1. PUTTING THE FORECAST INTO PERSPECTIVE: HOW PERSISTENT ARE CRISIS EFFECTS IN THE EURO AREA?

Nine years after the global economic and financial crisis struck in 2008, the euro area is experiencing a moderate expansion of economic activity with robust employment growth. However, several elements suggest that the recovery is still incomplete. The output gap is narrowing but has not yet closed; the unemployment rate remains about 2 pps. higher than before the crisis and is still very high in some Member States; investment remains weak; and the euro area's potential growth has been hit by the impact of the crisis.

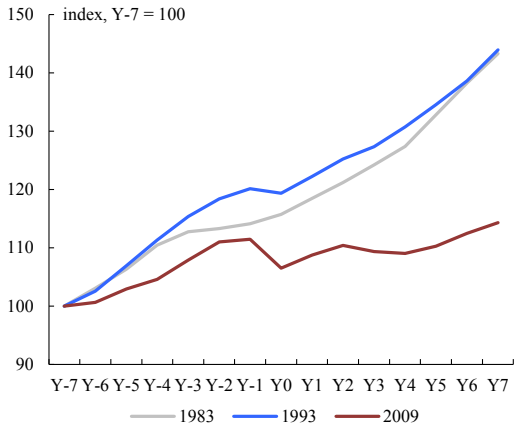
A slow recovery from the financial and economic crisis was expected [1] and has indeed been a feature in many advanced economies following the Great Recession of 2008-2009. But even so, the recovery in the euro area has been particularly slow. Its drawn-out nature carries the risk of permanent damage to productive capacity as highlighted by a number of observers. [2]

Indeed, the observed protracted weakness of investment could become self-reinforcing as expectations of slow potential growth become entrenched. Also some labour-market indicators point to areas where cyclical unemployment is at risk of becoming structural. Left unattended, this could result in a highly persistent [3] crisis impact on the euro-area economy.

The recovery was particularly slow in the euro area

Real GDP in the euro area recovered its pre-crisis level in 2015-Q3, but the pace of growth is slow compared to past recoveries after major recessions (see Graph I.3) and compared to recoveries in other economies/regions (see Graph I.4). To be sure, developments in the euro area were more challenging than elsewhere. The global financial crisis was followed by the sovereign debt crisis (2011-2013) and a fully-fledged recovery started only in 2013. Already before 2008, the growth performance of the euro area was relatively weaker than in other advanced economies; the debt crisis induced an outright decoupling of the euro area from other developed countries, including those that were also hit by the banking crisis. [4] The difference is particularly striking when compared to the US, which was at the epicentre of the global economic and financial crisis.

Graph I.3: **Real GDP, EA-12**



Note: (1) Y0 is the year of cyclical trough in the EA, i.e. 1983, 1993 and 2009. 2009 is also the year when most advanced economies started to recover from the global crisis. For the recovery after 2009, Y7 (2016) is based on the European Commission's Winter Forecasts. EA12 (15) is GDP-weighted aggregate of BE, DE, IE, EL, ES, FR, IT, LU, NL, AT, PT, FI, (SI, CY, MT). 'mean_crisis' is the un-weighted mean of CH, JP, SE, UK, US. 'mean_non-crisis' is the un-weighted mean of AU, CA, KO, NO, NZ.

In the context of the sovereign debt crisis, domestic demand in the euro area was dampened by negative feedback loops between banks and sovereigns and the need for frontloaded fiscal consolidation, while monetary easing was constrained by the zero lower bound and financial fragmentation. Structural deficiencies in labour and product markets and a comparatively less advantageous geographical orientation of external trade added to the slowness of the recovery. [5]

(1) This was highlighted in a number of ECFIN forecasts in the past years, e.g. DG ECFIN (2012). European Economic Forecast – Spring, *European Economy* 1.

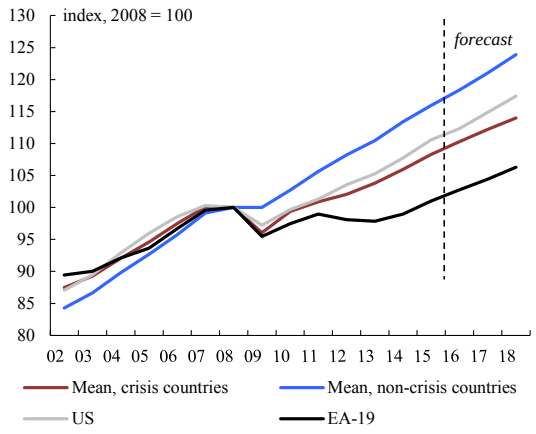
(2) Ball, L. (2014). 'Long-term damage from the Great Recession in OECD countries'. *NBER Working Paper*, No 20185, May. Haltmaier, J. (2012). 'Do Recessions Affect Potential Output?', Board of Governors of the Federal Reserve System, *International Finance Discussion Papers*, No. 1066. Mourougane, A. (2016). 'Crisis, potential output and hysteresis.' *International Economics*', forthcoming.

