

Why is investment in the euro area continuing to show only weak recovery ?

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Introduction

In the aftermath of the global financial crisis, investments in the euro area were cut dramatically and, eight years on, they have not yet returned to their pre-2008 levels. Investment is a significant, highly cyclical component of demand and its steep fall and subsequent weak dynamics to a large extent explain the seriousness of the recession and the uphill struggle to return to growth in the euro area. Low levels of capital spending do not merely depress demand but also undermine an economy's long-term growth potential, getting in the way of the broadening of the capital stock and the spread of innovative technologies, and so putting the brakes on wealth and job creation.

This article sets out to explain the recent developments in euro area investment. More specifically, it explores the factors hindering a capital spending revival and the European policy initiatives that have been taken to remedy the situation.

The article is structured as follows: a first, rather more descriptive section, investigates whether the post-crisis investment dynamics in the euro area are exceptional, both from an historical and international context. After all, past financial crises also brought lengthy periods of slow investment growth in their wake and the current crisis has not left capital spending unscathed in other advanced countries. Next, our analysis gauges whether subdued investment trends are a general phenomenon

affecting the euro area or whether they have only hit selected countries and investment components which had recorded extraordinarily strong expansion prior to the crisis – in which case the decline would represent a normal correction of an untenable situation, in which past accumulated excess capacity is being reduced.

Section 2 focuses on business investment. More than government spending or investment in residential property, capital spending by companies is a key driver of an economy's production potential and competitiveness. Subdued economic growth and excess capacity have reduced the need for capital spending, but a weak business cycle alone does not explain business investment dynamics. Other factors, as legacy of the financial crisis, also depress investment to a lesser or greater degree, e.g. a high level of indebtedness, less favourable borrowing conditions and uncertainty.

We cannot rule out that, in addition to these short- and medium-term influences, a number of fundamental changes in the past decades may have impacted underlying investment development. Secular trends such as demographic changes and globalisation, as well as the shift to a service-based economy, are addressed in section 3. The final section assesses initiatives taken at European policy level in response to weak investment growth, before drawing a number of conclusions.

1. Investment in the euro area: recent developments

Unusual downturn from global and historical perspectives

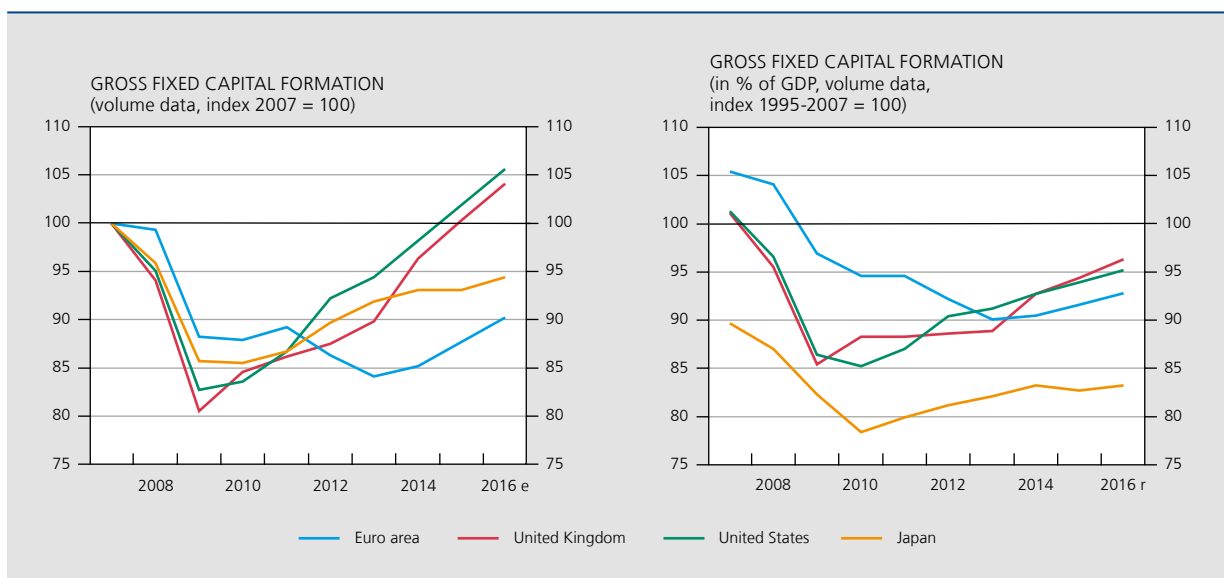
The initial impact of the financial crisis on capital spending in the euro area appeared less worrisome than in the other major advanced economies, as investment volumes contracted even harder in the United States and the United Kingdom in 2009. But with capital spending staging a firm recovery in these two countries in the two years after, the differences were minor during the first phase of the financial crisis. By 2012-13, however, euro area investment resumed with its fall in the wake of the sovereign debt crisis, pushing the euro area straight back into recession. Since then, Europe's recovery has been subdued. Investment volumes may have been inching up since the end of 2014, but the European Commission's spring projections (EC, 2016b) suggest that their level in 2016 would still remain well below pre-crisis peaks⁽¹⁾. In the United States, the United Kingdom and Japan, by contrast, the recovery carried on and capital spending in the former two countries has in the meantime surpassed its pre-crisis highs in real terms.

(1) We should remark here that euro area investment has recently staged an unexpected advance, recording a surprisingly dynamic increase in the fourth quarter of 2015 and turned into the largest contributor to economic growth then. However, a variety of one-off factors would seem to have been the cause, as the first quarter of 2016 saw this uptick decelerate. The EC is predicting capital spending growth to further moderate as 2016 progresses.

Note, however, that this pre-crisis level is only a snapshot of the state of play at the time. Taking as our reference the average ratio of investment-to-GDP measured over a longer period of time, i.e. 1995-2007, in the euro area, the latter happened to be higher than its long-term average in the year before the financial crisis broke – a possible symptom of an unsustainable situation, and unlike in the United States and the United Kingdom, where investment as a percentage of GDP was around these countries' averages in 2007. Japan's ratio was even below average at the time, reflecting years of decline after its asset bubble burst in the early 1990s. In view of this, the fall in the euro area's investment ratio may be argued to comprise a persistent component in as much as it is a correction to previously excessive capital spending. This aside, however, investment-to-GDP in the euro area still languishes well below its long-term average, while the American and British ratios are already drawing closer.

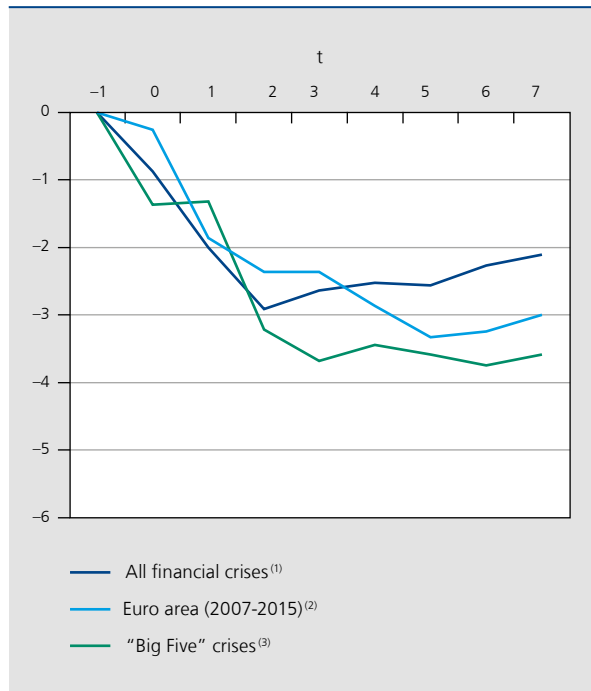
From a historical perspective too, euro area investment ratio developments are also fairly exceptional. IMF research (2014a) into the repercussions of financial crises since the 1970s found that such crises typically come with a deep recession, followed by a rather slow recovery, as it takes time to address imbalances – e.g. excessive debt – built up in the run-up to the crisis. What is more, investment tends to be more volatile and cyclical than other spending components and is typically also harder hit in times of crisis. A 'normal' financial crisis would see the investment-to-GDP fall by an average three percentage points three years after its onset, and the IMF puts this at nearly four

CHART 1 INVESTMENT: AN INTERNATIONAL COMPARISON



Source: EC.

