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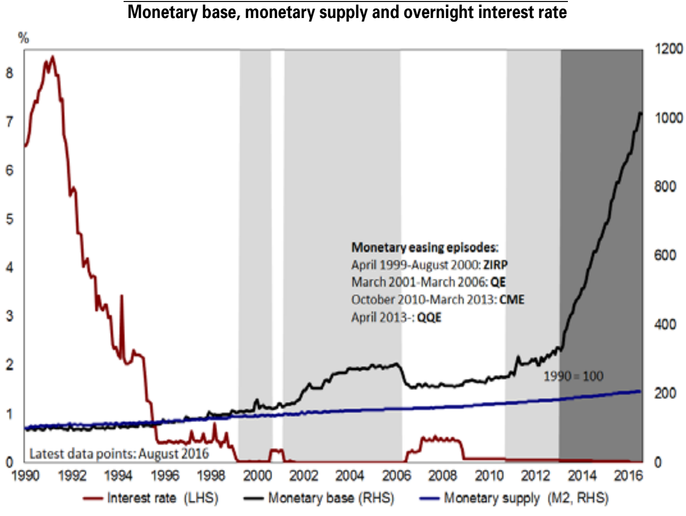
Japan's response to deflation: an assessment of Abenomics

- Japan's fall into deflation is explained by two sets of factors. The first were structural, such as the fading of the positive effects of technological catch-up and population ageing. The second were more cyclical like the economic downturns following the burst of the real-estate and stock-market bubble and the end-1997 economic crisis of the Asian countries. Since then, Japan has never experienced a lasting spell of positive inflation.
- The economy did not recover completely in the 2000s, presumably owing to an inappropriate policy mix and the absence of far-reaching structural reforms. The policy known as Abenomics, launched in December 2012, seeks to remedy these weaknesses in order to achieve a permanent exit from deflation and revitalize growth through short-term fiscal and monetary support coupled with structural reforms and a medium-term fiscal consolidation plan.
- However, four years after its launch, Abenomics has yielded mixed results. The initial encouraging effects of the confidence shock observed in 2013 and the yen's depreciation have evaporated. Monetary policy has promoted the exit from deflation, but credit growth remains slack and the massive effects on financial portfolio reallocation are slow in coming. Beyond the short-term stimulus, the persistence of an accommodative fiscal policy is incompatible with consolidation objectives, and some structural reforms have been delayed or are still in the planning stage.
- The key short-term issue is how wages will respond to prices. Initially, the nature of the jobs being created curbed the impact on wage movements of rising tensions in the labour market. However, the sectoral shortages that have developed in recent years and are starting to exert and upward pressure on wages. This trend should continue in order to trigger a price-wage spiral capable of ensuring a permanent exit from deflation.
- In the longer run, the major challenge for Abenomics is to successfully implement the productivity and labour-force reforms that are fundamental for correcting the Japan's structural headwinds. The expected effects of these long-term reforms and the further efforts to achieve fiscal consolidation in the medium term would also mitigate the effects of higher interest rates. However, the concerns over the sustainability of the public debt are at this stage moderate as most of the debt is held by residents.
- Finally, Japan's difficulty in achieving a sustained exit from deflation is inciting the developed economies to draw lessons from this experience in order to better calibrate economic policy responses to sluggish prices and GDP growth. Preventing the risk of entering deflation thus seems a useful approach to avoid a "disanchoring" of expectations. Furthermore, the potential deflationary effect of Japans's population ageing encourages to implement reforms to offset the decline in the labour force and limit its effect.

Monetary base, monetary supply and overnight interest rate



Source: Bank of Japan (BoJ).

Note: the monetary base is the "Currency Supplied by the Bank of Japan" and is defined as follows: (i)banknotes and coins in circulation et (ii) current deposits in the Bank of Japan (in particular bank "reserves").

MINISTÈRE DE L'ÉCONOMIE ET DES FINANCES

1. Abenomics has tackled the Japanese economy's structural weaknesses to ensure a permanent exit from deflation

1.1 An ill-suited policy mix and structural factors dragged Japan into deflation

The prevailing perception of Japan has changed over the past twenty years from that of a fast growing economy in the 1980s to a stagnant one in the 1990s. The economic slowdown of the early 1990s was due to structural causes, such as the fading of the positive effects of technological catch-up, **and short-term causes**.

