Spanish Economic and Financial Outlook

European banks in the face of new regulatory pressures

FEATURES

opportunities exist, the shockwaves from losing its second largest economy would be felt in the EU, as well as in Spain, where people flows and financial connections with the UK are especially significant.

2016 has been a difficult year for the European banking sector. Unique global market conditions, with negative interest rates, are major factors in the current difficulties. The banking industry business model is facing a shift driven by new technologies, overcapacity, a legacy of losses from the crisis and serious downward pressure on returns.

Investor perceptions of these difficulties have exacerbated valuation losses in European bank shares. These dynamics set the stage for the May SEFO´s analysis of the impact of present conditions on the European bank restructuring process, as well as our questioning of to what extent recent changes to European financial regulation may be fuelling investor concerns.

The European banking sector´s response to existing challenges has included widespread branch closures and staff cuts, although delays will likely force some entities to adopt more drastic solutions in shorter time frames. In the case of the Spanish banking sector, additional restructuring efforts will be a less traumatic continuation of a process of orderly change that began during the crisis. In general, our estimates show there are significant potential cost savings to be made from economies of scale. For the case of Spain, integration could generate cost savings of about 4%-20%. However, it is worth noting that competition is determined by rivalry and not the number of competitors or market concentration, which is set to decline further as banking

moves more towards digital technologies rather than physical branches.

Apart from the fundamental pressures affecting European banks, this SEFO analyses the impact of new regulatory changes, or rather, the uncertainty surrounding their implementation, on recent losses in banks´ share value. We find that the underperformance of European banks relative to other sectors unquestionably reflects perceptions that the banking business is far more exposed than other sectors to economic weakness and interest rates. However, European bank shares have also been affected by new regulations, which substantially change the rules of the game as regards resolution regimes, as well as limits on maximum distributable amounts (MDAs) applied to financial instruments. The former change has had the most significant impact in the case of Italy, while the latter in the case of Germany. This negative impact, however, is likely more a consequence of regulatory uncertainty rather than the new measures themselves.

The May SEFO also highlights another consequence of increased regulatory requirements on financial institutions – their impact on financial disclosures. Financial institutions´ business models and products have become increasingly more complex. This has led to necessary, but more onerous, reporting obligations imposed by regulators and standard setters. Empirical evidence suggests banks´ reporting has actually become

more complex, reflecting the more challenging operating environment faced by banks. In the case of Spain, evidence suggests that financial reports were more readable and optimistic compared to the European average, although readability measures were more volatile. In general, focusing on improving readability and tone of financial reporting could represent one way to increase the clarity and transparency of quantitative financial disclosures.

Apart from financial sector issues, we look at Spain´s recent fiscal performance in an effort to deconstruct noncompliance with fiscal targets. Despite strong economic growth (3.2%), the Spanish government ran a deficit of 5.1% of GDP in 2015 (including financial sector assistance). This result implies noncompliance with both internal and EU targets, and together with increased public debt since the start of the crisis, is casting doubt on Spain's ability to restore its budgetary equilibrium and ensure debt sustainability. The autonomous regions and social security system emerge as the cause of the deviation from budgetary stability targets. However, correcting these imbalances is a general economic policy problem that will require reforms.

The next section of SEFO takes a look at developments in Spain at the industry level, such as: recent changes to Spain´s business landscape and remaining challenges; the key elements of success behind Spanish exports; and the country´s renewable energy promotion regime.

Net business creation was positive last year for the first time since the crisis. However, recent trends in business demography and declines in innovating firms are raising questions over the future. Proposed measures for tackling some of these issues include promoting human capital and innovation, among others.

In the case of exports, Spain´s performance today boasts strong results relative to many European peers. Recent export growth has received a boost from the crisis, as firms tried to compensate for decreased domestic demand. However, Spain´s solid export performance is largely underpinned by decades of rapid expansion, beginning with European integration and the ensuing transformational changes of the Spanish economy's productive structure, as well as within its companies, in response to the demands of globalisation. Despite progress, support measure will be necessary to ensure Spanish production remains focused on increasing companies' export intensities, as the recovery raises the risk of recurrence of trade imbalances.

In an effort to meet EU renewable energy targets, Spain has relied on various support mechanisms over the last few decades. From 1998-2013, Spain essentially used various versions of the feed-in-tariff (FIT) to successfully promote renewable energy installed capacity and generation, in line with EU objectives. By 2013, the overly generous FIT regime had overstimulated investment and resulted in a large electricity sector deficit, threatening the very stability of the electricity system. With a view towards fiscal consolidation, the government undertook a necessary reform of the subsidy regime, replacing FIT with compensation based on obtaining a reasonable return for the project. The new regime was an improvement as regards financial sustainability, but its

interventionist and discretionary character is generating investor uncertainty. Initial data in 2014 seem to already point to a slowdown in investment since the introduction of the new mechanism, which may ultimately hinder compliance with EU Renewable Energy targets going forward.

Finally, we close the May SEFO with an analysis of a potential geopolitical event – Brexit – that, should it come to fruition, would have strong economic and political implications for both the UK, Europe and Spain. While the ultimate outcome remains difficult to predict, a vote in favour of leaving the EU ("Brexit") is likely to have a net negative impact on the UK economy, although the long-term implications will depend on the UK´s ultimate trade relations with the EU and its scope for compensatory action. Brexit could also create significant economic spillovers for the EU, as well as call into question the wider EU project. The Spanish economy is not immune. Unlike most other EU economies, it runs both a goods and services surplus with the UK – 1.3% of GDP. People flows – both tourism and migration – as well as financial interlinkages are particularly strong between both countries.

Another twist to European bank restructuring

Santiago Carbó Valverde[1] and Francisco Rodríguez Fernández[2]

The global financial sector faces serious challenges to boost profitability. Restructuring is part of the necessary solution to these challenges, but the extent to which economies of scale will be accompanied by economies of scope is yet to be determined, as a successful combination of traditional and new digital technologies is yet to emerge.