CHART 2 INVESTMENT: A HISTORICAL PERSPECTIVE
(in % GDP, volume data, percentage points)



Sources: EC, IMF.

- (1) The full sample of financial crises between 1970 and 2007 as identified by Laeven and Valence (2012).
- (2) $t = 0$ captures the onset of the financial crisis. This is 2008 for the euro area.
- (3) Spain (1977), Norway (1987), Finland (1991), Sweden (1991) and Japan (1992).

percentage points for the worst systemic crises. The effects tend to be quite persistent and it can take years for the investment ratio to return to its earlier levels.

Initially, the investment ratio in the euro area had all the hallmarks of a 'normal' financial crisis. The first few years saw capital spending cut back by as much as one would expect and it started to revive post-crisis, yet at a clearly slower pace. However, the second shock – i.e. the sovereign debt crisis – nipped the tentative recovery in the bud and prompted a fresh adjustment of the investment ratio to well below the average for normal financial crises, and more in line with the overall falls recorded in five other full-on systemic financial crises. This double-dip pattern is the great marker of the current crisis.

Broad and steep falls across sectors and Member States, followed by a subdued and a heterogeneous recovery

In the early stages of the crisis, the decline of investment was a generalised phenomenon, falling across sectors and Member States. This followed a period of robust

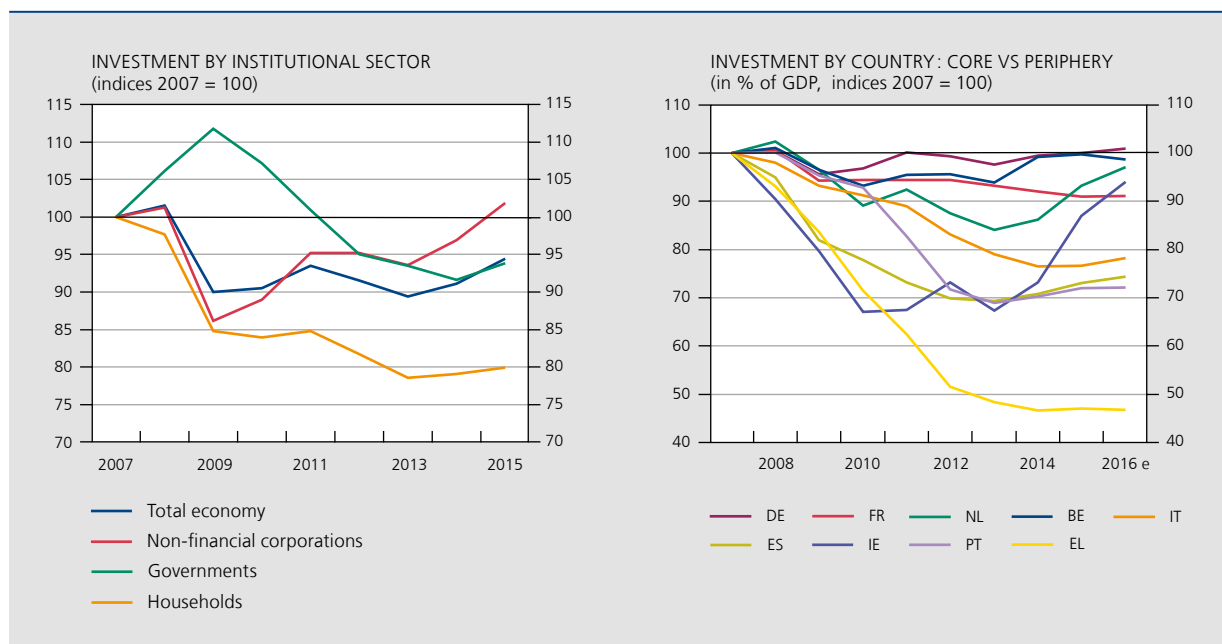
investment⁽¹⁾ dynamics in a number of countries – particularly in residential property. Both household investment, which more or less corresponds to residential property spending, and investment by non-financial corporations had shrunk by 15% by 2009. Having first stabilised, household investment contracted further and did not reach its nadir until 2013, at nearly 20% below its pre-crisis showing. It has since recovered slightly. By contrast, business investment started to pick up in 2010 and exceeded pre-crisis levels by 2015⁽²⁾. Diverging trends in government investment are explained by fiscal stimulus in the early years after the crisis, followed by fiscal consolidation. In 2008, and more particularly in 2009, government investment continued to stage significant growth on the back of infrastructure spending by euro area Member States under the European Economic Recovery Plan. From 2010, not until this plan had run its course and the necessity of fiscal tightening became apparent did government investment undergo a sharp contraction. However, more recently – in 2015 – government investment has started to inch up thanks to slightly more accommodative fiscal policies. In all, household investment accounted for more than half of the drop in total investment in the post-crisis period.

A closer look at investment in the euro area's biggest Member States and in some peripheral countries reveals a general downward trend, but also that Greece, Ireland, Spain and Portugal recorded the steepest falls. Before the crisis, these four economies were characterised by unsustainable macro-economic conditions, e.g. excessive debt and overcapacity in the residential property market, that eventually contributed to triggering the euro debt crisis. All four⁽³⁾ received financial assistance in return for economic adjustment programmes aiming at fiscal health among other goals, by cutting government investment to meet programme requirements. With the exception of Greece, their investment has bottomed out and Ireland's in particular is on the mend.

After its initial slowdown, the investment situation in a number of other euro area countries – such as Germany, the Netherlands and Belgium – took a turn for the better in 2011 but the subsequent euro debt crisis combined with moderate growth prospects kept capital spending at more moderate growth in the next few years, albeit that Germany bucked the trend in 2007. The EC's spring projections (EC, 2016b) see no immediate robust investment growth for these countries, the Netherlands being the exception. Most notably, France and Italy, two of

- (1) Data for investment by sector are only available in value. The rise in the investment deflator explains the difference between the total investment decline in the 2008-15 period by value and by volume (chart 1).
- (2) Investment in equipment – a key component of business investment for which volume data are available – was still some 5% below pre-crisis levels by 2015 in real terms.
- (3) Cyprus also received financial assistance and implemented an economic adjustment programme.

CHART 3 INVESTMENT: EURO AREA INSTITUTIONAL SECTORS AND COUNTRIES



Source: EC.

the biggest countries in the euro area, have not shown any clear signs of reviving investment since 2009. In fact, Italy has been facing a protracted and uninterrupted fall of over 20 % in cumulative terms when compared with 2007, while the same figure works out at around 10 % for France. This is worrying, as these two countries are not merely big players in the euro area – they were also not, or much less, bogged down by macroeconomic imbalances than were the peripheral countries when the crisis hit; their investment declines cannot therefore be interpreted as a correction of excessive pre-crisis spending.

In part, then, weak investment in the euro area may be explained as an adjustment to previous excessive spending and to overcapacity in the pre-crisis period, particularly of household investment in residential property, which were more pronounced in some Member States than others. As we have observed, these effects may be quite persistent as excess capacity needs to be eliminated before the investment ratio can pick up, if to a lower, more sustainable level than before. We would do well to recall that the crisis in German construction dragged on for years after the property boom of the first half of the 1990s: having peaked in 1994, it took 15 years before investment in residential property had recovered a little relative to GDP, and even in the first quarter of 2016 this investment ratio was

still nearly 25 % below record highs notched up 20 years previously.

All that said, weak investment in the euro area has not been limited to countries that had seen property bubbles, and households are not the only part of the economy feeling the pain; other sectors have also been affected. The next sections now move on to investigate the possible reasons for disappointing investment. Section 2 looks at the short-term situation and focuses on business investment. Section 3 covers a number of longer-term trends.

2. Explaining recent business investment developments

In the euro area, business investment has also remained mediocre since the financial crisis. The category of business investment accounts for the largest part of total investment – around 55 % – and is therefore also a key demand component. It is vitally important for sustaining and expanding an economy's growth potential – more so than investment in residential property or government investment.

The economic literature suggests a variety of factors that may influence capital spending decisions of corporations. Traditional determinants are (expected) demand and earnings, as well as the real cost of capital. More recent research⁽¹⁾ points to the importance of other

(1) See Barkbu *et al.* (2015), IMF (2015), IMF (2014b).

factors such as a corporation's financial health (including its debt ratio and cash position), access to sources of external funding (e.g. bank lending conditions, market-based funding), and uncertainty. In the aftermath of the financial crisis, some or all of these factors may also help to explain more particularly weak investment dynamics.