(3) In what follows, the term "persistent" is used for shocks that take a long time, compared to usual business-cycle developments, to be absorbed. A large literature has developed around the concept of "hysteresis", which, strictly speaking, requires shocks to have permanent effects.

(4) Ruscher, E. and B. Vašíček (2015). 'The euro area recovery in perspective'. *Quarterly Report on the Euro Area* 14(3), pp. 6-18.

(5) Ruscher, E. and B. Vašíček, (2015). Op. cit.. Consolidation efforts were strongest in the years 2011-2013, as reflected in the change of the structural fiscal balance. Since 2015, the fiscal stance has been broadly neutral (see Section I.8).

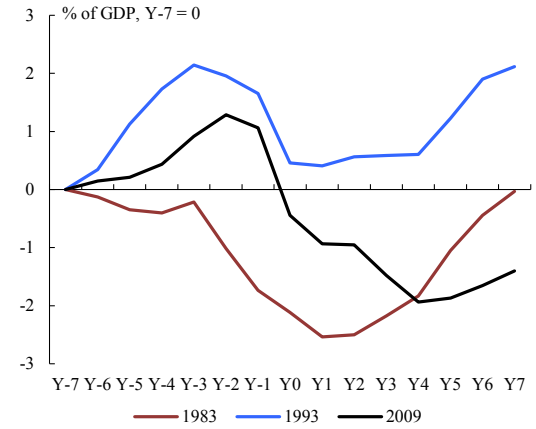
Graph I.4: **Real GDP, advanced economies**



Investment continues to lag behind

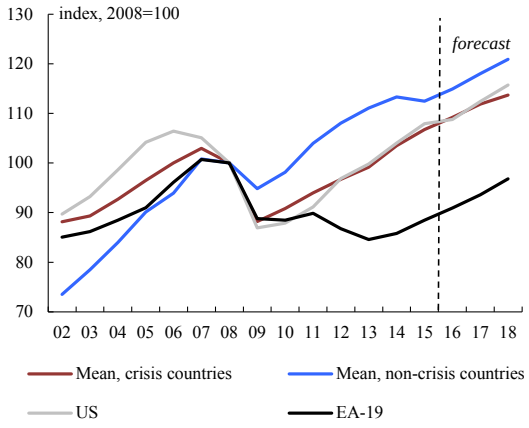
Despite 15 consecutive quarters of GDP growth, investment in the euro area remains weak. The comparison with past recoveries suggests that investment growth in the euro area has so far failed to pick up to a speed that is typical for an advanced stage of recovery. The comparison with other advanced economies shows that investment has remained depressed for far longer than in other crisis-hit countries. Investment as a percentage of GDP in the euro area is still 1.8 pps. below the average of the early 2000s (i.e. before the pre-crisis investment boom) (see Graph I.5).

Graph I.5: **Total investment, EA-12**



A number of factors have contributed to keeping investment low, with different weights at different stages of crisis and recovery. In the initial years, financing constraints played a major role, as banks were first hit by the financial crisis and then, in some Member States, by negative feedback loops between the sovereign and the banking sector. [6] At the same time, firms trying to reduce their debt typically cut back on investment. [7] The importance of these factors has diminished gradually. More recently, a subdued outlook for demand was found to be a major brake on investment, in line with the accelerator model. [8] Finally, firms tend to delay investment when they are faced with high uncertainty. [9]

Graph I.6: **Total investment, advanced economies**



According to this forecast, the drop in investment as a proportion of GDP is not permanent (hysteresis in the strict sense) but, with total investment growth forecast at 2.9% this year and 3.4% next, it is set to be protracted. Assuming investment growth and GDP growth at the rates forecast for 2017, it would take until 2023 for the investment share to recover to 22%, its level in the years 2000-05.