2016 has been a somewhat difficult year for the European banking sector, with big swings experienced on stock markets. The global financial situation and unprecedented market conditions, with real negative interest rates, are major factors in the current difficulties. The banking industry worldwide – and the European industry is no exception – is facing a shift in model driven by changing technology, an excessive delay in responding to the need to cut overcapacity, and a grim legacy of losses from the crisis and serious downward pressure on returns. The response has included widespread branch closures and staff cuts, with Spain having the advantage of having begun an orderly process of change some years ago. Estimates show there are significant potential cost savings to be made from increasing the average size of financial institutions, but doubts remain as regards economies of scope as it is not yet clear which technologies and services will provide the most advantages.

International context: Negative rates and the search for returns

Stock market valuations initially recovered from the substantial losses in the early months of the year, but have since become mired in volatility and uncertainty. The sources of risk have not significantly worsened. The main factors are still instability in emerging economies, geostrategic shifts in energy markets, and negative real interest rates. However, in an unprecedented international financial scenario, marked by the volume of accumulated debt, the flood of "official" liquidity, and low returns on assets, the long-term path of the global economy remains unclear.

The banking sector has been one of the most powerfully affected by this volatility, particularly in Europe, where doubts persist about recovery, the effectiveness of monetary policy, and the capacity for fiscal coordination.

At its April meeting, the Executive Board of the European Central Bank indicated that its expansionary monetary policy may have to become more expansionary still. In particular, the statement highlighted that: "Regarding non-standard monetary policy measures, as decided on March 10th, 2016, we have started to expand our monthly purchases under the asset purchase programme to 80 billion euros, from the previous

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[1] Bangor Business School and Funcas.

[2] University of Granada and Funcas.

amount of 60 billion euros. As stated before, these purchases are intended to run until the end of March 2017, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with its inflation aim. Moreover, in June, we will conduct the first operation of our new series of targeted longer-term refinancing operations (TLTRO II) and we will commence purchases under our corporate sector purchase programme (CSPP)."

Therefore, even though the ECB considered that: "The pass-through of the monetary policy stimulus to firms and households, notably through the banking system, is strengthening," it kept open the option of using new instruments, with significant new features in corporate bond purchases. The statement also said that "uncertainties persist and relate, in particular, to developments in the global economy." The tone of the International Monetary Fund's April Global Financial Stability Report was similar, making several allusions to risks affecting the banking sector. In particular, the report mentioned that "European bank equity prices declined along with global bank equities, pushing valuations to a record discount for U.S. banks. The hardest hit banking systems within the euro area in February have been those of Greece, Italy, and to a lesser extent, Portugal, along with some large German banks." The IMF considers the banks' problems to be "structural" with "problems of excess bank capacity, high levels of NPLs, and poorly adapted business models."

From a more technical perspective, the IMF report distinguishes three specific current and potential areas of concern for European banks:

- **Troubled assets:** Weak profitability increases the difficulty of dealing with NPLs by reducing banks' capacity to build capital buffers through retained earnings. For some banking systems, this comprises a structural weakness. Euro area banks still have around a trillion euros in NPLs. Greece and Italy are considered particularly problematic.

- **Business model challenges:** The transition to new business models may prove expensive for some banks. Reducing their exposure to particular sectors, banks not only have to absorb the legacy of losses from previous investments, but meet significant legal costs. Market turbulence is making things more difficult as it allows few options for profit generation.

Banks' regulatory challenges go beyond preparing for Basel III capital and liquidity requirements. It is also necessary to consider potentially bail-inable assets, altogether making European banks' management and regulatory compliance more difficult.

- **Regulatory challenges:** Banks face clear demands for more capital to build up their buffers as well as comply with regulatory requirements. This is not just a question of increasing capital and reserves, or preparing for the leverage and liquidity requirements accompanying Basel III up to 2019. It is also necessary to consider assets that can potentially be used to respond to losses (bail-in) rather than tax payers' money (bail-out). This includes new total loss-absorbing capacity (TLAC) requirements and minimum requirements for own funds and eligible liabilities (MREL). These provisions comprise a regulatory framework that, while clearly necessary, makes European banks' management and regulatory compliance significantly more difficulty, particularly given the convergence of legal pressures from different sources.

As the IMF suggests, these regulatory challenges have been reflected in bank asset valuations, above all in situations of stress. It explicitly mentions the "bail-in of the subordinated debt of four small Italian banks late last year" and the concern over the "treatment of select senior debt holders of Novo Banco (Portugal)," which "has

led to a perception of uneven handedness and increased uncertainty that has dented confidence."

In any event, the solvency of the European banking sector has improved significantly since the financial crisis. And the state of the Spanish banking sector in this context also looks favourable. As Table 1 shows, the return on equity (RoE) of Spain's largest listed banks was 7.5% in 2015. This is better than the Eurozone average (6.5%) and their return on assets (0.5% compared with 0.28%) was also better. Even with significant downward pressure, the interest margin in Spain (2.51%) remains the highest in Europe.

Spanish banks rank favourably on the cost-income ratio, which is a measure of efficiency (0.51% compared to a eurozone average of 0.55%). As regards solvency, the core-equity Tier 1 (CET1) ratio was 12.5%, compared with a eurozone average of 12%.

One aspect that is always controversial is the consideration of the level of balance sheet risk, approximated by risk-weighted assets (RWA). The "RWA/total assets" ratio for Spanish banks was 0.47, compared to a Eurozone average of 0.29. This discussion can also be seen as part of the ongoing debate on how public debt is to be treated on the balance sheet. Data from the European Central Bank show Italian banks to have a public

debt exposure of 10.5% of their balance sheet. The figure for Spain is 8.8%. Even when setting a limit on it seems plausible, it is worth asking to what extent it makes sense to penalise these holdings rather than address the root problem of sovereign risk (fiscal sustainability). This is all the more relevant given that the ECB is buying large quantities of these assets under its monetary expansion strategy.