A simple econometric model demonstrates that business investment is trailing what might be expected in view of GDP developments, both in the euro area at large and for most individual countries. If we add into our basic model a number of the factors as discussed above, a more comprehensive explanation of lacklustre investment emerges for quite a few of these countries.

Weak economic growth and the accelerator model

According to the simplest available investment model (the accelerator model), corporations are mainly driven by their expectations of demand. Empirical research shows that

(1) Only nominal data and no volume data are available for business investment, and various proxies have been proposed in the literature. A number of researchers have deflated nominal business investment using the total investment deflator. Others, such as the EC (EC, 2013) use real non-residential investment, as this consists primarily of business investment given its small proportion of public investment. This article has adopted the latter approach.

this model generally explains business investment trends fairly well⁽¹⁾.

A protracted period of little or even negative economic growth – the deep recession post-financial crisis, the subdued revival in 2010-11, the double-dip GDP contraction in the wake of the sovereign debt crisis and, subsequently, the tentative recovery and tepid outlook for the following couple of years – has made it less imperative for corporations to expand their production capacity.

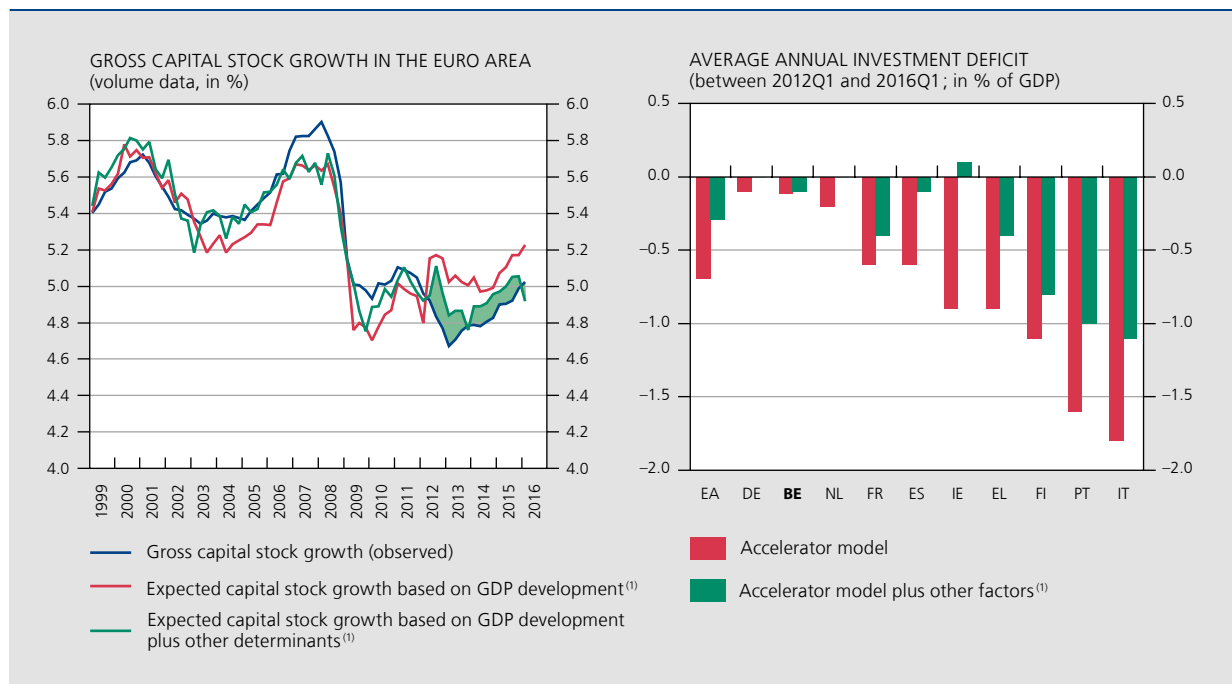
The standard specification of the accelerator model is:

$$\frac{I_t}{K_{t-1}} = \frac{\alpha}{K_{t-1}} + \sum_{i=1}^N \beta_i \frac{\Delta Y_{t-i}}{K_{t-1}} + \delta + e_t$$

The hypothesis underpinning the model denotes that changes in the desired (net) capital stock (K) are proportional to changes in GDP (Y). The desired capital stock – factoring in its depreciation (δ) – then determines gross investment dynamics (I).

The model largely explains trends in capital spending since 1999, confirming the exceptional nature of the investment boom in the run-up to the financial crisis (2004-08) and the fiscal stimulus support to economic activity in the 2009-10 period, which came in the shape of infrastructure

CHART 4 LAGGING INVESTMENT DYNAMICS RELATIVE TO GROWTH AND ADDITIONAL FACTORS



Source: NBB calculations based on IMF (2015).

(1) Expected capital stock growth is the outcome of an estimate by the so-called accelerator model, plus additional factors where necessary, e.g., real bank lending rates, corporate debt ratios, financial restrictions on production and political uncertainty.

spending among other investment. Since 2012, at the culmination of the sovereign debt crisis, investment has dipped below what might be expected based on economic growth, both in the euro area at large and in most individual countries. As a percentage of GDP and on an annual basis, the average investment shortfall is largest in Ireland, Greece, Finland, Portugal and Italy, while it is very small in Belgium, Germany and the Netherlands.

As GDP trends fail to explain the lack of momentum in investment volumes since 2012, we are expanding the accelerator model to include other potential determinants, with a number of factors qualifying as candidates in the euro area⁽¹⁾.

Funding conditions

Companies often need to rely on external funding resources if they are to realise their investment projects. In the euro area, they typically turn to bank lending rather than tapping the markets by issuing debt or equities – this was the typical external funding structure for non-financial corporations right up to the financial crisis. This crisis, which hit both banks and companies hard, triggered a sharp contraction in the flow of bank credit to companies and a short-lived revival was subsequently wiped out by an even harder squeeze related to the sovereign debt crisis. It would appear that bank lending is now reviving somewhat, while the shortfall in bank loans during the crisis was partly offset by higher issuance of debt securities, whose funding costs were sharply down because of financial investors' search for yield.

The market for corporate bonds remains fairly limited in size and offers a real alternative only to bigger corporations. Only in France, whose companies tend to be larger than in many other countries of the euro area, does the corporate bond market appear to be a stable funding instrument, and the French corporate bond segment accounts for around half of all euro area issuances. Germany and Italy, by contrast, account for issuance of no more than 10% and 13% respectively of all corporate bonds in the euro area.

Post-crisis bank lending to non-financial corporations has been dismal in all euro area countries, but particularly in the Member States that were hardest hit by the financial crisis and which, more often than not, had enjoyed significant credit growth in the period leading up to the crisis,

such as Ireland, Spain and Portugal. Both demand and supply factors contributed to the downturn in credit volumes. On the demand side, companies shelved their capital spending plans to wait out the economic situation and so needed less external funding. On the supply side, euro area banks to a greater or lesser degree faced increasing non-performing loans and depreciation, liquidity shortages and reduced profitability. They also found themselves subject to new and stricter regulation, including more demanding capital requirements. Coping with the legacy of the crisis in a weak and uncertain business cycle, banks became more selective when granting new loans – even more severely so in the more vulnerable countries. The seriousness of the recession deeply impacted their balance sheets and increased credit risks. Worse, the financial crisis, and particularly the sovereign debt crisis, fragmented the financial markets in the euro area and made it difficult for banks in these countries to find funding at reasonable conditions. In response, the Eurosystem introduced a variety of non-conventional measures to meet banks' liquidity needs directly. Its efforts were unable to prevent the emergence of an unequal playing field in credit supply in the euro area, with vulnerable Member States facing higher lending rates and tighter credit conditions that may well have curbed investment.

That said, the highly expansionary monetary policies pursued by the Eurosystem since the onset of the financial crisis have brought the euro area historically low interest rates, including those on bank lending to companies, in the core countries at least. The increasingly urgent search for yield in the markets also reduced yields on corporate bonds to all-time lows and sparked rallies in the equity markets.