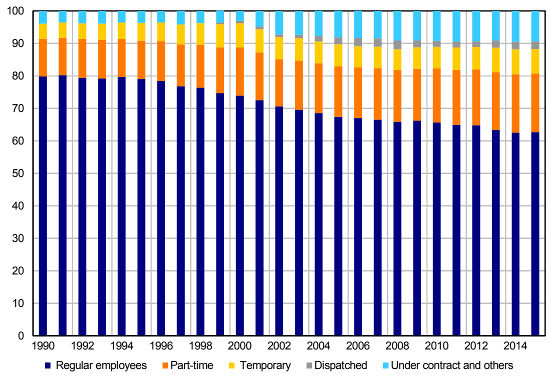
The highly accommodative monetary policy during the 1980s, aimed at moderating the yen's appreciation against the dollar after the 1985 Plaza agreements and **contributed to the emergence of a real-estate bubble and to a sharp rise in corporate debt**–partly fostered by weak financial oversight[1]. The delayed rise in interest rates from 1989 on led to a downturn in the stock market in 1990 and in the real-estate market in 1991. **The yen later appreciated sharply, undermining price dynamics** directly via imported disinflation and indirectly by inciting firms to adjust their labour costs in order to preserve competitive export prices.

The economy, however, proved resilient in the first half of the 1990s thanks to public demand and external trade. The Japanese authorities raised VAT in April 1997 and implemented a consolidation program, depressing domestic demand. On the external front, the end-1997 Asian crisis dragged down exports. **Japan entered deflation[2] in 1998 after these first two shocks and the failure of three major financial institutions.** Thereafter, the efforts by firms to pay down their debts and the downward adjustment in wages contributed to the weakness of the domestic demand and helped to trigger a deflationary spiral.

1.2 Structural weaknesses persisted in the 2000s and were amplified by the 2008 crisis and the Sendai catastrophe in 2011

The downward adjustment in wages continued in the 2000s, despite a return to growth and an improvement in corporate financial positions. This adjustment was facilitated by Japan's labour market which favours life-time employment at the expense of wage and working conditions flexibility[3]. The generalisation of "non-regular" jobs since the 1990s (see Chart 1) and firms' preference for increasing the variable component of wages, it is argued, led households to refrain from adjusting income expectations–despite ad hoc increases–and so to maintain their current consumption level. **Consumption has thus gradually become less sensitive to wage dynamics than to confidence shocks and ad hoc measures to support consumption.**

Chart 1: Regular and non-regular jobs



Sources: Ministry of Health, Labour and Welfare (MHLW).

The 2000s also witnessed an acceleration in population ageing that undermined potential growth. The percentage of over-65s in the total population rose from 23.5% in 2000 to 32.2% in 2012. This increase, coupled with a very low birth rate, has led to a decrease in the total population and the working-age population, which started to decline in the mid-1990s without being offset by immigration flows. **A second direct consequence of population ageing is the rise in healthcare and retirement financing requirements.** The impact on the public finances has, however, been mitigated by the implementation of a stabilisation mechanism called the "macro-slide", which reduces the income replacement ratio (of pensions to earned income) on the basis of pension-system sustainability. **Population ageing also appears to have stimulated Japan's negative price dynamics** (see Box 1).

Box 1: Effects of ageing on Japanese price movements [a]

Population ageing influences prices through changes in the relative price structure. Demographic changes in Japan since the 1990s have amplified the decline in land prices, which have not risen since the sharp drop that followed the burst of the real-estate bubble. This trend eroded household wealth and may have weakened demand and price movements.

Ageing also leads to changes in consumption patterns, as seniors consume more services than goods. The impact of this mechanism, however, depends on how supply adjusts to demand. As it happens, the sharper adjustment in wages–owing to the type of jobs created–appears to have kept prices on a downtrend, particularly in services, despite an upturn in demand.