Recent concerns over the health of the European banking sector stem from the controversy over Deutsche Bank's exposure to structured products, and the general state of the Italian banking sector, with the creation of a "bad bank."

At the more detailed level, as regards the health of the European banking sector and the persisting doubts, two recent cases have caused particular concern: The controversy over Deutsche Bank's exposure to structured products, and the general state of the Italian banking sector, with the creation of an asset management company or "bad bank".

A long time has passed since the German bank Hypo Real Estate was bailed out in 2008, but doubts still persist as to German banks'

Table 1
Profitability, efficiency and solvency of Europe's main listed banks (2015)
(Percentage)

	Return on equity (RoE)	Return on assets (RoA)	Net interest income/Assets	Cost-income ratio	CET1/RWA	Default ratio	RWA/ Assets
United States	9.5	0.93	2.40	0.58	11.7	0.7	0.59
United Kingdom	5.6	0.35	1.93	0.66	12.6	2.8	0.37
Euro area	6.5	0.28	1.51	0.55	12	0.3	0.29
Italy	5.8	0.39	1.57	0.57	11.8	11	0.48
Spain	7.5	0.50	2.51	0.51	12.5	6.7	0.47
Japan	6.9	0.34	1.02	0.54	n/a	n/a	0.39

Source: Global Financial Stability Outlook April, 2016 (International Monetary Fund) and the authors.

exposure to structured products. This no longer concerns subprime mortgages, so much as complex derivatives in general. Germany's financial institutions have not been the most willing participants in the enhanced transparency exercises (or the various Europe-wide stress tests performed). More recent efforts have calmed some fears, but are still a long way from removing uncertainty. The underlying problem is the loss-absorption capacity referred to earlier. Deutsche Bank is, in fact, the first major European bank that has had to confront its contingent convertible bond (CoCo) holders with substantial losses.

What is known, although the details are unclear, is that Deutsche Bank holds derivatives valued at 50 trillion euros, 17 times Germany's GDP. The "real" net risk (cancelling or offsetting all these risks) is calculated to represent an exposure of up to 500 billion euros. But the biggest problem would be the contagion effects unwinding these derivatives would have on third parties, as this is an intrinsic feature of derivatives. This has been known since 2008.

In Italy's case, the banking market is weighed down by NPLs, which, far from being under control, are still rising alarmingly. The volume of NPLs rose to 360 billion euros in early 2016, and the big concern is that the trend is still upward, while Italian banks' profitability and loss absorption capacity continues to shrink. In January, the Italian government reached an agreement with the European Commission to set up an asset management company for these impaired assets. This was finally approved on April 20th. This fund has been called "Atlante" and all Italy's banks have a share of its capital, with contributions totalling four billion euros on the most recent estimates. The fund has an innovative structure for a "bad bank". Atlante does not aim to manage these impaired assets directly, but rather "unblock the market" so that Italy's banks can do so. Atlante will invest in shares in Italian financial institutions which, in turn, will increase their stockmarket capital for this purpose. At the same time, the government will underwrite some

of Atlante's shares, guaranteeing at least the fund participants' senior tranches. Atlante could also support banks' individual restructuring plans. The European Central Bank (ECB) has highlighted the risks of this approach, warning that without a capital increase, banks would struggle to tap sources of credit to improve their solvency levels. The advantage and disadvantage of this management model is that it puts everything in the industry's hands, without intervention or a clear segregation of assets. The viability of this mechanism if the deterioration continues and profits fail to rise is by no means certain.

Recent efforts and the outlook for bank restructuring in Europe

In recent weeks, there has often been news in Europe's financial press of European banks announcing restructuring plans. Basically, this restructuring involves branch closures and staff cuts. In the case of Spanish banking institutions, this is a less traumatic continuation of a process of orderly change that began during the crisis. In other European countries, however, the fact that serious restructuring was not undertaken earlier is forcing many entities to adopt more drastic solutions over shorter timeframes.

In the January 2016 issue of *Spanish Economic and Financial Outlook,* we reviewed the recent progress and outlook of Spain's bank restructuring process. In particular, we highlighted that the number of employees had dropped from 231,389 in 2012 to an estimated 194,688 at the end of 2015. The number of branches was cut, from 37,903 in 2012 to 31,021 in 2015. And by 2019 the number of branches could be around 28,000 and the number of employees 180,000.

A look back at the past may help put the scale of these transformations into perspective. Between 1974 and 2000, Spanish banks increased their number of branches by a factor of 2.5 (Exhibit 1). Between 2003 and 2008, before the first signs of the financial crisis in Spain, 6,898 new branches

Exhibit 1

Historical trend in the number of bank branches (1974-2015)
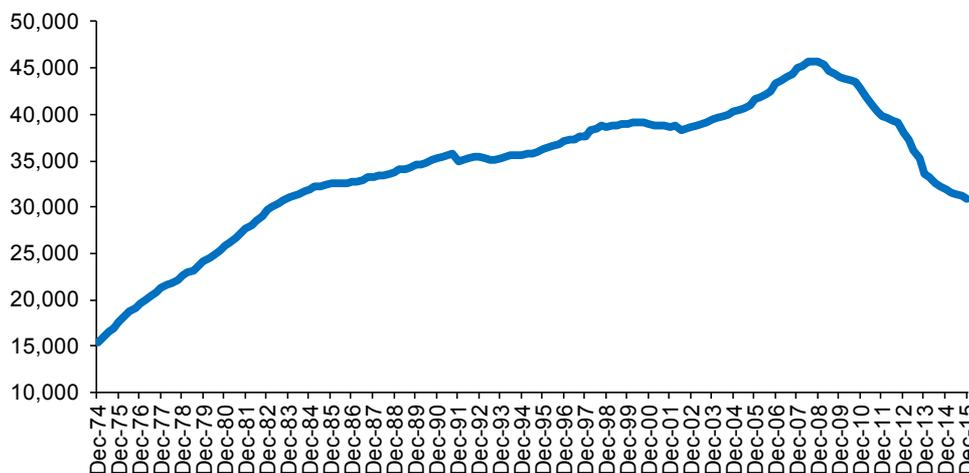
Source: The authors' calculations based on Bank of Spain data.

were opened, more than in the preceding 18 years. At the end of 2015, the number of branches was back to 1980s levels.