Looking at the components of fixed capital formation, construction investment has collapsed with the onset of the crisis, which in many Member States was related to the bursting of a housing bubble, as was the case in the US. In the euro area, it has bottomed out only in 2014 [10] and is expected to increase at around 3% p.a. this year and next. This leaves its share of GDP

(6) Balta, N. and B. Vašíček, (2016). 'Financial channels and economic activity in the euro area'. *Quarterly Report on the Euro Area* 15(2), pp. 19-3.

(7) DG ECFIN (2014). 'Private sector deleveraging: outlook and implications for the forecast'. Box in European Economic Forecast – Autumn. *European Economy* 7.

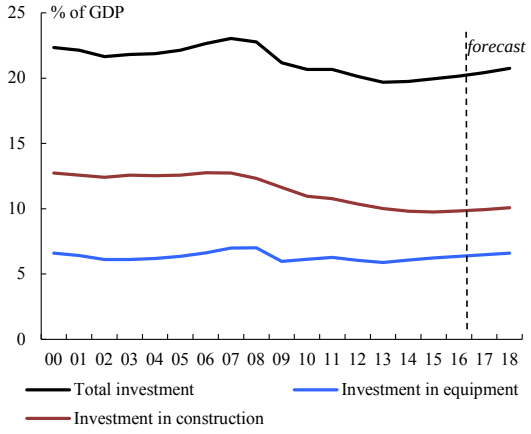
(8) Barkbu, B., S. P. Berkmen, P. Lukyantsau, S. Saksonovs, and H. Schoelermann (2015). 'Investment in the Euro Area: Why Has It Been Weak?'. *IMF Working Paper* 15/32.

(9) Balta, N., I. Valdes Fernandez and E. Ruscher (2013). 'Assessing the impact of uncertainty on consumption and investment'. *Quarterly Report on the Euro Area* 12(2), pp.7-16.

(10) Housing investment in the US bottomed out in 2010.

significantly lower than it was in the early 2000s, before the housing boom, (see Graph I.7). Equipment investment registered a double dip with troughs in 2009 and 2013. By 2016, its share of GDP was similar to the first half of the 2000s.

Graph I.7: **Investment breakdown, euro area**



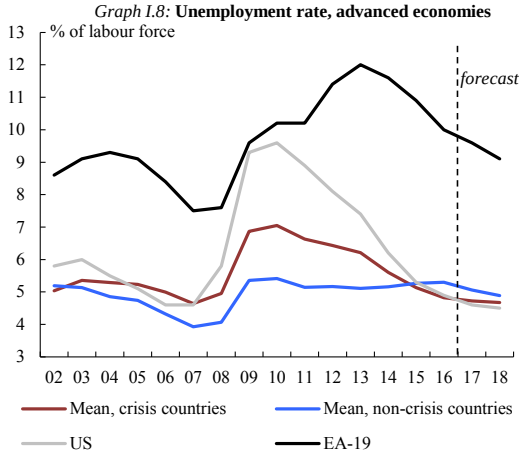
Labour-market healing is incomplete…

The economy has been creating jobs uninterruptedly for three years. Employment growth in the past two years was even surprisingly strong considering the modest rates of GDP growth (see Section I.5). In December 2016, the unemployment rate reached 9.6% of the labour force in the euro area, its lowest level since May 2009. However, supplementary indicators to unemployment signal that slack in the labour market still remains important, but also that there is a risk of elevated long-term/structural unemployment that could be detrimental to the further improvement of the labour market and potential growth.

Even before the crisis, unemployment in the euro area was higher than in other advanced economies (see Graph I.8), arguably reflecting labour-market institutions and structural rigidities. [11] Due to the double-dip recession, the unemployment rate in the euro area peaked only in 2013 (2010 in the US). It currently remains 2 pps. above its pre-crisis level, while the US rate is back to its 2007 level, also helped by a fall in the labour-force participation.

[11] International Monetary Fund (2003). 'Unemployment and labour market institutions: why reforms pay off?', Chapter IV of the *World Economic Outlook*, April.

Graph I.8: **Unemployment rate, advanced economies**



The chances of finding a job decrease with the length of the spell out of employment. Joblessness that started as a cyclical phenomenon can therefore become structural. Forecasting labour market developments thus requires an assessment of which parts of the labour force could be brought into employment relatively easily, representing the cyclical component of joblessness or labour-market slack, and which part of unemployment is structural or at risk of becoming so, making the crisis impact protracted or even permanent. [12] Graph I.9 provides a useful approximation. It displays for different labour-market indicators the impact of the crisis (the difference between pre-crisis levels and the peak) and the most recent reading. The closer the latest reading remains to the peak, the less impact the recent cyclical improvement has had on that indicator and the higher the risk of structural ossification. [13]

…and some segments are particularly affected.