According to the life-cycle model, however, ageing could stimulate domestic demand and therefore prices via household dissaving behaviour. On the other hand, a dissaving behaviour mainly involving asset repatriation would cause an exchange-rate appreciation and a decrease in imported inflation.

a. Anderson, D., Botman D. et Hunt, B. (2014), "Is Japan's population aging deflationary", IMF, *Working Paper* n°14/139.

(1) Ito, T. and Mishkin, F. (2006), "Two decades of Japanese monetary policy and the deflation problem", *NBER - EASE*, vol. 15.

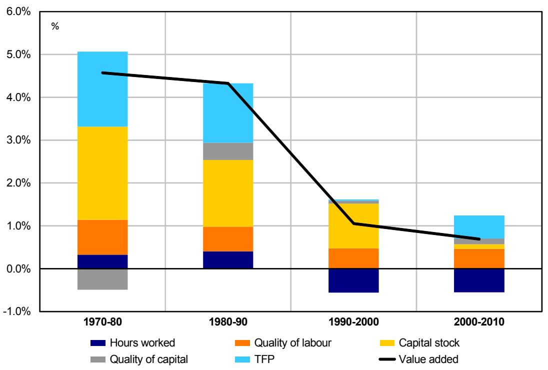
(2) Deflation is a persistent decline in the general price level.

(3) Sicsic, M. and Fortin, A. (2009), "Japan's changing labour market and how it is affecting its growth model", *Trésor-Economics* no. 65.

The gradual integration of new exporting countries into global trade and Japan's inability to steer its economy towards sectors with higher value added have weakened its export performance. Strong growth potential in new markets and the lacklustre performance of the domestic market have driven firms to relocate production abroad.

Given the slackness of domestic demand and exports, Japanese corporate investment in the domestic market has been relatively modest. These trends have led to excess corporate savings, eroding demand and economic growth (see Chart 2).

Chart 2: Contributions to changes in value added in the total economy



Sources: Research Institute of Economy, Trade and Industry (RIETI).

The exogenous shocks of 2008 and 2011 have exacerbated these weaknesses. The 2008 crisis led to a strong appreciation of the yen, which regained its role as a safe-haven currency; this accelerated the transfer of production abroad, since firms could no longer adjust wages downwards. Moreover, the yen's steep appreciation hit the firms that had moved some of their production back home during the depreciation episode of 2004-2006. The triple catastrophe of Sendai in 2011 drove firms to shift more of their production overseas and forced the government to launch several stimulus packages–reviving concerns about public-debt sustainability. With the return of deflation, consumption slackened again, supported only by ad hoc measures.

1.3 Abenomics aims to limit and reverse the impact of structural factors in this environment

Abenomics, an economic strategy focused on three "arrows" (see Box 2), **addresses these weaknesses with the aim of permanently extracting Japan's economy from deflation.** This policy displays a continuity with previous policies, but also breaks with them in several ways. The **first break is the importance attached to overall economic policy**–a contrast with the approach followed by earlier governments, more focused on narrower issues. **A second break is the linkage between the three pillars of economic policy**, whereas earlier growth programmes sometimes gave the impression of being catalogues of measures proposed by different ministries. **The third break concerns monetary policy** (see Table 1). The Bank of Japan (BoJ) has totally altered its stance[4]. The novelty of the Abenomics approach concerns both the objectives and the scale of resources applied.