Something similar may be concluded in the case of bank employees, although here the adjustment

has been more moderate. Financial institutions kept their workforce fairly stable over the 1990s and in the early 2000s. During the credit boom, lasting from 2003 to 2008, Spain's banks took on 31,752 new staff. However, between 2009 and 2015, they shed 73,025 employees.

Exhibit 2

Historical trend in the number of bank employees (1981-2015)
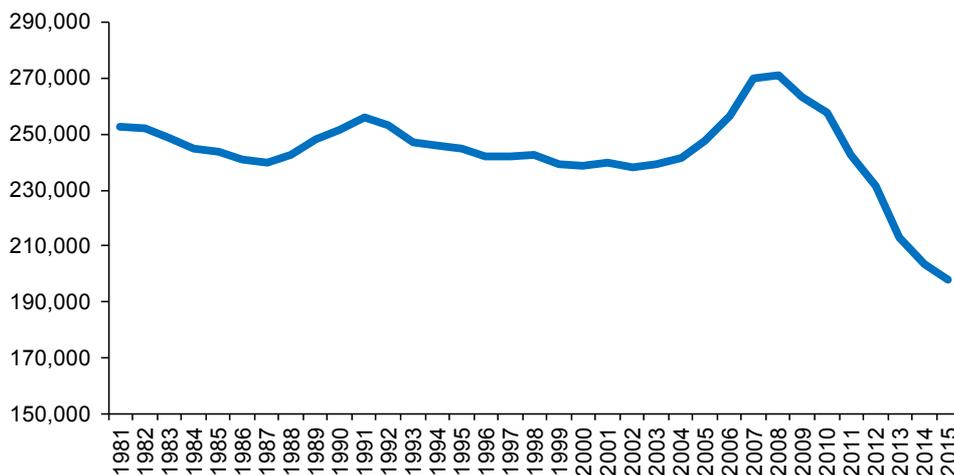
Source: The authors' calculations based on Bank of Spain data.

Although the adjustment was – and remains – necessary throughout Europe, it is worth mentioning some of the peculiarities of Spain's banking infrastructure in terms of the capacity indicators (Exhibit 3) published by the ECB in its 2015 Banking Structures Report (the most recent data available are for 2014, but remain valid for comparative purposes).

Exhibit 3

Capacity indicators for the banking sector in Europe
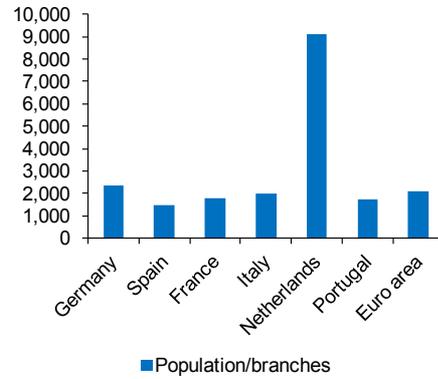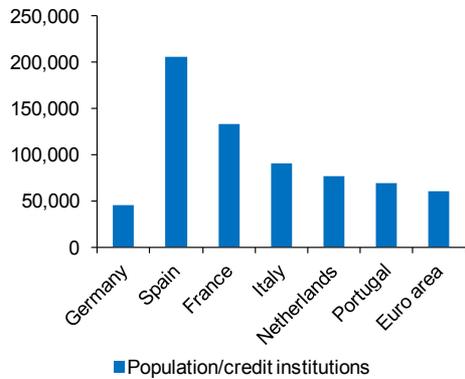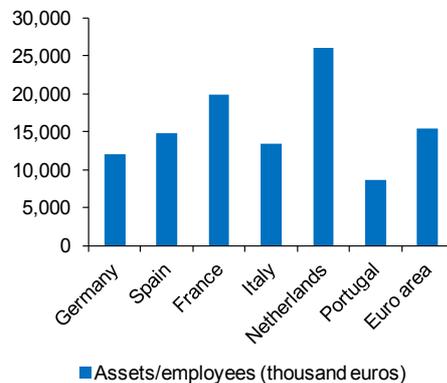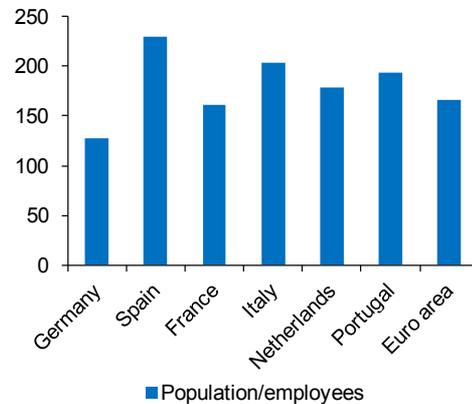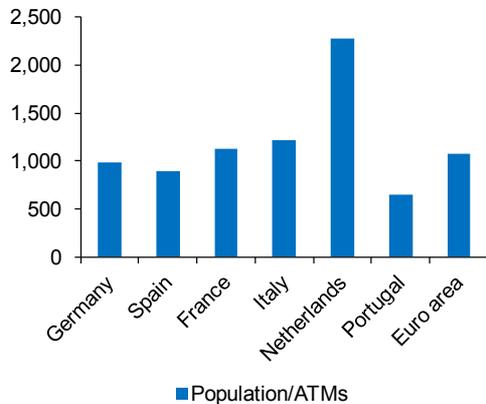
Source: European Central Bank. Banking Structures Report, 2015. (Data for 2014).