Having become even more marked from 2010, when the crisis had turned into a sovereign debt crisis and one country after another (Greece, Ireland, Portugal and Spain) proved in need of financial aid, the above-mentioned financial fragmentation also created greater divergence in the interest rates that banks in the various Member States charged to companies, through the effects of the negative feedback loops between the financial sector and the government sector. Eurosystem cuts in base rates in 2011 and 2012 failed to feed through into bank lending rates, suggesting that monetary transmission mechanisms were dysfunctional. From mid-2012, rates started to converge again following the announcement by the ECB President of far-reaching measures. These materialised in the autumn of 2012 when the ECB's Governing Council approved the OMT (outright monetary transactions) programme. A fresh drive towards greater convergence started in 2014 in the shape of a number of supplementary non-conventional measures by the Eurosystem, culminating in the

(1) For ease of understanding, we have divided the euro area into three distinct groups of countries that score more or less the same on the additional factors: the core countries of the euro area (Germany, France, the Netherlands, Belgium, Finland), the programme countries (Greece, Ireland and Portugal) and the "in-betweens", i.e. Italy and Spain.

announcement and implementation at the start of 2015 of the expanded asset purchase programme (APP).

Yet the gap between the euro area countries remains wide, as it also reflects the very different credit risks in the various countries as well as the solvency of their banks. In addition, the fall in inflation and inflation expectations has caused real interest rates to rise since 2013⁽¹⁾.

Steeper interest rates may not be the only thing putting companies off capital spending; they may also face funding restrictions as banks impose stricter lending conditions. The ECB's bank lending survey, for instance, showed that tighter credit conditions were a major curb on funding for non-financial corporations in the shape of lending in the early days after the onset of the financial crisis and at the height of the sovereign debt crisis, particularly in programme countries. Since then, nearly all euro area countries report a net easing.

More relevant even than what banks report is how companies themselves perceive their funding options. The EC's quarterly business confidence survey also investigates any factors that might hamper production. Across the euro area, companies have recently been reporting fewer financial

restrictions, but clear differences remain and – particularly in the programme countries – companies continue to identify funding as an issue. We should also note that even in the core countries these figures have yet to recover to their pre-crisis levels. An alternative indicator is the survey on the access to finance of small and medium-sized enterprises (SAFE) jointly conducted by the ECB and EC every six months. It finds that, unlike large corporations, SMEs in the programme countries continue to report funding shortfalls. More than large corporations, SMEs rely heavily on the banking sector which in some countries is still not on an even keel. By unfortunate circumstances, SMEs – whether considered in terms of employment or added value – account for a large proportion, way above the euro area average, in Greece and Portugal but also in Italy and Spain, making their funding issues even more acute.

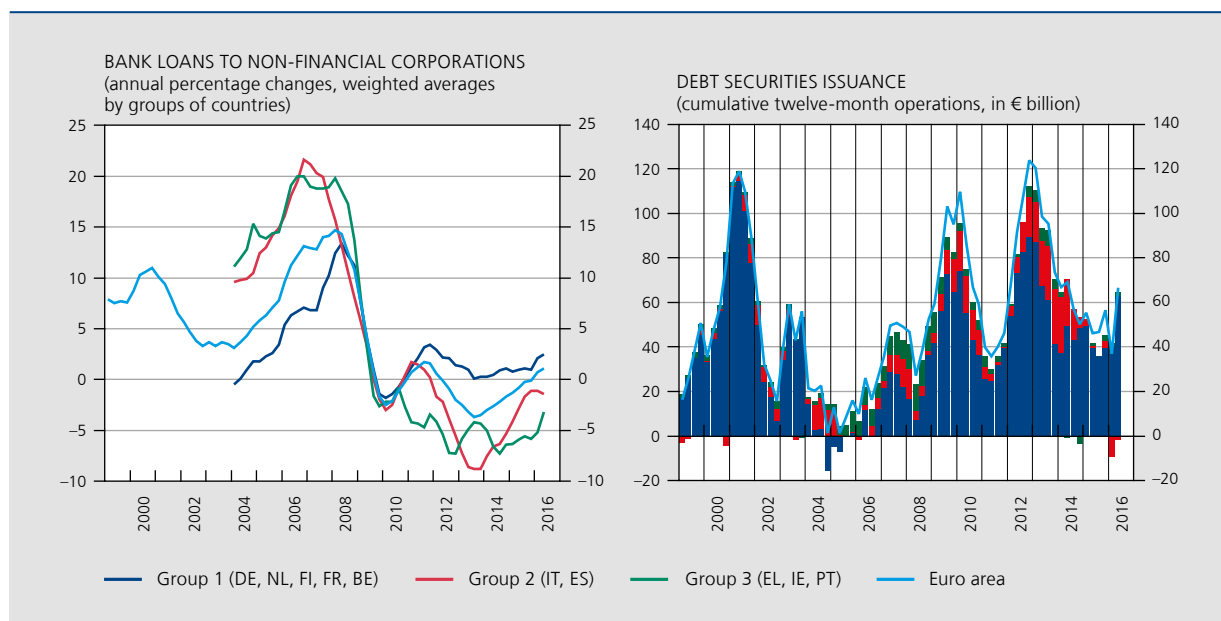
Business surveys to a large degree confirm the outcomes of the bank lending survey, in as much as the past few years have seen greater relaxation of credit conditions and easier access to funding. That said, banks would appear to be taking a more upbeat view of the situation than companies, and *a fortiori* SMEs in the vulnerable countries.

Deleveraging

The years before the financial crisis had seen a rapid credit expansion, triggering surging debt ratios at non-financial

(1) Real interest rates are typically calculated using inflation expectations, which have remained more stable than inflation data. However, inflation expectations are available only for the euro area and for some of the largest Member States.

CHART 5 FALLING CORPORATE BANK LOANS AGAINST INCREASING ISSUANCE OF DEBT SECURITIES



Source: ECB.

corporations in the euro area. Supported by sanguine growth expectations, low risk perception and easy credit conditions, these debt dynamics in their turn underpinned relatively fast economic growth, rising asset prices and a general climate of optimism. A self-reinforcing interaction emerged between credit expansion and – the perception of – the economic situation, resulting in high debts which, as the financial crisis laid bare, made companies exceedingly vulnerable to shocks. The crisis ushered in a drastic reversal in market sentiment, upward revisions of risk, falling asset prices and a deep recession, all factors affecting expected income flows, repayment capacity and companies' credit ratings.

Corporations may find themselves under pressure to reduce their debt positions for different reasons. First off, they may decide to restructure their balance sheets of their own accord in order to better handle any additional shocks. Also, against a background of economic recession and subdued recovery, companies may shelve their capital spending plans, and therefore be in less need of immediate access to additional loans. Supply factors may also prompt deleveraging when banks prove more selective in their loan offerings. The latter channel may be significant for smaller companies that have less access to alternative funding. Whatever the reasons or context may be, deleveraging can be a major drag for business investment.

In the aftermath of the crisis, most countries embarked on a deleveraging process, as witnessed by the decline in debt ratios of non-financial corporations from their previous peak levels. That said, the reduction was rather limited overall and amounts to a mere fraction of the rises recorded in the run-up to the financial crisis. One reason is the poor economic growth of the past few years, as deleveraging efforts through negative credit flows – both demand and supply-driven – and the consequent reduction of outstanding nominal debt were in part offset by contracting economic activity and low inflation. In Greece, the fall in GDP virtually wiped out the benefits of active deleveraging.

Today's debt levels suggest that non-financial corporations might well continue to deleverage, as in fact is necessary if debt ratios are to become more sustainable. However, sustainability is a complex concept on which there is no consensus, neither on its definition nor on an

appropriate measure. As a result, a variety of researchers have plumped for multi-dimensional approaches, with country-specific factors also coming into play in many of these, leading to a benchmark per country. Recent estimates by the EC, based on the methodology proposed by Bricongne *et al.* (2016)⁽¹⁾, suggest that, at end-2014, non-financial corporations needed to engage in additional deleveraging, particularly in Ireland, Portugal and Greece and to a lesser degree also in Spain⁽²⁾⁽³⁾.

Uncertainty

Uncertainty is also frequently cited as a conclusive explanation for subdued investment dynamics in the euro area, as research⁽⁴⁾ finds that companies will put off investment decisions in an unpredictable environment until more information becomes available. Such behaviour is attributable to a feature specific to capital spending, i.e. its irreversibility. Once made, an investment is typically difficult and costly to dismantle and its remaining value often a mere fraction of its original cost. In addition, uncertainty influences lenders, who are likely to charge a higher risk premium in their lending rates and to impose more stringent terms and conditions.

