term spread at the zero lower bound: The case of the euro area*, VOX CEPR, January 2019



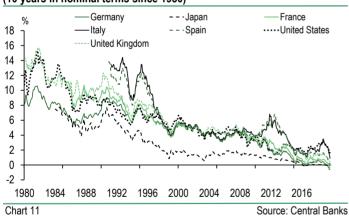
Credit in the Eurozone: growth weakened but positive



A prolonged period of low or negative interest rates

If the downward trend in interest rates appears steeper since the 2008 crisis, the fall in long term rates is a long-term phenomenon (Chart 11). Real interest rates are now at historic lows in advanced economies and have been falling for several decades. This trend has been broadly synchronised between the advanced economies, in association with the growing integration of global capital markets since the wave of deregulation that began in the 1980s¹⁵.

Downward trend in long term interest rates (10 years in nominal terms since 1980)



The inexorable fall in long-term interest rates can in part be explained over the relatively recent past by expansion in money supply. More fundamentally, the fall in real rates is often associated with a drop in the natural rate (r*) for structural reasons. The ageing of the population, the high and rising savings rate, the slowdown in productivity gains, inequality and an increase in risk aversion are all deep-seated changes that can affect interest rate movements. On certain estimates, the real natural short-term rate in the Eurozone is now zero or even in negative territorv¹⁶.

Sovereign bond yields by maturity

Country	2 у	5 y	10 y	30 y
Germany	-0.782	-0.803	-0.595	-0.106
Netherlands	-0.754	-0.726	-0.452	-0.078
Finland	-0.709	-0.667	-0.329	0.175
Austria	-0.698	-0.618	-0.333	0.261
Belgium	-0.689	-0.572	-0.268	0.58
France	-0.699	-0.654	-0.297	0.549
Italy	-0.215	0.264	0.846	1.969
Spain	-0.499	-0.301	0.135	1.025
Portugal	-0.624	-0.28	0.12	1.044

Table 1

Source: Thomson Reuters Note : red figures indicate negative sovereign yields at 8 October 2019.

As in Japan, the Eurozone is affected by this widespread downward trend in interest rates. Across a broad range of maturities, yields on the Eurozone's sovereign bonds - some of which are viewed as risk-free and highly liquid - have been very low, or even negative in many member states. In 2019, the Dutch and German vield curves, for example, have moved fully into negative territory. On some estimates, the total value of bonds with negative yields, both sovereign and corporate, stood at some USD 15 000 billion, marking a substantial increase since 2015-16¹⁷. Many other countries, including France, Finland and Belgium, have also seen bond yields drop particularly low (Table 1). Despite political tension, Italy has also seen a narrowing of its spread, albeit without moving into negative territory. Having stabilised overall between late-2016 and late-2018, rates have started falling again. Against the background of the marked slowdown in the Eurozone since Q3 2018, investors have, indeed, been taking an increasingly cautious stance.

At present, both the Bank of Japan (BoJ) and the European Central Bank (ECB) have taken their policy rates below zero (Chart 12). For the BoJ, the policy rate was cut to 0% in 1999, several years after the bursting of the asset bubbles, and then rose briefly between August 2000 and February 2001. As discussed above, some of these rate movements reflected the BoJ's failure to adequately respond to the deterioration of the economic situation. By prematurely anticipating a rebound in activity, monetary policy choices are one of the most likely causes of the period of deflation¹⁸.



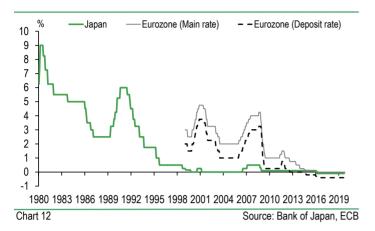
¹⁵ M. Del Negro et al, *Global trends in interest rates*, VoxEU, November 2018

¹⁶ C. Brand et al, The natural rate of interest: estimates, drivers, and challenges to monetary policy, ECB Occasional Paper Series, December 2018

¹⁷ T. Adrian and F. Natalucci, Lower for longer: Rising vulnerabilities may put growth at risk, IMF Blog, October 2019

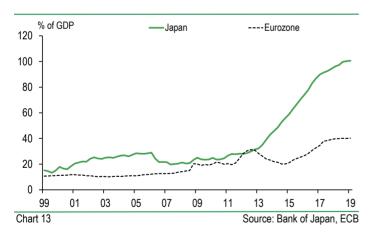
¹⁸ T. Ito & F. Mishkin, Two decades of Japanese monetary policy and the deflation problem, NBER, 2004

Main interest rates : Bank of Japan & European Central Bank



Faced with the absence of any reaction in inflation, the scaling back of inflation expectations, and nominal interest rates at their floor, the central banks triggered so-called 'non-conventional' measures, the most noticeable of which were massive asset purchasing programmes. The swelling of balance sheets (Chart 13) and the stock of securities held at the BoJ (via *Quantitative and Qualitative Monetary Easing*) and the ECB (*Asset Purchases Programme*) exerted downward pressure on long-term interest rates, notably through a reduction in the net volume of securities available to private investors ¹⁹. The introduction of this programme in the Eurozone came at a time when inflation had slipped into negative territory (the inflation rate in the zone was temporarily negative from the end of 2014 to the beginning of 2015). Overall, the ECB's non-conventional monetary policy interventions have had favourable effects on economic activity and price trends²⁰.