In Spain, there is a banking institution for every 205,593 inhabitants, compared with a Eurozone average of one per 60,046 inhabitants. However, the large number of branches explains why customer service is close and personalised, with 1,452 inhabitants per branch compared to a Eurozone average of 2,111. The position is similar as regards ATMs, with one per 892 inhabitants compared to one per 1,078 in the Eurozone. The

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The Spanish banking industry's strategic choice has been to have more smaller branches with fewer employees than is typical in Europe. The relative productivity of this model, however, is in line with the Eurozone average.

Spanish banking industry's strategic choice has been to have more smaller branches with fewer employees than is typical in Europe. This translates into one bank employee per 230 inhabitants in Spain compared to 166 in Europe. However, it is worth noting that the relative productivity of this

model, given that each bank employee in Spain manages an average of 14.7 million euros, is entirely in line with the 15.4 million euros average for the Eurozone, although it is higher than the 12.1 million euros average in Germany or 13.5 million euros in Italy.

Mergers: Economies of scale are back. Economies of scope will be next

Changes in bank structure are related to changes in concentration in the sector. Mergers and acquisitions tend to increase significantly in the wake of a financial crisis. The persistence of overcapacity in many countries is being exacerbated by a profitability crisis in a context of negative real interest rates. It comes as no surprise that, as Exhibit 4 shows, the market share held by the five biggest banks in Europe's main financial systems has increased. In the Netherlands this share is 85%, in Portugal 69%, in Spain 58%, and the Eurozone average is 48%.

Nevertheless, it would be a mistake to associate the level of concentration with the intensity of competition. There are countries in which almost

Exhibit 4

Market share of the five largest banks
(Percentage)
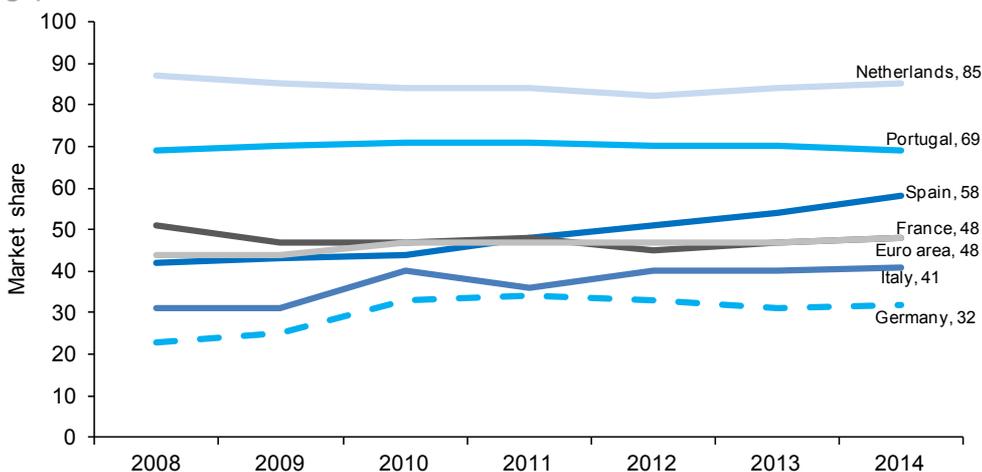
Source: European Central Bank. Banking Structures Report, 2015. (Data for 2014).

all of the banking business is shared between less than five institutions – such as Canada – but the competition between them is nevertheless intense. And there are others, such as the United States, where there are thousands of institutions, but the strength of competition depends on the ability of different operators to set prices in local markets. A growing number of studies suggest that in markets such as Spain's, competition is determined by rivalry and not the number of competitors or market concentration (Carbó, Rodríguez and Udell, 2009). What is more, the importance of market concentration is set to decline yet further as the banking business gears itself more towards digital technologies rather than physical branches.

In Spain, competition is determined by rivalry and not the number of competitors or market concentration, which is set to decline further as banking moves more towards digital technologies rather than physical branches.

It could be argued that the mergers and acquisitions that are affecting and will continue to affect the Spanish and European banking sectors are explained by overcapacity and the technological change implied by digitisation. Although both these factors are important, this explanation would be incomplete. Financial consolidation is also playing a role in the changing interaction between entities and financial markets and in the recovery of economies of scale (cost savings as institutions become larger), which had been considered largely exhausted since the 1990s.

Carbó and Rodríguez (2014) propose a methodology explaining how to calculate economies of scale in a complex banking business environment such as the present. Without going too far into the technical details, this methodology considers the advantages of diversification of risk while the size of the business increases. It also considers the ratio of external debt to own funds. This is important because, if it is not taken into account, it would imply that two banks with identical assets would be considered equally efficient even if one had more debt relative to its capital. Using Carbó and Rodríguez's methodology to determine the Spanish banking sector's growth potential and resulting cost savings shows these savings to have risen significantly between 2007 and 2014. In particular, Table 2 shows how much costs could be reduced for various different categories of assets in the Spanish banking system.

The findings suggest important cost savings of between 8% and 27% for entities with assets of over 200 billion euros. The range probably affecting most possibilities of financial integration

Table 2

Economies of scale: Cost savings for Spanish banks from increasing asset size
(Percentage)

	Range of cost savings		
Asset category	2007	2013	2015
Over 200 billion euros	5-14	7-26	8-27
100-200 billion euros	3-10	5-22	6-24
50-100 billion euros	1-8	3-19	4-19
20-50 billion euros	1-5	1-12	1-12
10-20 billion euros	(-2)-3	(-1)-4	(-1)-4
Less than 10 billion euros	(-3)-2	(-1)-2	(-1)-2

Source: Authors' estimates based on Carbó and Rodríguez (2014).

in Spain is that comprising institutions of between 50 billion and 100 billion euros, where the savings from reaching this scale lie in the 4% to 20% range.

The overall conclusion from these estimates is that Spain's banks can benefit from integration processes by achieving cost savings from greater scale. However, the challenge remains that of exploiting economies of scope, which arise out of synergies when combining traditional products with new ones. Incorporating fintech alternatives into the banking mix is clearly one option for achieving these kinds of economies of scope. However, it is not yet clear which technologies and services will provide these advantages.