Uncertainty is hard to quantify and there is no clarity on the best gauge for tracking its impact on business investment. Recent literature on the subject often includes an indicator representing political uncertainty, e.g. the Economic Policy Uncertainty Index on the basis of news items reported in the media as established by Baker *et al.* (2013). This indicator has risen markedly since the start of the financial crisis until it attained a clear peak at the euro area sovereign debt crisis. Political uncertainty has come down in the past few years but has remained more pronounced than it was before the crisis, while any temporary new tensions, such as those at the beginning of 2016, cannot be excluded.

Expanded accelerator model

If we add some of the above factors into the standard specification mix – i.e. real bank lending rates, corporate debt ratios, the indicator of financial constraints on production, as well as the political uncertainty index – the expanded accelerator model turns out to explain fairly well the recent trends in the investment ratio. Its improved explanatory value is particularly marked in the peripheral countries and even spectacular for Spain and Ireland. Uncertainty, financial constraints, size of the debt and real interest rates turn out to have had a massive impact on investment dynamics in these countries. Other studies have produced similar results⁽⁵⁾, and policy measures

(1) The benchmark for "sustainable" debt was estimated on the basis of previous episodes of deleveraging. See also EC (2014).

(2) Deleveraging needs are estimated between 10 % and 20 % for Ireland, Portugal and Greece; for Spain this is less than 10 %.

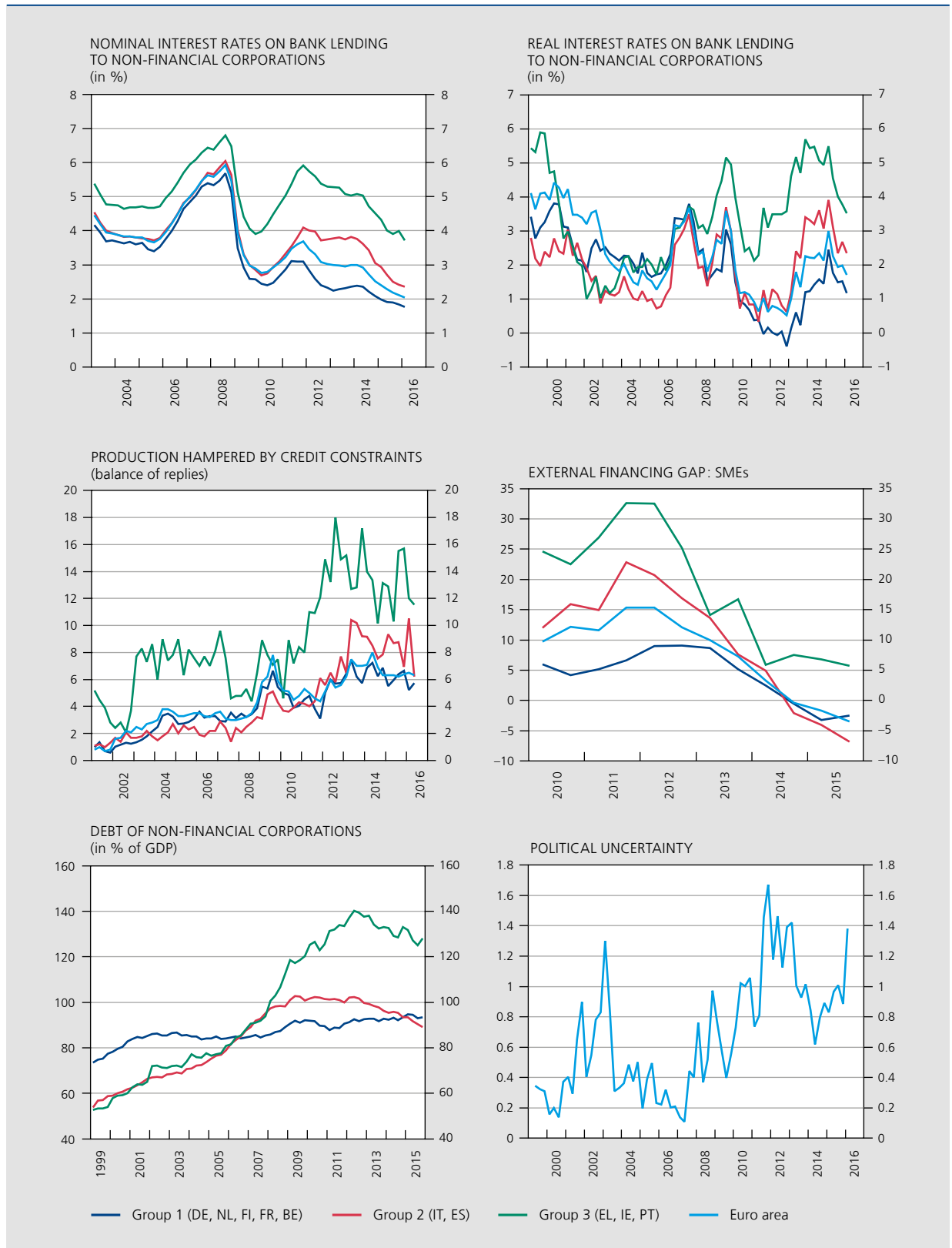
(3) The EC has played down the need for further deleveraging in Ireland, as the important increase of corporate debt ratios can be due to cross-border (intra-group) loans.

(4) See amongst others Dixit and Pindyck (1994); Carruth *et al.* (2000).

(5) See also Barkbu *et al.* (2015).

CHART 6

EVOLUTION OF THE ADDITIONAL INVESTMENT DETERMINANTS FACTORED INTO THE EXPANDED ACCELERATOR MODEL



Sources: EC, ECB, OECD, Thomson Reuters Datastream, NBB calculations.

would seem in order in as much as these factors still get in the way of investment. Despite these advances, recent developments in the business investment ratios are still partly unexplained for Italy, Finland, Portugal and Greece.

3. Secular investment trends

Section 2's analysis focused on factors that might help to explain investment trends in the short term. The past decades have seen a number of structural changes in the world economy that may have caused more secular trends in investment, e.g. the shift to service-based economies, globalisation and its related offshoring of activities to emerging countries, shorter useful life of capital goods and demographic trends. This section focuses on these developments as well as on their impact on capital spending.

Shift to a service-based economy

The drop in the investment ratio is linked by some to the relative contraction of the industrial sector and the shift to an expanding, less capital-intensive services sector. This hypothesis is difficult to test as very few countries produce capital stock data broken down by sector. However,

in Germany – a country for which these data are indeed available – there do not appear to have been any major shifts in the larger sector categories over the past two decades. The share of services in total value added has not increased at the expense of manufacturing industry. Differences in average capital intensity across sectors are limited and, in fact, utilities and energy companies – i.e. highly capital-intensive industrial branches – now account for a slightly bigger share of the total economy.