Table 1: Monetary-easing episodes

Monetary-easing episodes	Implementation period	Monetary-policy instruments	Definition of price stability
Zero Interest Rate Policy (ZIRP)	April 1999 - August 2000	- Interest rates	**April 1999**: "fears of deflation dispelled"
Quantitative Monetary Easing Policy (QMEP)	March 2001 - March 2006	- **CAB** (current-account balance) - JGB purchases (for an amount inferior to the bank notes in circulation)	**March 2001**: "core inflation positive and stable" **October 2003**: "core inflation positive and stable, with a trend confirmed over several months"
Comprehensive and Monetary Easing (CME)	October 2010 - March 2013	- **Asset Purchase Program** (APP): JGBs, private receivables, risky securities (ETFs and J-REITs); ceiling gradually raised - **Loan Support Program:** Growth-Supporting Funding Facility (GSLF), June 2010, and Stimulating Bank Lending Facility (SBLF), December 2012, no ceiling	**October 2010 :** "objective: medium- and long-term price stability" **February 2012:** 1% inflation target **January 2013**: 2% inflation target
Quantitative and Qualitative Monetary Easing (QQE)	April 2013 - present	- **Monetary base:** after end-October easing, annual purchases rose from ¥60 trillion to ¥80 trillion - **Lengthening of average maturity of securities held:** after latest announcements, average maturity of securities held should rise from 5 years to 7-10 years - **Commitment** to maintain policy so long as target is not reached permanently - **Introduction of negative interest rate (January 2016):** –0.1%, which applied to excess bank reserves	**April 2013** : "2% inflation [...] as soon as possible, with a time horizon of approximately two years"

Source: DG Trésor.

This new policy has several objectives (see Box 2). **In particular, the monetary pillar seeks to**: (i) reanchor inflation expectations to promote a decline in real interest rates, (ii) lower the yield curve to reduce financing costs and (iii) encourage portfolio reallocations to increase financing for riskier projects.

(4) This shift involves: (i) arguments about deflation; under previous governors, the BoJ emphasised the structural nature of deflation, thus justifying its reluctance to ease monetary policy, which must follow and not precede structural reforms and fiscal consolidation, and (ii) the commitment to pull Japan out of deflation, materialised by the joint agreement with the government to move out of deflation and by a precise definition of the price stability target.

Box 2: *Abenomics*

Elected in December 2012, Prime Minister Shinzo Abe announced the enactment of a new strategy focused on "three arrows":

- **A flexible fiscal policy** combining: (i) short-term stimulus measures and (ii) medium-term fiscal consolidation to ease fears about public debt sustainability, the government having confirmed the Toronto consolidation targets: a halving of the primary deficit in 2015 from its 2010 level and a primary surplus by 2020, to allow a reduction in public debt.
- **A "quantitative and qualitative monetary easing" (QQE) monetary policy,** which commits the Bank of Japan for the first time to an inflation target (2%, excluding impact of a VAT hike) and a specific time horizon (initially, two years). The BoJ is thus aiming to: (i) double the monetary base by increasing its holdings of public securities and doubling its holdings of risky securities and (ii) lengthen the average maturity of securities held. The Loan Support Program has been modified by adding the Stimulating Bank Lending Facility, with unlimited funding. Monetary policy has been eased several times in response to economic conditions after the VAT increase and the decline in oil prices (see Table 1). In January 2016, the BoJ introduced a negative interest rate[a] on excess reserves.
- **A series of structural reforms** whose prime goal is to drive corporate investment back to its pre-crisis level and return GDP growth to around 2% in the medium term. The government has presented several revised versions of the growth strategy. They confirm the main medium/long-term objectives, raise certain targets (for example, agricultural exports) and add new ones (maintain a population of at least 100 million). A second phase of Abenomics was announced **in September 2015** with the definition of "three new arrows". Official policy now focuses on "a strong economy, childcare arrangements and social wellbeing".

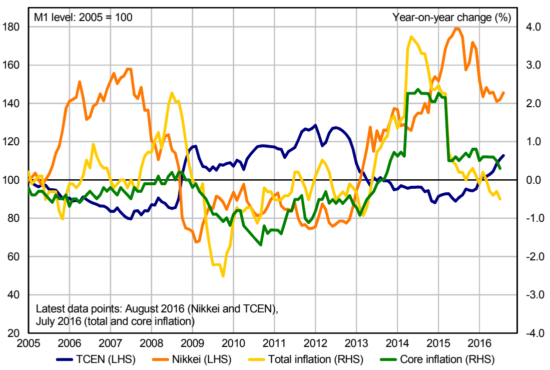
a. The Bank of Japan has followed the European Central Bank (ECB), which introduced a negative interest rate in June 2014 for the deposit facility, also applicable to reserve assets in excess of required reserves. Switzerland, Denmark and Sweden, as well, have introduced negative interest rates. These decisions were motivated by the risk of a strong appreciation of the local currency and/or slack price movements and an economic slowdown.