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Regulatory shocks and a weak operating climate: A toxic cocktail for banks

Angel Berges and Francisco J. Valero[1]

New regulatory changes affecting resolution regimes and imposing limits on payment of dividends/coupons on financial instruments are increasing pressure on European banks already facing a difficult operating climate. This negative impact, however, is likely more a consequence of regulatory uncertainty rather than the new measures themselves.

Regulation serves an important function within the financial system, ensuring financial stability and consumer protection. However, while the current crisis has brought to light the need for regulatory changes, concerns about implementation of recent measures are adding uncertainty to an already challenging operating climate for European banks. In fact, the underperformance of European banks relative to other sectors unquestionably reflects perceptions that the banking business is far more exposed than other sectors to economic weakness and ulta-low interest rates. However, European bank shares have also been affected by new regulations, which substantially change the rules of the game as regards resolution regimes, as well as limits on maximum distributable amounts (MDAs) applied to financial instruments. The former change has had the most significant impact in the case of Italy, while the latter in the case of Germany.

The start of the year has been particularly harsh on European banks in terms of share price performance and the value of other listed financial securities, particularly those whose holders may now have to absorb losses in the event of resolution.

This value destruction is attributable to a dangerous combination of an extremely weak operating environment –zero growth and zero or even negative rates– and the effectiveness of certain new regulatory measures, which radically change the way losses are absorbed in the event of bank resolution, as well as imposing serious limits on the payment of dividends and/or coupons on the financial instruments issued by banks.

In our view, it is not so much the advent of the new regulatory framework, but rather the uncertainty lingering as to its effective application which the market has penalised, all of which against a macroeconomic backdrop hardly favourable to the banking business.

[1] A.F.I. – Analistas Financieros Internacionales, S.A.

Financial sector regulation: *Raison d'etre* and responses to the crisis

Regulation is an intrinsic part of the banking business and has important implications for banks' risks and returns. In turn, these regulations form part of the social contract between the banking system and society: the financial institutions act as intermediaries in the financial system, a function performed in a regulated environment, which has two basic objectives (see Afi, 2015):

- Ensure the stability of the financial system as a whole, which essentially entails defending it against distress, external or internal, which could have an adverse impact on this stability, ensuring the various markets work as intended and overseeing that the system players are adequately capitalised and have suitable risk controls;

- Protect financial service users, particularly those in greatest need of protection: retail customers, who generally lack the required financial acumen or resources to operate in this arena without sufficient guarantees.

Although the need for financial stability has always been present, the current crisis has highlighted the need to ensure the stability of the system per se rather than the financial health of individual institutions, historically the object of financial regulations and supervision.

Although the need for financial stability has always been present, the current crisis has highlighted the need to ensure the stability of the system per se rather than the financial health of individual institutions, historically the object of financial regulations and supervision.

This reality is behind what is known as **systemic risk,** which can be defined as in Regulation (EU)

No. 1092/2010, of November 24th, 2010, on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board (ESRB): "a risk of disruption in the financial system with the potential to have serious negative consequences for the internal market and the real economy".

Having identified this risk, the purpose of **macro-prudential oversight** is to prevent or mitigate systemic risks to financial stability arising from developments within the financial system and taking into account macroeconomic developments so as to avoid periods of widespread financial distress.

We have sought to emphasise this oversight function not just because it is new but above all because it has yet to be implemented in Spain, which presently does not have a well-defined macro-prudential authority (additional provision 18 of Spanish Law 10/2014), notwithstanding the temporary assignment of some of these competencies to the Bank of Spain (transitional provision 1 of Spanish Royal Decree 84/2015) and performance of the macro-prudential functions vested in the ECB with respect to significant entities.

The consumer protection impetus is in the system's own interests as consumers would not put their money in it if they did not feel duly protected by the system's regulations.

The prevailing crisis has prompted a raft of regulatory initiatives designed to enhance consumer protection in response to the cases coming to light in some countries, including Spain. These initiatives have been mainly articulated around two lines of action: mortgage holder protection and malpractice in the distribution of certain financial instruments.

At any rate, the consumer protection thrust goes beyond regulation insofar as the banks have suffered reputational damage which has required

them to approach their customers in a more proactive manner.

The crisis has prompted a raft of regulatory initiatives designed to enhance consumer protection in response to the cases coming to light in some countries, including Spain. These initiatives have been mainly articulated around two lines of action: mortgage holder protection in response to the cases coming and malpractice in the distribution of certain financial instruments.

Elsewhere, the current crisis has spawned the creation of new institutions, not previously contemplated, which have naturally needed their own rules and regulations, just as these institutions contribute to the development of new regulations in the course of exercising their functions.

In this paper we do not attempt to specifically address all of these new regulations, but it is worth highlighting the fact that they affect:

- The aforementioned ESRB and the three European Supervisory Authorities (EBA, EIOPA and ESMA, together the ESAs).

- Banking union, which so far has two pillars (while the creation of a potential European deposit fund is pending):

  - The Single Supervisory Mechanism (SSM), tasked to the ECB, which has already given rise to very comprehensive and specific implementing regulations, which is not to say that these will not continue to be fine-tuned in accordance with this body's experience and needs.

  - The Single Resolution Mechanism (SRM), underpinned by the Single Resolution Board and the Single Resolution Fund, which has still to be implemented.

Because resolution of the various banking crises was not homogeneous across the EU, other than involving public aid across the board, the EU has published Directive 2014/59/EU, the Bank Recovery and Resolution Directive (BRRD), which has introduced a substantial shift in the apportionment of the costs of a crisis towards the investment community (bail-in) and away from the public sector (bail-out, the former *modus operandi)*, the consequences of which have yet to be truly tested on a crisis at a real systemic entity, although Spain has had some experience as a result of the Memorandum of Understanding signed with the rest of the eurozone nations in exchange for the provision of funds for resolving its banking system crisis.