Increase in Central Banks' balance sheets



¹⁹ *L'arrêt des achats nets d'actifs ne met pas fin au quantitative easing*, Jean Dalbard, et al., Banque de France, December 2018

²⁰ Monetary policy and below-target inflation, speech by Philip R. Lane, Bank of Finland, July 2019

Choices need to be made in the Eurozone

Synthetic index of "Japanification"

In line with the method adopted by Ito $(2016)^{21}$, we have constructed a simple index of "Japanification" for the Eurozone (Charts 14a and 14b). To calculate this we have taken the unweighted aggregate of the three characteristic features of the Japanese Syndrome: (i) the gap between actual real growth and potential growth (g-g^{*}); (ii) total inflation (π , year-on-year); and (iii) main policy rate²², indicated as i.

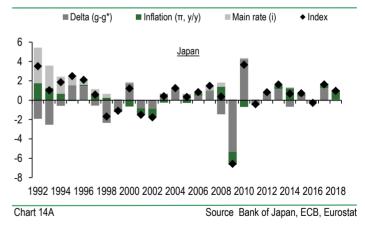
Japanification index = Growth gap (g-g*) + Total inflation (n) + Policy rate (i)

The "Japanification" index for the Eurozone has been on a downward trend. Having contributed to its high pre-crisis level, inflation and interest rates have tended to contribute to its drop since the crisis. The index remains above that for Japan. In Japan, inflation, or deflation, has often worked to drag down the overall index since the end of the 1990s.

If we include real estate prices in the index (Charts 14c and 14d), the gap between the Eurozone and Japanese economies widens. As discussed above, growth in real estate prices resumed relatively rapidly in the euro area, against a background of monetary easing, whilst in Japan they remained relatively inert following the bursting of the bubble in the early 1990s.

Although the Eurozone seems to be resisting the "Japanification" for the time being, its future is less clear. The ageing population, the slowdown in productivity gains and the absence of any further deepening in the construction of the Eurozone could all have a lasting effect on the zone's economy and increase the risk of "Japanification".

Synthetic index of "japanification"



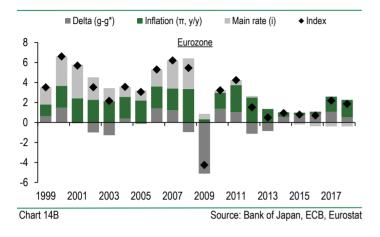
Note: the closer the index gets to 0, the greater the extent of "Japanification".

²¹ See footnote, page 1

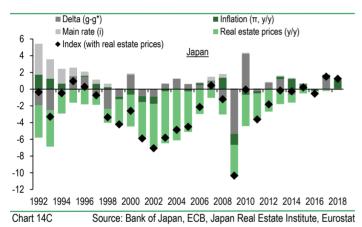
22 For this rate in the Eurozone we have used the Deposit Facility Rate (currently at - 0.5%). For Japan, the rate used is the Overnight Call Rate, currently at -0.1%.



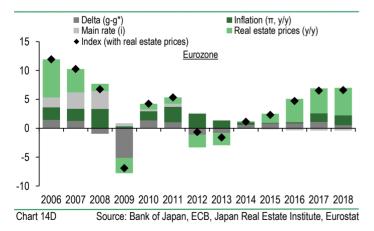
Synthetic index of "japanification"



Synthetic index of "japanification" with real estate prices



Synthetic index of "japanification" with real estate prices

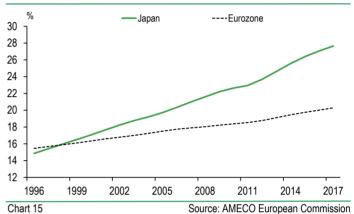


Significant challenges and obstacles

The challenge of long-term growth

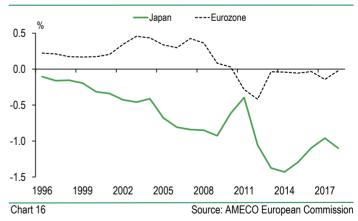
When it comes to the engines of long-term growth in the Eurozone, the stars do not appear well-aligned. First, the issue of an ageing population is becoming ever more challenging. Although Japan is one of the 'oldest' countries in the world, the share of over-65 in the Eurozone population is also trending upwards (Chart 15).