2. Despite encouraging initial effects, some of the expected mechanisms have not yet materialised

2.1 The confidence shock and the yen's depreciation helped to produce the encouraging initial effects, but these have gradually faded

The breaks with the past introduced by Abenomics generated a positive confidence shock. Financial markets rebounded sharply and the economy was buoyant during the first half of 2013, driven by household consumption and, to a lesser extent, by public demand. **Monetary policy led to a sharp depreciation of the yen, whose main effect was to sustain inflation dynamics** (see Chart 3). Price movements entered into positive territory in late 2013 for the first time since 2008, signalling the main success of Abenomics. More recently, however, the trend has been slowed by the yen's less favourable dynamics and the decline in oil prices.

Chart 3: Financial markets and inflation



Source: DG Trésor, Cabinet Office.

The confidence of private agents has, however, dropped since end-2013, confirming the persistence of structural weaknesses. In particular, firms have been reluctant to: (i) invest despite their favourable financial positions, financing facilities, and negative real interest rates, and (ii) raise wages. This suggests a lingering effect of structural factors and a hesitation by firms to fully endorse Abenomics. **Economic developments after the VAT hike on April 1st 2014 have confirmed these observations.** For instance, private demand has declined sharply–beyond the expectation effects observed in 2014 Q1–and has remained slack ever since.

2.2 Monetary policy has had so far a limited effect on credit growth

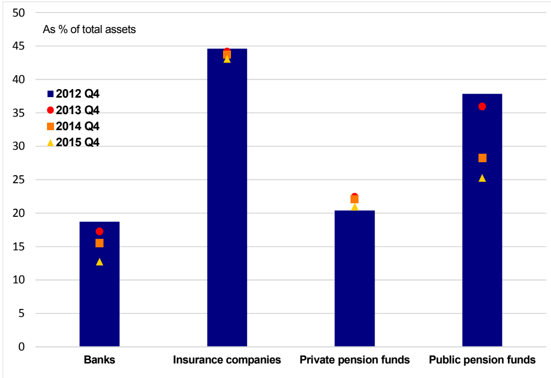
Credit supply was stimulated by the introduction of financing facilities, but these have not sufficed to revive credit. Expectation effects prior to the VAT increase on 1 April 2014 increased credit demand in 2012 and 2013, but the trend has since weakened. Firms have continued to pay off debt and/or invest in financial assets, while rebuilding profit margins.

The yen's depreciation sustained inflation, but its impact on external trade has been limited (see Box 3). **However, the depreciation seems to have adversely affected other private agents.** Small and mid-sized businesses suffer from the weaker currency because of their intermediate position in the economic circuit, which has prevented them from passing on the full rise in their input prices to their selling prices. Households, as well, have been impacted by higher prices because wages have responded weakly.

Financing facilities coupled with very low interest rates have failed to generate a rebound in corporate investment. Firms have continued to give priority to the variable portion of employee compensation (which represents an average 25% of wage income) rather than to basic pay (which, with exceptions, cannot be adjusted downwards, and is also used to determine severance pay). This behaviour underscores firms' persistent doubts about the sustainability of growth and the exit from deflation.

The Quantitative and Qualitative Monetary Easing (QQE) has not triggered massive portfolio reallocations at this stage[5], despite its being one of the main monetary-policy transmission channels in the current zero interest rate environment. The main banks and public pension funds have increased their purchases of foreign assets, following the Government Pension Investment Fund reform. By contrast, insurance funds, private pension funds, and regional banks still display a pronounced domestic bias (see Chart 4). **The recent introduction of a negative interest rate may foster portfolio rebalancing,** particularly by insurance companies, **but its impact on corporate investment is likely to be moderate**.

Chart 4: Japanese Government Bond (JGB) holdings by financial institutions



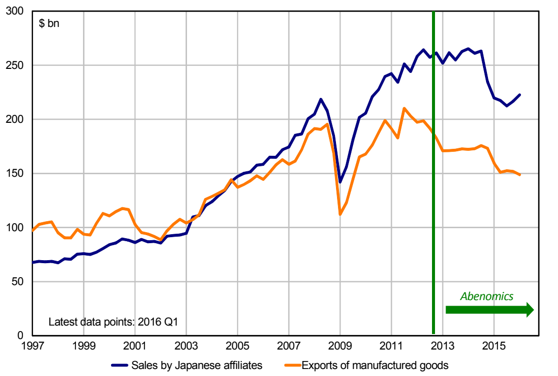
Source: Bank of Japan.