People working part time because they cannot find full-time work or who have withdrawn from the labour market possibly due to the lack of job opportunities (i.e. the 'hidden reserve' of workers [14] are not counted as unemployed. While there is a trend towards more part-time work in general, involuntary part-time work can be expected to fall back to pre-crisis levels as labour

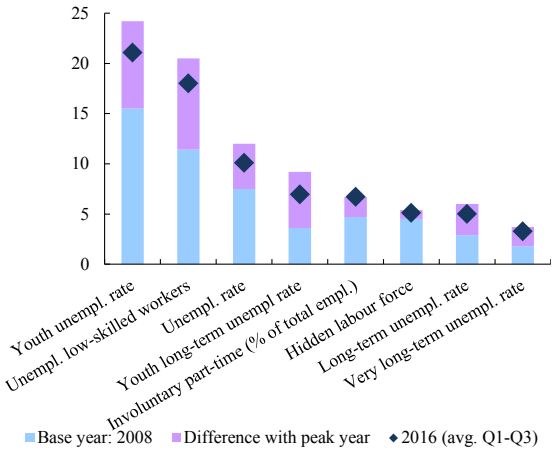
[12] Gali, J. (2015). 'Hysteresis and the european unemployment problem revisited'. *NBER Working Paper* 21430.

[13] Being a simple gauge, this approach cannot distinguish whether a recent improvement is due to cyclical developments alone or to structural reforms. The cyclical impact may thus be overestimated.

[14] The hidden reserve of workers includes "people available for work but not seeking" and "people seeking work but not immediately available".

demand rises. Similarly, the downward trend for the hidden reserve of workers should continue as the recovery of the labour market encourages more and more workers to (re-)enter the labour force. Additionally, further increases in labour-market participation are also warranted in view of population ageing.

Graph I.9: **Labour Market indicators, euro area**



Note: all indicators in % of labour force (unless otherwise specified).

The unemployment rates for the long-term unemployed, the low-skilled and the youth have peaked more than 'headline' unemployment, and decreased at a much slower pace and with a delay (for long-term and the low-skilled). Unemployment among these groups remains at very high levels, suggesting less reactivity to cyclical improvements. The persistence of such 'pockets' of very high unemployment could thus be detrimental to structural unemployment in the future.

Long-term unemployment (people being unemployed for more than 12 months) continued to decline in the first three quarters of 2016, though very slowly. At 5% of the labour force in the first three quarters of 2016, it stood 1 pp. below its peak of 2014, but still more than 2 pps. above its pre-crisis level (of 2.9% in 2008). More worryingly, the average duration of unemployment has increased, and the share of the long-term unemployed now represents half of total unemployment compared to around 37% in 2009. In the US, the share is just 20%. Very long-term unemployment (people who remain unemployed for more than two years) has barely started to decline and counted for 65% of the total long-term unemployed in the first half of 2016.

This may indicate that unemployment is becoming more entrenched. The literature points to several factors that make it harder to find a job the longer a worker remains unemployed: e.g. loss of skills, discouragement as well as signalling effects (employers are reluctant to hire someone who has been unemployed for a long time because they suspect that the long unemployment spell signals poor performance). [15] All this suggests that long-term unemployment has a negative impact on structural unemployment, labour-force participation and thus potential growth.

Young people and the low-skilled have been among the groups most affected by the crisis. Youth unemployment rate skyrocketed in the aftermath of the crisis to 24.4% in the euro area in 2013 and at 21% in 2016 remains very high by international and historical standards. Despite the positive trend, one should remember that prolonged spells of unemployment can cause long-lasting damage to the career of young people, reducing their future wages and opportunities. This is notably due to the lack of on-the-job training as well as the depreciation of knowledge and skills which tend to increase the risk of social exclusion. [16] Moreover, during the crisis years, the positions they do manage to find, given the competition on the job market, might well involve a lower rate of pay and less favourable career prospects than they could expect in less adverse circumstances. [17] So the economic crisis has potentially scarring effects on young people. The loss of knowledge and skills for a significant

[15] Becker G. (1962). 'Investment in human capital: a theoretical analysis'. *Journal of Political Economy*,70(1), S9-S49.; Spence M. (1973). 'Job market signalling'. *Quaterly Journal of Economics*, 87(3), 355-374. Mortensen D. (1986): 'Job search and labor market analysis'. *Handbook of Labor Economics*; Knabe, A. and S. Rätzel (2011). 'Scarring or Scaring? The Psychological Impact of Past Unemployment and Future Unemployment Risk'. *Economica* 78, pp. 283–293. Ekert-Jaffé, O and I. Terraz (2011). 'The scarring effect of unemployment in ten European countries: an analysis based on the ECHP'. BETA Document de Travail n° 2011 – 09.