Share of the population aged 65+ in the total population



Eurozone growth in the working-age population (which we define here as people between 15 and 64) started to fall in 2011. In Japan, this section of the population has been shrinking continuously since the mid-1990s (Chart 16). In the Eurozone, the overall trend obscures differences from one member state to the next. The working-age population has shrunk in both Italy and France since 2015, whilst in Germany it has seen a return to growth since 2013, due notably to migration flows, after a long period of decline. Meanwhile, the share of over-65 in the populations of Germany and Italy are above the Eurozone average.

Growth rate of the working-age population (15-64)



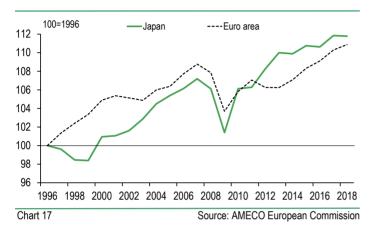
The ageing population and the shrinking of working-age population have reduced the available workforce and could also hold back capital accumulation. These demographic trends, with unchanged policies and



productivity trends, will have negative effects on economic growth over the short and medium terms. On certain estimates, potential growth in the Eurozone will be lacklustre in future years at around $1.4\%^{23}$. This would nevertheless put it above potential growth in Japan (estimated at around 0.5% in the medium term).

Alongside the loss of demographic vitality, the slowdown in productivity gains could act as a brake on long-term growth.

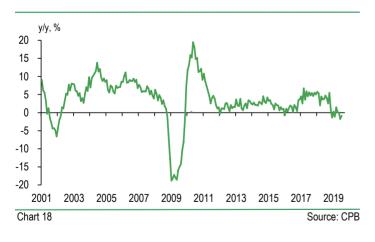
Evolution of total factor productivity



Although certain analyses predict only a temporary slowdown in productivity gains, other more pessimistic work suggests a structural weakening of productivity growth²⁴.

Lastly, on a demand-based approach, the Eurozone could be lastingly affected by a structural slowdown in global trade (Chart 18). Weaker trade growth since the end of 2018 lies in a longer-term pattern of slowing trade under the effect of a number of factors such as the ending of the fragmentation of value chains, a pause in the integration of global trade, lower trade intensity in economic growth which is now turned more towards services and consumption, and so on.

Growth rate of world trade



²³ IMF estimates

²⁴ Relating to the US economy: R.J. Gordon, Is US economic growth over? Faltering innovation confronts the six headwinds, NBER, August 2012 Given a level of economic openness (ratio of exports to GDP by value) of nearly 50%, the Eurozone is directly affected by these trends.

The challenge of deepening the institutional framework of the Eurozone

The growth profile of the Eurozone over the medium term will depend on its ability to meet the next shock it faces. Its authorities will have to avoid the economic policy errors of the past. On the monetary front, for example, an excessively rapid or abrupt tightening, such as that carried out in 2011, could weaken the Eurozone still further. Fiscal policy, meanwhile, will have to play a greater counter-cyclical role than it did during the 2012 crisis for example. At that time, the Eurozone (on an aggregated level) carried out a structural primary adjustment even though it had not yet seen a return to growth.

Today, the issue is one of the limited room for manoeuvre in both monetary and fiscal policy. Now constrained, it would seem difficult for the ECB to make another massive intervention on the scale of that conducted by the BoJ, whose balance sheet, we should remember, is now equivalent to nearly 100% of the country's GDP. On the fiscal front, European rules inhibit a sufficiently flexible approach in the event of a contraction in economic activity. Although total debt in the Eurozone has trended downwards since late 2014, it remains high in several member states. Completing the architecture of the Eurozone thus looks like the best way of avoiding a prolonged impact from any fresh economic downturn in the currency area. In particular, greater fiscal integration across the Eurozone, through the creation of a macroeconomic stabilisation mechanism, looks necessary²⁵. Combined with continued fiscal consolidation during expansionary periods, such a tool would allow a better balance in the policy-mix and increase the impact of monetary policy. To avoid slipping into "Japanification", Eurozone member states will need a coordinated, committed and disciplined approach.

The debate about "Japanification" spreading to the Eurozone is not over. This article has attempted to provide an overall macroeconomic profile of the Eurozone, highlighting both similarities and differences between it and Japan. Whether it is unavoidable or not, the "Japanification" of the Eurozone would clearly have significant economic consequences. If actual growth is below potential for a long period, for example, this could trigger a deflationary spiral which in turn would have damaging consequences for growth. Elsewhere, the current climate of low interest rates could persist and already some are highlighting their negative side effects. From a macroeconomic viewpoint, low interest rates might skew the perception of risk, destabilise the balance between savings and investment or encourage the financing of less productive activities. This situation could persist given the limited inflationary pressure, which itself is raising questions about the appropriate central bank response. All of these mechanisms are worthy of in-depth examination and we will be paying them particularly close attention.

Completed 1st November 2019 louis.boisset@bnpparibas.com



²⁵ N. Arnold, A central fiscal stabilization capacity for the Euro area, IMF, March 2018 or, for a simplified version, *Eurozone convergence: Where do things stand today?*, Louis Boisset, Conjoncture, BNP Paribas, April 2019

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