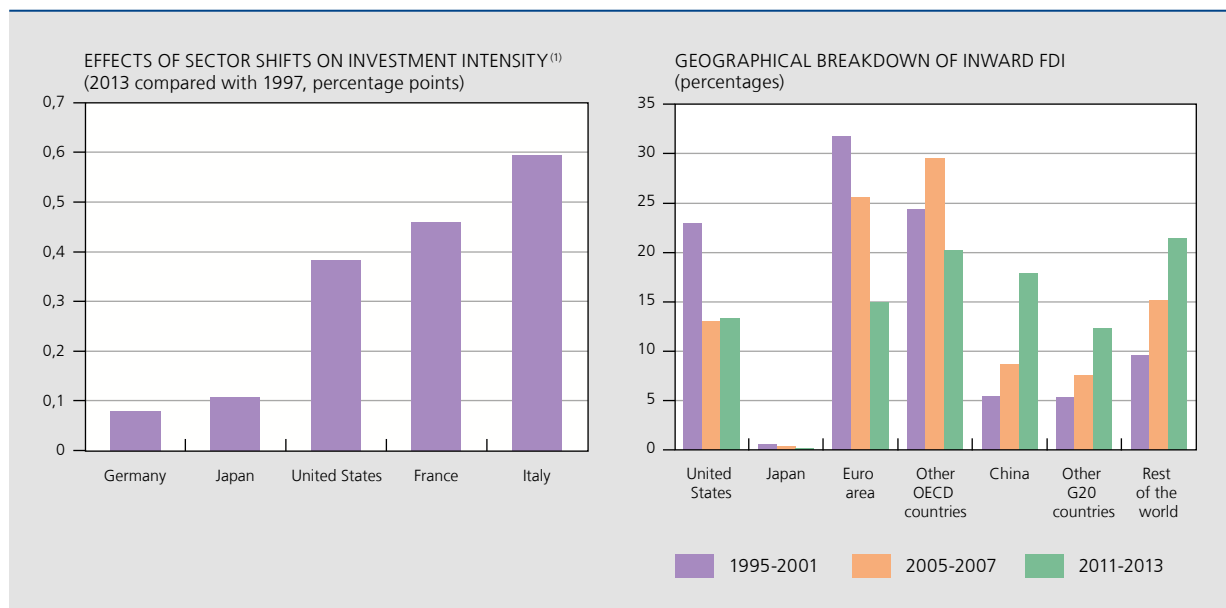
Using a related concept of investment intensity, defined as investment measured relative to value added by industry, an OECD⁽¹⁾ analysis found that for a group of countries the investment intensity of the services sector tends to be significantly below that for industrial sectors including mining, energy and utilities. What is more, a number of OECD countries have seen these less investment-intensive services claim a bigger share of the total value added. Still, the shift has not been significant enough to have a clear impact: actual 2013 investment intensity compared with estimates, based on an unchanged sector breakdown as of 1997, shows only a minor effect, even if it does work out at around 0.5 percentage point for Italy and France.

Globalisation, global value chains and offshoring

Global investment flows have radically changed over time. Domestic investment activity in the advanced economies

(1) OECD (2015).

CHART 7 SECULAR TRENDS



Source: OECD.

(1) Nominal investment relative to nominal gross value added.

is often assumed to have partly shifted to other parts of the world as global value chains developed and production was offshored. However, empirical research has not been able to establish beyond a doubt whether foreign investment is replacing domestic investment activity (substitution) or supplementing it (complementarity).

This is a complex issue and, to date, no clear conclusions can be drawn about the impact on the advanced economies, as the make-up of relevant statistics complicates empirical work. One oft-used measure is the flow of foreign direct investment (FDI), but besides capital goods purchases, it also includes financial flows such as mergers and acquisitions. Other data make use of investment by multinational corporations – including their subsidiaries –, but these are only available for a few countries.

Inward FDI provides a first clue about changing flows, showing that the share of OECD countries has shrunk significantly in the past two decades – including in the post-crisis euro area – in favour of the emerging economies, and particularly China. This may be attributed to the downward trend in domestic investment activity in the advanced countries. At the same time, the OECD finds that post-crisis investment activity by foreign subsidiaries of multinational corporations has risen relative to GDP in a number of OECD countries, including in the euro area.

If we take as a proxy data on investment by foreign subsidiaries of multinational corporations from the United States and Japan, we find that outward investment from advanced economies has grown over time and that such capital spending accounts for an increasing share of total group investment. It is assumed that offshoring of activities by multinational corporations typically integrated horizontally – i.e. whose different facilities produce the same products – will cause substitution effects and impact negatively on economic activity in the corporation's home country. By contrast, vertically integrated multinationals looking to use foreign investment to split their production process via global value chains may generate activity that is complementary to the home market, e.g. the supply of intermediate inputs. This may imply relatively higher investment abroad, but does not necessarily mean a concomitant fall in absolute domestic market investment

levels. All of this makes it hard to predict at the outset what the overall effect will be. The outcomes of country-specific empirical studies are mixed: while positive effects have been identified for the US economy in some cases, these same effects are reportedly negative for Germany⁽¹⁾.

Capital goods depreciated more quickly

The OECD also points out that average depreciation rates have gone up on the back of a greater share of investment with a shorter useful life, such as ICT and some types of intangible investment. In effect, then, investment should exceed historical reference levels to prevent net investment and net capital stock from shrinking.

Demographic trends

Demographic prospects suggest that European population ageing will have a highly detrimental impact on labour supply; in fact, this is already happening in some countries, such as Germany. As growth potential shrinks, less investment is said to be necessary (see below). It is also true that capital and labour are never fully complementary, such that more capital-intensive production practices and more investment may both be targeted. To counteract the demographic effects on economic growth, countries will initially have to push up the activity rate, for instance by having people work longer and – in order to make better use of the potential of the working population – by cutting structural unemployment, which has grown in a number of countries since the crisis due to hysteresis effects. Reducing youth unemployment should be a particular focus, as joblessness in those vital initial stages of people's careers rapidly leads their human capital to become obsolete or underdeveloped, and destroys their productive potential.

Growth and investment interacting

There is a great deal of interaction between economic growth and investment. On the one hand, higher growth requires greater investment to keep up capital stock and, with it, the capital intensity of growth; while, on the other hand, a protracted spell of below-par investment ratios will be detrimental to potential growth. Capital investment contributes directly to the creation of capital stock and indirectly to its implicit technological progress⁽²⁾, resulting in a longer-term steady state equilibrium between growth and investment. At this point, however, quite a few advanced economies appear stuck in a less favourable "double bind" of subdued growth and low investment ratios⁽³⁾. This begs the question to what extent investment might serve as

(1) Braunerhjelm *et al.* (2004); Herzer (2008); Herzer and Schrooten (2008).

(2) According to EC estimates (Buti, 2014), a drop in the investment ratio of five percentage points would reduce potential growth by around 0.5% in the longer term.

(3) The OECD (Lewis *et al.*, 2014) calculated the deviation between the current level of investment and a reference level equal to a steady-state equilibrium of the investment-to-GDP ratio, given a level for the pace of depreciation, a constant capital-to-output ratio and the growth rate of the economy. The OECD is assuming long-term GDP projections based on a return to pre-crisis potential growth rates for the OECD region, for the United States and for the euro area. It established that current investment levels are significantly below their reference points, with the shortfall amounting to over 2.5 percentage points of GDP in one-third of the OECD countries.

a lever to break the “bad” equilibrium. However, some observers⁽¹⁾ believe that potential growth, particularly in the euro area, is on a downward trend driven by a combination of slowing productivity growth and demographic developments, and that this will result in a permanently lower equilibrium ratio of investment relative to GDP. In this scenario, additional investment would only boost demand temporarily and cause overcapacity; too little profitability would require scaling down this investment at a later date. True, investment can only serve as a lever to break the impasse of slow growth and lagging investment if it is highly targeted, appropriately productive, and profitable. The focus should be on capital spending with serious growth-boosting potential, particularly through the use of new technologies. R&D and ICT are most often put forward as areas for investment in this context.

4. Policy initiatives

Although GDP remains a key determinant of cyclical investment trends, Section 2 demonstrated that a number of other factors also need to be considered when explaining weak investment dynamics since 2012, in particular uncertainty, deleveraging, diverging bank lending rates and funding constraints on SMEs. Uncertainty is the outcome of a whole host of circumstances and is often driven by global events that European policy-makers have no control over. And, of course, that policies themselves become a source of uncertainty is something they should

(1) Gros (2014).

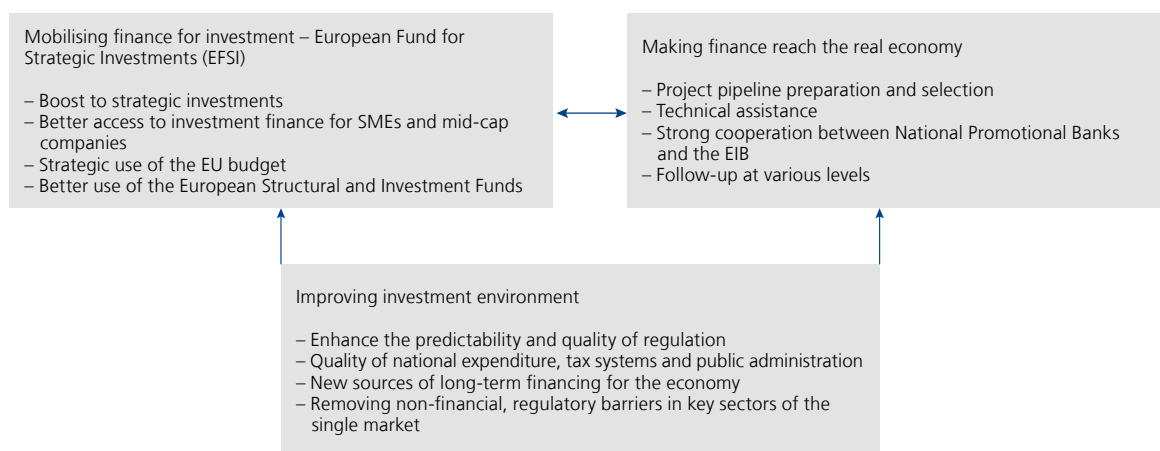
avoid at all cost. Deleveraging, the second factor in this list, is proceeding gradually and should continue to run its course. Given the seriousness of the problems, however, policy is and will remain vital and the sheer array of factors holding back investment demands a wide-ranging package of policy measures to address the issue.