[16] Gregg P. and Tominey E. (2005). 'The wage scar from male youth unemployment'. *Labour Economics*, 12, 487-509. Nordström Skans, O. (2011). 'Scarring Effects of the First Labor Market Experience'. *IZA Discussion Paper* No. 5565, March. Mroz, T.A. and T.H. Savage (2006). 'The Long-Term Effects of Youth Unemployment'. *Journal of Human Resources* 41(2), Spring, pp. 259-293.

[17] The youth making the transition from education into work during crisis years and experience a spell of unemployment as a result face more difficulty in remaining in employment throughout their working life and receive lower lifetime earnings than those beginning their working career during more favourable times. Fondeville, N and T. Ward (2014). 'Scarring Effects of the Crisis'. European Commission *Social Situation Monitor Research Note* 6/2014.

number of youth not being employed for a long period of time could reduce the average productivity of the workforce and eventually lower potential growth.

A different approach to distinguishing the cyclical and structural components of unemployment consists of comparing headline unemployment to an estimated measure of structural unemployment. DG ECFIN estimates a non-accelerating wage rate of unemployment (NAWRU) as part of its assessment of potential GDP growth and output gaps. The euro-area unemployment gap in 2016 is estimated at 0.9 pps., down from 2.5 pps. in 2012 (see Graph I.10). By comparison, in the US, the unemployment gap is estimated to have closed in 2014. It should be noted that the estimated NAWRU does also move with the cycle.

Looking at the different indicators in conjunction suggests that once full employment is reached, further employment growth can tap into slack that is still present (low number of hours, hidden labour force), but that a swift and continued reduction of unemployment would become more and more difficult to achieve in the medium to long-term particularly if a high share of long-term unemployment persists.

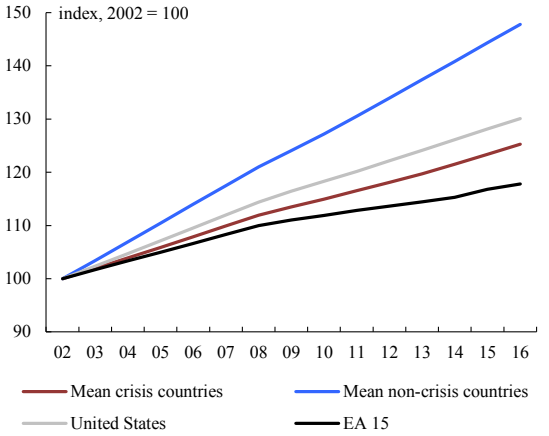
Graph I.10: **Unemployment and NAWRU, euro area**

Lingering effects of the crisis interact with potential growth

Euro-area potential GDP growth has fallen from close to 2% in the pre-crisis years to just ½% in the aftermath of the crisis and has recovered only partly to 1.1% in 2016. It has been affected by the crisis as structural unemployment (in this context the NAWRU) has reduced the labour contribution to potential GDP while the investment shortfall has reduced the capital contribution and productivity growth as new technology is adopted less quickly. The contributions of labour and capital to potential growth declined by a similar amount during the crisis. The crisis has compounded longer-term negative trends of decelerating total factor productivity and population ageing, not fully compensated by a trend of increasing labour-market participation.

The international comparison shows that the Great Recession and the sovereign debt crisis have exacerbated the differences in potential growth with other regions (see Graph I.11).

Graph I.11: **Potential GDP, advanced economies**



Based on the present forecast, the very modest recovery in potential growth over the forecast horizon suggests a persistent impact of the crisis on the growth potential.

Looking further ahead, despite the continued decline in the "headline" unemployment rate, the probability that a non-negligible share of cyclical unemployment becomes structural or that difficult career starts for young workers transform into lower productivity cannot be ruled out. If unaddressed, these issues could contribute to persistently lowering the contribution of labour to potential growth. On the side of investment, long-lasting effects could stem from a negative feedback loop, as low investment reduces the growth potential and the anticipation of a lower economic growth potential reduces the incentives to invest.