Box 3: **Impact of exchange-rate movements on real exports**

The limited impact of the yen's steep depreciation since mid-2012 on exports is due to the following factors:

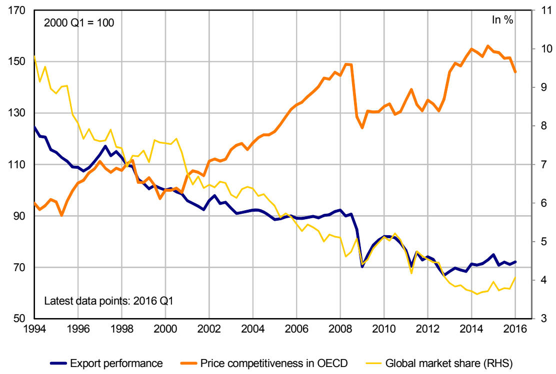
1. The impact of Sendai (2011) on production chains. The triple catastrophe (earthquake, tsunami, and Fukushima) initially interrupted production in the disaster area and, later, power cuts and disruptions in production chains in Japan's most industrialised area (Kantô)[a].
2. Relocation of national production abroad, a trend that gained considerable momentum after Sendai in line with the yen's appreciation (see Chart 5). This structural change promoted the strong transmission of exchange-rate movements to prices-beyond the energy component-via prices of electronic products (now imported).
3. Firms' preference for rebuilding profit margins rather than raising export volume, amid a capacity shortage due to several years of underinvestment and labour-supply constraints. Firms have kept the dollar prices of their exports relatively stable, as in the previous episode of the yen's sharp depreciation in the 2000s (see Chart 6).

Chart 5: Relocation of manufacturing production



Sources: Cabinet Office, METI.

Chart 6: Export performance and competitiveness



Sources: Cabinet Office, OECD, IMF, DG Trésor calculations.

a. Sicsic, M. and Sampognaro, R. (2011), "The impact of Japan's earthquake on the global economy", *Trésor-Economics No.*100.

2.3 The stimulus packages sustained the economy in the short term, but the fiscal consolidation measures exposed the weaknesses of Japan's recovery

The fiscal "arrow" of Abenomics aims to link short-term economic stimulus with medium-term consolidation of the public finances. The timing for linking these two contradictory objectives is hard to find: a premature consolidation can thwart the goals of economic recovery and exit from deflation; conversely, an over-delayed consolidation could destabilise the bond market and limit the benefits of monetary policy.

The greater than expected impact of the VAT hike on April 1st 2014 exposed the weaknesses of the growth drivers excluding stimulus measures. The strong impact of fiscal consolidation measures (or reduced fiscal-policy support) suggests that the Japanese economy cannot grow without official stimuli, making it impossible to move on to the expected fiscal consolidation.

(5) Arslanalp, S. and Botman, D. (2015), "Portfolio rebalancing in Japan: constraints and implications for quantitative easing", *IMF Working Paper* no. 15/186.

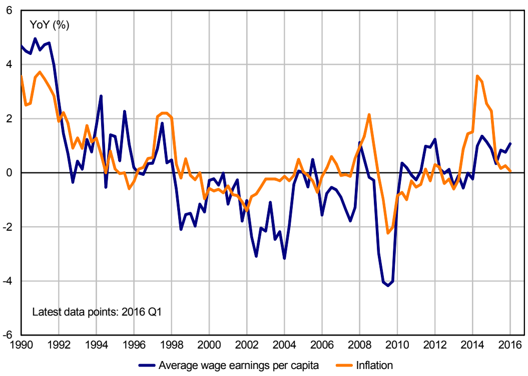
3. Given these mixed results, the success of Abenomics depends, in the short term, on the response of wages and, in the long term, on the enactment of structural reforms