Monetary policy should first of all continue to support the smooth operation of channels for monetary transmission – i.e. base rates to be passed on to bank lending rates – and so try to reduce the fragmentation of bank rates. By stabilising inflation expectations, monetary policy will also continue to control real interest rates, while the remit of prudential policy governing bank lending is to monitor banks’ balance sheet positions and so indirectly combat distortions of lending supply in the euro area. Where needed, non-performing loans will have to be written down appropriately and the capital base of banks shored up.

The Juncker investment plan for Europe

The major impact on investment trends of factors such as uncertainty and SME funding issues shows up a need for specific measures to address them. The euro area was also in dire need of a catalyst to help break the double bind of slow economic growth and lagging investment, and the Investment Plan for Europe, which was put forward by the then Commission President Jean-Claude Juncker in November 2014, would appear to go some way towards addressing these issues. It aims to reduce the impact of

CHART 8 THE THREE PILLARS OF THE INVESTMENT PLAN FOR EUROPE



Source: EC.

uncertainty and improve the overall investment climate. It specifically targets SMEs and mid-cap companies and focuses on types of investment of which the risk profiles are too high to be financed by the private sector alone – higher even than the typical risk profile the European Investment Bank (EIB) uses when lending. The same drive also saw the launch of the Capital Markets Union (CMU) initiative, whose aim, amongst others, is to make funding easier for SMEs. Section 4 examines the main features of the plan and its initial results one year on. The section ends on the CMU initiative.

Investment Plan for Europe: structure and operation

The Investment Plan for Europe consists of three mutually reinforcing strands.

Mobilising additional financing for investment

The first pillar is to mobilise financial resources to flow into additional investment. Created for this express purpose in July 2015⁽¹⁾, the European Fund for Strategic Investments

(EFSI), a special EIB fund, aims chiefly to improve the capacity for higher-risk financing in the EU. The Fund does not finance projects itself, but provides EU guarantees to back project finance by the EIB and the European Investment Fund (EIF), which is part of the EIB Group. Under the plan, an entirely new mechanism is introduced when compared with existing European financing structures, based on putting up guarantees instead of direct allocation of subsidies: it helps to mobilise existing sources of funding without loading down the public finances of individual Member States.

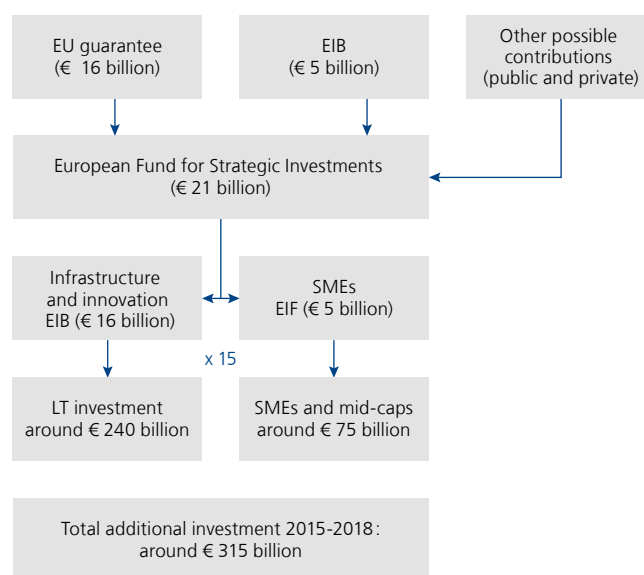
EFSI aims to mobilise at least € 315 billion in public and particularly private investment within the space of three years, up until mid-2018. It started off with a € 16 billion guarantee in the EU budget and the EIB allocated € 5 billion, adding up to sizeable seed capital of € 21 billion. This amount may be supplemented with contributions from private investors or Member States, either directly or via National Promotional Banks or similar institutions. The EC assumes that for every euro guaranteed by EFSI, € 15 can be invested in the real economy. The € 21 billion in guarantees should potentially unlock € 315 billion in investment⁽²⁾.

The Fund complements and enhances ongoing initiatives to support investment such as the European Structural and Investment Funds (ESIF) and current EIB project finance. EFSI aims to support projects with high

(1) EC (2015a) and EC (2015b).

(2) The EC considers this multiplier effect of 1:15 a conservative average, based on previous experience with EU programmes and on EIB experience.

CHART 9 EUROPEAN FUND FOR STRATEGIC INVESTMENTS (EFSI): STRUCTURE



Sources: EC, EIB.

added value for society and economy, and will divide the estimated additional € 315 billion investment into two separate windows: three-quarters of the resources (€ 240 billion) will be earmarked for higher risk-taking of long-term investment, such as strategic investment of European interest in infrastructure, particularly in broadband and energy networks, as well as transport infrastructure, education, research and innovation, renewable energy and energy efficiency. The remainder of € 75 billion will be set aside to enhance access to risk capital in Europe for SMEs (up to 250 employees) and mid-cap companies (up to 3,000 employees), with EIF in charge of operational implementation.

We should note here that the “additional” investment of € 315 billion is meant to supplement existing investment and that project qualification criteria should ensure that resources are effectively allocated to new, higher-risk projects for sectors and companies targeted by the plan. The principle of additionality is key and ensures that EFSI aid addresses sub-optimal situations in which such projects would not otherwise be carried out.

Making additional finance for investment reach the real economy

The second pillar of the plan involves taking targeted initiatives to make sure that the extra investment finance generated by EFSI meets the needs of the real economy. This means channelling money to viable projects with a real added value for the European economy.

In concrete terms, the EIB has set up the European Investment Advisory Hub (EIAH). The EIAH offers a single point of access to advisory and technical assistance services at every stage of the development of a project, for promoters, investors and public authorities. The Hub provides guidelines on the best advice for specific projects.

In addition, the European Investment Project Portal (EIPP), operational since June 2016, will assist investors in search of potentially viable projects. The portal is managed by the EC and comprises a list of projects supportive of EU goals and scheduled to start in the next three years, with or without EFSI financing.

Improving the investment environment

The third pillar of the plan consists of providing greater regulatory predictability, removing barriers to investment and further reinforcing the Single Market by creating optimal conditions for investment.

The regulatory framework, at national as well as European level, needs to be simple, clear, predictable and stable in order to incentivise investments with a longer-term horizon. The aim is not to deregulate, but to enhance regulation, by removing the obstacles to economic growth, by minimising costs and ensuring sustainability of investment in the social and environmental arenas.

Another important initiative undertaken – and a major progress – concerns the setting of new sources for long-term financing of investment, including steps towards a Capital Markets Union (CMU). In time, the CMU should help bring about a more diverse supply of finance by complementing bank financing with deeper capital markets. It is therefore an important medium- to long-term component of the investment plan (see below for further details).

Lastly, it is imperative that barriers to investment in the Single Market are removed. More specifically, this will require reforms in such areas as energy and transport, transport infrastructure and systems, the Digital Single Market, services and product markets, research and innovation, and foreign investment flows.

A first assessment of the plan

According to July 2016 figures, € 20.4 billion had been approved for EFSI projects, breaking down in to 289 operations. The EIB-linked window – i.e. innovation and infrastructure projects – accounts for the bulk of this amount at € 13.6 billion, while the EIF – SMEs and mid-cap companies – mops up € 6.8 billion. Together, these transactions are projected to return a total investment of € 115.7 billion at maturity. These initial outcomes would appear to match the plan’s objectives, with total expected investment now at about one-third of the amount to be reached at the end of the three-year period. Investment projects are chiefly found in the sectors research, development and innovation (25 %) and energy (23 %); the EIF portion earmarked for SMEs accounts for 26 % of all agreed projects.