Meanwhile, the resolution solution being cobbled together for a group of Italian financial institutions, which goes in a different direction, highlights the difficulties of putting such as radical change into practice, raising the costs borne by the banks' shareholders and investors, making it harder for these institutions to secure financing.

We should also mention the fact that because one of the issues detected during the crisis was uneven application of EU regulations by its member states, the new regulations have largely taken the form of binding and directly applicable regulations rather than the traditional directives, although these have not disappeared altogether.

However, a regulation can leave some of its elements to development by the member states or their authorities (the so-called national options), which has given rise to intervention by the ECB, as the competent authority for the SSM in respect of significant supervised entities, in an attempt to regulate as many options and discretions as it has been able to, thereby increasing regulation in this arena.[2]

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[2] See Regulation (EU) 2016/445 of the European Central Bank, of March 14th, 2016, on the exercise of options and discretions available in Union law, as well as the related Guide, available at https://www.bankingsupervision.europa.eu/legalframework/ecblegal/framework/html/index.en.html

Angel Berges and Francisco J. Valero

Regulatory processes: Complexity and uncertainty

These reflections, and those that could be posited regarding the quantity and quality of the regulations, cannot be separated from the procedures used to approve the regulations and the context in which they are amended.

The current crisis has necessitated, and continues to require, many regulatory modifications of varying scope which, in general, imply very substantial changes with respect to the pre-existing situation, not only on account of the depth of the changes made to the previous regulations but also because they now address new or formerly scantly addressed aspects, such as remuneration and liquidity risk, to cite a couple of examples.

Irrespective of how well they may be drafted, for example in terms of internal consistency, the effectiveness of the new regulations must be tested and borne out in reality, which is precisely why they often have to be modified, sooner or later, if, ultimately, they do not work as anticipated or are not capable of tackling the new problems adequately.

This does not mean that all draft regulations should not be subjected to as much prior quality testing as possible. To the contrary. We are referring, for example, to testing in the sense of:

■ Being accompanied by impact analyses designed to estimate their effects on the affected entities and, very importantly, for the real economy. These studies will inevitably be based on assumptions which, as such, do not always correspond with reality.

■ Being subjected to consultation for a reasonable period of time during which the affected entities, either directly, or through the associations which represent them, can channel the observations they deem opportune. This feedback should be evaluated by the regulators before approving the new regulations.

■ Being put through the controls contemplated in the regulations themselves, such as, in the case of the EU, the subsidiarity control mechanism for participation by national parliaments.[3]

The European Commission (EC) operates a Regulatory Fitness and Performance Programme (REFIT[4]), which was rounded out in the middle of April 2016 with an Interinstitutional Agreement on Better Law-making[5] among the EU's three main institutions responsible for the bulk of its front-line regulations: the European Parliament, the Council of the European Union and the European Commission.

■ Anticipating the required implementing regulations and the opportune delegations of powers to the European Commission and, if warranted, the prior work which needs to be performed by the European Supervisory Authorities (ESA[6]) via the corresponding regulatory or implementing technical standards. The former give rise to delegated acts, the latter to implementing acts.

This last idea is based on the Treaty on the Functioning of the EU (TFEU), reformed by the Lisbon Treaty, as reflected in Table 1, which currently takes the approach proposed by Lamfalussy,[7] initially tested in securities markets and since applied to all financial services areas.

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[3] Protocol No. 2 on application of the principles of subsidiarity and proportionality.

[4] http://ec.europa.eu/smart-regulation/refit/index_en.htm

[5] http://ec.europa.eu/smart-regulation/better_regulation/documents/iia_blm_final_en.pdf

[6] These authorities have stakeholder groups (consumers and users, financial institutions, employees, academics, small and medium sized enterprises) for the purpose of fostering their participation in the preparation of these standards.

[7] Proposed in the report prepared by *The committee of wise men on the regulation of European securities markets*, presided by Alexandre Lamfalussy, on 15/2.2001, available at the following link: http://ec.europa.eu/internal_market/securities/docs/lamfalussy/wisemen/final-report-wise-men_en.pdf

At any rate, it is an approach which considerably increases the number of EU standards in a given field; recall, however, that these acts have a different legal status. At present, there is a profusion of implementing acts under CRR/CRD IV, which does not mean that the implementation process is complete; indeed, the regulatory effort is barely underway with the attempt to address banking crisis resolution and we can expect to see more standards of this nature in the immediate future.

One peculiarity of the delegated acts is the fact that they generally see the light of day months after they are approved by the European Commission,

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Most of the new regulations implemented in Europe are being coordinated at the global level. This certainly gives European regulatory developments greater legitimacy internationally, but does not necessary guarantee their appropriateness or consistency.

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regardless of whether their origin lies with the Commission or one of the ESA's technical standards. The fact is that they have to be validated by two co-legislators within a deadline and without this validation they cannot be published. This can generate a sometimes-significant delay in their application.

Moreover, we must not forget that most of the new regulations implemented in Europe are in theory being coordinated at the global level by the G-20, with the Financial Stability Board and the Basel Committee on Banking Supervision being the institutions tasked with their implementation, despite the fact that neither institution has been expressly empowered to adopt legally binding acts. This situation certainly gives European regulatory developments greater legitimacy internationally, but does not necessary guarantee their appropriateness or consistency.

Turning back to the EU, there is, generally speaking, a double level of regulations: the European level and that corresponding to the member states, giving rise to a duality of standards which it is very important to consider in order to understand their scope and interrelationships, to which end the Exhibits included in this paper on banking regulation in general and capital requirement standards in particular (Exhibits 1) and on the resolution of bank crises (Exhibits 2) might be of use.

This regulatory zeal is not likely to conclude in the near term, or even after the transition periods

Table 1

Delegated and implementing acts

Type of act	Article of the TFEU	Purpose	Institution
Delegated	290	Adoption of non-legislative acts of general application that supplement or amend certain non-essential elements of a legislative act, so long as the powers to do so are delegated in the European Commission	European Commission

Implementing	291	The granting of powers to implement legally binding EU acts when the acts require uniform conditions for implementation	European Commission
			Council of the European Union
			  - Duly justified specific cases
			  - Common foreign and security policy

Source: TFEU.