3.1 A more dynamic response of wages would help household consumption and encourage firms to invest

Wage adjustment has played a key role in the sluggiskness of consumption. This has triggered a vicious circle, since the weakness of the domestic market contributes to the weakness of corporate investment, which in turn helps to gradually impoverish the Japanese economy. Faced with sluggish domestic demand, firms have sought new markets and partly shifted production abroad. **A more favourable wages dynamics, particularly of the fixed component, would allow household consumption to be less dependent on ad hoc support measures and to be more closely coordinated with wage movements–triggering price-wage spiral.** The return of inflation between 2013 and 2015 owed much to temporary factors. The impact of declining oil prices and of the yen's milder depreciation on price movements in the recent period has confirmed the weakness of these positive inflation dynamics. A lasting exit from deflation is crucially dependent on wage movements and their capacity to change household expectations.

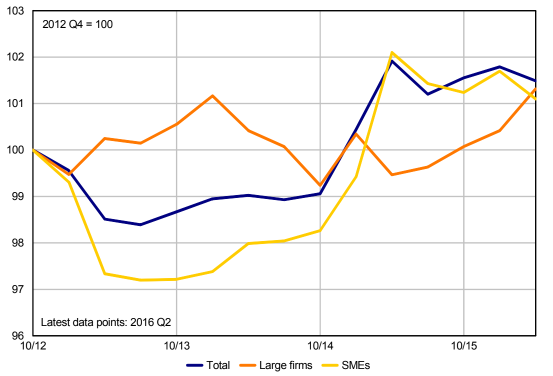
The rise in labour-market tensions, with unemployment at an all-time low, **is starting to put upward pressure on wages** (see Chart 7) owing to sectoral shortages. This effect has been delayed because of the type of jobs created (typically, jobs with weak bargaining power: non-regular jobs and service jobs) and the categories likely to apply for them (older workers and women, who are willing to accept low wages). **Wage negotiations (*shunto*) in recent years have led to pay raises, but only for a minority of employees**–namely, holders of regular jobs and trade-union members in large firms. Small and medium-sized firms have started to raise wages later than larger firms (see Chart 8). This wage movement will need to continue in order to trigger a price-wage spiral that can ensure a definitive exit from deflation.

Chart 7: Average wage earnings per capita and inflation



Source: Ministry of Finance (MoF).

Chart 8: Indicator of gross wages per capita, excluding bonuses, by firm size



Source: National accounts, Cabinet Office.

3.2 Structural reforms target the Japanese economy's weaknesses, but some are still in the planning or implementation stage

The decline in the Japanese economy's potential growth is due to population ageing and a sharp slowdown in productivity gains. Measures to improve the integration of women into the labour market or to promote the market's greater openness to immigrant workers may curb the impact of the decline in the working-age population. However, their implementation is delayed.

Reforms to revive productivity gains are essential for returning the economy to a medium-term growth path of around 2%. An initial priority of structural reforms is unquestionably a better allocation of capital–particularly among firms, whose cash holdings are equivalent to two-thirds of GDP–to more buoyant sectors in order to quicken productivity gains. Corporate governance reform and investment incentives should bring Japan closer to this goal. Measures to reduce labour-market dualism–which keeps one-third of wage-earners in a precarious status and deprives them of training and even social protection–should promote wage growth and innovation via an optimal allocation of the labour factor within firms and sectors.