A note of caution is in order: a study by Claes and Alvaro (2016a) reviewed compliance with the additionality criterion, i.e. whether only higher-risk and viable projects had been selected that could not have been completed within other existing financing structures. The study uncovered numerous similarities between new EFSI projects and the usual projects that the EIB takes on outside the plan. That said, the study also found EFSI projects to be relatively higher-risk, in keeping with the plan’s objectives.

Government investment

The main purpose of policy initiatives should be to mobilise business investment. However, government investment is also part of the problem, as years of restructuring have taken their toll⁽¹⁾. By cutting capital spending, Member States opted for the easiest way to meet their fiscal obligations, and government investment that sharply boosts productivity – e.g. economic and social infrastructure in areas such as energy or scientific research, development and innovation – may also be eligible as targeted investment projects under the Juncker Plan. Governments being allowed to constitute themselves as contributors to invest in EFSI projects, it was agreed that the EC would take a more relaxed view of such capital spending within the fiscal surveillance framework of the Stability and Growth Pact⁽²⁾.

As for all other investment outside the Juncker Plan, the preventive arm of the new Stability and Growth Pact guidance now boasts a so-called ‘investment clause’ allowing Member States engaging in government investment to diverge temporarily from their medium-term budgetary objectives or fiscal adjustment paths. As Melyn *et al.* (2016) argue, the clause may only be invoked under very strict conditions, which are only met by a very few countries. This may call for a complete overhaul of the way in which government investment is treated in the Stability and Growth Pact so as to ensure that such spending is looked on more favourably.

Next steps

The EC is looking to extend the duration of EFSI beyond its initially agreed period of three years⁽³⁾ and will present the appropriate legislative proposals in the autumn of 2016. It will also enhance the current EFSI operations, imposing a more rigorous application of the additionality principle and expanding the SME window. Joining up with other European funds, such as the European Structural and Investment Funds, will give EFSI much more clout, while EFSI will also help develop a market for sustainable/green

projects by including green bonds⁽⁴⁾ in its arsenal of financial instruments.

CMU initiative

The EC’s CMU initiative, which ties in with the third pillar of the Juncker Plan, aims to remove impediments to the integration and development of a genuine single capital market and to further scale back the fragmentation along national borders that still marks the European financial markets. This would make companies less dependent on bank lending as they would be better able to find alternative sources of finance. The realisation of the CMU would particularly benefit SMEs by enabling them to tap the capital markets, possibly even in countries other than their own Member States⁽⁵⁾. The 2015 Action Plan set out priority measures to have a CMU in place by 2019⁽⁶⁾. Some of these have since led to concrete measures, but many are still in process:

– *More sources of finance for corporations and SMEs and easier access to the equity markets.* The start-up phase of new activities should be able to draw on a range of new types of financing in addition to bank lending (money-lending and donor platforms, peer-to-peer lending and crowdfunding). The next phase, in which raising funds to expand activities is typically difficult, should promote the use of shareholders’ equity or venture capital. The EC has set up two new mutual investment funds⁽⁷⁾ and launched a public consultation at the beginning of 2016.

The securitisation market could be developed further and serve as an instrument to diversify risks and strengthen banks’ lending capacity. New legislative proposals by the EC, approved by the Ecofin Council on 8 December 2015⁽⁸⁾, define a number of simple, transparent and standardised (STS) securitisations and revised the prudential requirements for banks’ investments in STS products.

Lastly, in November 2015, the EC proposed to review the current Prospectus Directive in order to enhance its efficiency and reduce the burden on smaller companies⁽⁹⁾. As a detailed document setting out company information, terms and conditions, and the risks of investment, a prospectus serves as a passport to capital markets for corporations seeking funding and it is vital that it does not become an unnecessary hurdle.

– *Promoting long-term investment.* The new European Long Term Investment Fund (ELTIF) Regulation, adopted in April 2015, aims to attract and raise capital from

(1) See Melyn *et al.* (2016) for a detailed analysis of government investment.

(2) Such financial contributions by national governments will be ignored in the review of the budget efforts under the preventive and corrective arms of the Stability and Growth Pact, and are considered exceptional one-off measures. See Melyn *et al.* (2016).

(3) EC (2015d).

(4) Green bonds comprise all types of bond instruments that are exclusively used to finance or refinance green projects in order to promote progress on environmentally sustainable activities.

(5) Establishing the CMU should also promote risk-sharing across borders within the EU via private capital flows, and therefore reduce the need for public risk-sharing mechanisms.

(6) The Action Plan has since been reviewed in a follow-up report of April 2016 (see EC, 2016a).

(7) European risk capital funds and European social entrepreneurship funds.

(8) The proposals were still before the European Parliament for consideration in the summer of 2016.

(9) The Council is to agree on a general approach in the summer of 2016.

private and institutional investors (life insurers, pension funds and investment funds) for longer-term projects such as infrastructure⁽¹⁾. In addition, retail investors (including households) have significant savings in the shape of bank accounts and are only marginally involved in the capital markets. To help them better leverage their savings – often accumulated in view of their pensions – by way of the capital markets, at the end of 2016 the EC will investigate the creation of a strategic framework for a European market for individual pension savings products.

- *Promoting cross-border investment by removing persistent obstacles in the shape of diverging tax treatments and national rules and regulations, particularly insolvency laws.* To align national procedures, the EC will put forward a legislative proposal at the end of 2016 on the subject of companies' insolvency frameworks (including preventive restructuring and debt repayment of bankrupt companies). In doing so, it should be able to benefit from its experience with its 2014 Insolvency Recommendation, from properly functioning national schemes, as well as from the findings of the consultation that closed in June 2016.

Conclusions

Investment dynamics in the euro area have remained subdued since the financial crisis: capital spending is languishing below its long-term average and recovery is dragging its heels. From both a global and a historical perspective – i.e. compared with previous post-crisis periods – subdued investment dynamics are a highly unusual state of affairs. This weakness may persist as a partial adjustment to previously excessive spending, particularly by households on residential property. That said, business investment has also yet to stage a major recovery.

Drawing on the accelerator model, this article has demonstrated that, although GDP remains a key determinant of cyclical investment trends, a set of other factors have also contributed to weak capital spending dynamics since 2012, particularly in Italy and Spain and in countries subject to adjustment programmes. Uncertainty plays a not insignificant role, while limited financing possibilities also

serve to squeeze investment plans. SMEs more specifically find it hard to meet their funding needs, as they, more than large corporations, recourse to the banking sector, and in some countries this is still not on an even keel. Other factors that feed into subdued investment include the process of debt deleveraging at non-financial corporations and the fragmentation of the financial markets, which has resulted in diverging interest rates offered to clients by banks in different euro area countries.

In addition to these factors – which primarily help to explain short-term capital spending developments – a number of structural changes have taken place in the past decades that may have triggered more secular trends in investment. This is a complex theme, however, and the current state of research does not allow for any clear-cut conclusions about the impact on capital spending of the gradual shift to a more service-based society or the globalisation in the advanced economies. Demographic trends, such as population ageing, are claimed by some to reduce the need for investment, but one might equally argue that more capital-intensive production practices should precisely be implemented to offset negative effects on growth.

The euro area appears to be stymied by the twin challenges of slow economic growth and lagging investment, and a catalyst was needed to reverse this double bind. The Investment Plan for Europe, proposed by Commission President Jean-Claude Juncker in November 2014, attempts to address these issues by increasing funding capacity through the creation of an investment fund, and by improving the general investment climate. Specifically targeting SMEs and mid-cap companies, the plan focuses on selected types of investment with the risk profiles that are too high to be financed by the private sector alone. To date, the fund has committed about one-third of its resources to a variety of investment projects. The same drive also saw the launch of the Capital Markets Union initiative, whose aim is to create a fully integrated European capital market in due course and which should make funding easier for SMEs. While a lot has been achieved, this initiative is still very much on the drawing board.

Investment is not merely a key component of demand; it also determines future growth potential and therefore deserves policy-making attention. In view of the many persistent obstacles in the way of more robust investment dynamics, there is scope for further policy initiatives in various domains.

(1) Accordingly, the EC changed its Solvency II rules in both February and May 2016, making it easier for insurance companies to invest in infrastructure projects and ELTIF long-term projects.

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