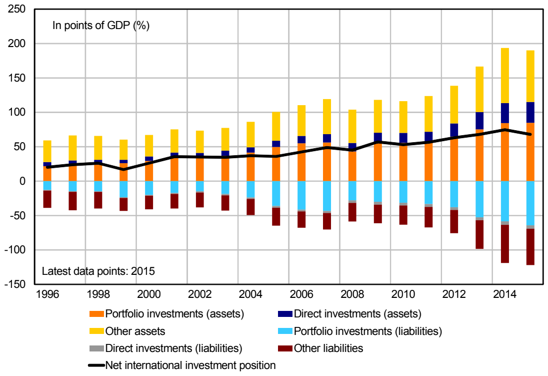
The annual revisions of the structural reform programme introduce new measures, but the enactment of the key reforms must intensify. An initial status report shows progress on corporate governance, a more active management of the world's largest public pension fund, a revamping of regulations to promote a more start-up-friendly ecosystem, and measures to facilitate female employment and the intake of skilled foreign workers. **Several key reforms are still in the planning or implementation stage:** (i) reduction of the labour market rigidities, (ii) redesign of pension, old-age and healthcare systems, (iii) change in level of trade protection of the five "sacred" agricultural commodities (rice, wheat, sugar, beef/pork, dairy products) and reform of the agricultural cooperative system to achieve greater competition, and (iv) establishment of special economic areas (laboratories for testing greater labour-market deregulation, new urban planning rules, and opening to foreign investment). The latter are particularly critical for revitalizing areas faced with a massive rural exodus.

3.3 The enactment of structural reforms would mitigate the risk of a substantial rise in long-term rates on the public debt

Concerns over the sustainability of the public debt, despite its persistently high level, are limited so long as most of it is held by residents. However, an exit from deflation and the gradual disappearance of factors that have contributed to the decline in interest rates[6] should generate upward pressure on rates. In particular, a decrease in national savings due to population ageing and/or a deterioration in the current-account balance could lead to a greater reliance on foreign investors to finance Japanese debt. In all likelihood, these investors will demand higher interest rates[7]. However, Japan's very large external surplus–which makes it the world's number-one lender–may enable it to mitigate the risk by selling off its most liquid assets (see Chart 9).

The effective implementation of structural reforms and further fiscal consolidation efforts should limit these risks. If Japan meets its economic growth targets, it will be able to finance itself at higher rates without accelerating public debt. Meanwhile, further fiscal consolidation efforts should mitigate the risk of an increase in sovereign rates.

Chart 9: Net international investment position



Source: Bank of Japan (BoJ).

Finally, Japan's difficulty in achieving a permanent exit from deflation and the imperative necessity of the reforms to be implemented are an incentive for the developed economies to draw lessons from the Japanese experience–in order to better calibrate economic policy responses to sluggish price growth and lacklustre economic performance, and to curb the deflation risk (see Box 4).

Box 4: **What lessons can be drawn from Japan's experience?**

Sluggish price growth in the euro area since 2012 has led economists to draw comparisons with Japan. In this respect, the Japanese experience offers several possible lessons[a]:

- An economy should have sufficient budgetary margins conduct a flexible fiscal policy in the event of an unexpected shock.
- To avoid a disanchoring of expectations, one should not underestimate the risk of entering deflation and one should prevent that risk. The Japanese experience shows that an effective anchoring of long-term inflation expectations does not, however, ensure against the onset of a systematic decline in prices[b].
- A linkage between the three pillars of economic policy is essential. In particular, the potential disinflationary effect of population ageing is a spur to the rapid implementation of the structural reforms needed to curtail that effect.

Conditions in the euro area are not, however, directly comparable to those of Japan in the 1990s. The Bank of Japan had no specific price stability target and the banking system was vulnerable. The euro's appreciation between mid-2012 and early 2014 is modest by comparison with the yen's surge in the 1990s. Currently, population ageing and the decline in the working-age population are far more limited in the developed countries than in Japan.

a. Lechevalier, S. and Monfort, B. (2016), " *Leçons de l'expérience japonaise: vers une autre politique économique ?* ", CEPREMAP.
b. Bouvard, F., El Kasmi, S., Sampognaro, R. and Tazi, A. (2014), " A spell of deflation in the euro area? ", *Trésor-Economics* No. 130

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(6) Interest rates have been kept low by: (i) persistent deflation and weak potential growth, (ii) margins for an increase in tax revenues, (iii) a highly favourable net international investment position, (iv) a large stock of private saving, (v) a strong domestic bias partly sustained by an ageing population and (vii) large capital inflows attracted by the "safe haven"; see Randall, S. (2013), "Restoring Japan's fiscal sustainability", OECD.

(7) Botman, D., Danninger, S. and Schiff, J. (2015), "Can Abenomics succeed? Overcoming the legacy of Japan's lost decades", IMF.

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