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Exhibit 1

General and capital requirement regulations applicable to Spanish financial institutions
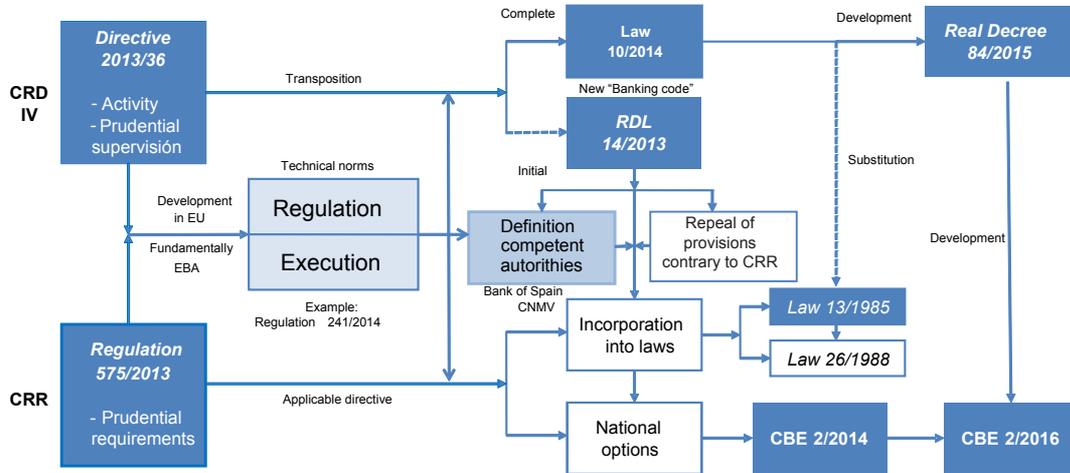
Source: AFI.

contemplated conclude; for example, there are still some Basel III matters to determine, such as the leverage and medium-term ratios. Without mentioning the unfolding need to address previously unforeseen developments, such as the appropriate treatment of sovereign risk exposure, of great interest to the eurozone members, particularly Spain.

What is clear is that any new regulatory reforms, including the scope for dismantling or rolling back some of the changes already made, must

Exhibit 2

Financial institution resolution in Spain
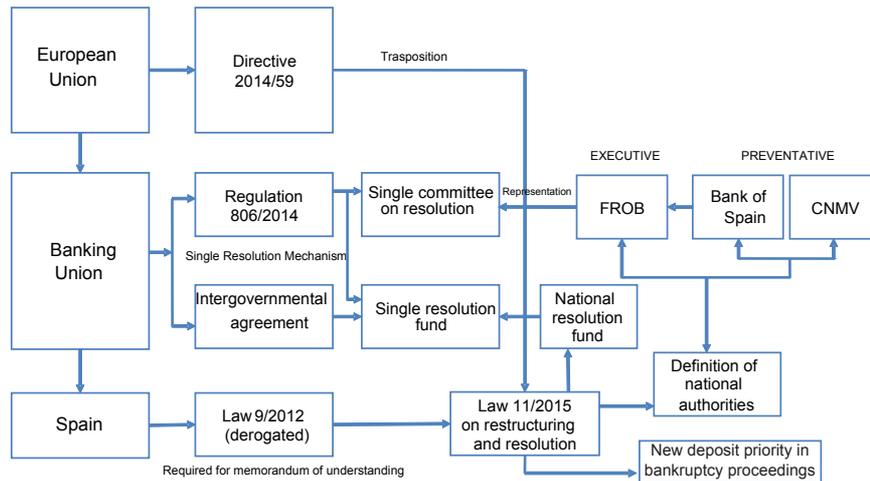
Source: AFI.

factor in experience and analysis of the changes required.

Regulatory uncertainty in the current banking business environment

In light of the foregoing considerations, it would appear that we have not seen the end of the new regulations designed to mitigate the effects of the crisis and, insofar as possible, prevent a recurrence in the future. Although much progress has been made in recent years, there are still important matters to implement; in parallel, some of the new standards have yet to be tested in reality, a process which could fuel additional regulatory developments for a time.

All of this combines to imply significant uncertainty regarding the outlook on the regulatory front, particularly with respect to certain implementing regulations which lend themselves to different interpretations in respect of certain key aspects, as we will analyse in this section. This uncertainty is not good for bank valuations, much less their ability to attract capital, especially in such a challenging business climate, as the banks contemplate stagnation with rates at or even below zero.

Interest rates of zero per cent, not to mention in negative territory, are extremely harmful for the banking business to the extent that the downward repricing of the interest collected on loans cannot be fully passed through to the remuneration paid for liabilities, particularly those comprised of household and corporate deposits, putting tremendous pressure on net interest margins.

This vulnerability –which affects not only the banks but also the insurance companies– to negative rates has been the subject of debate in the ECB's press conferences in recent months each time it has cut its benchmark rates further. The standard response provided by the ECB's president to appeals regarding this vulnerability

has been, firstly, that the central bank's mandate does not include propping up bank margins and, secondly, that the vulnerability is not generalised, that it varies from one country to the next depending on the business model and the relative sensitivity of assets and liabilities to zero or negative rates.

The International Monetary Fund has, however, addressed this source of vulnerability directly. In its *Global Financial Stability Report* (GFSR, http://www.imf.org/External/Pubs/FT/GFSR/2016/01/pdf/text.pdf) it performs a simulation exercise to determine which banking systems are more exposed to the negative rate scenario and to what extent they have room to offset the squeeze on margins by increasing lending.

Vulnerability is higher the more sensitive asset returns are to benchmark rates and the less sensitive the cost of funding to these same rates. Unfortunately, the Spanish banking system is among the most vulnerable on both fronts as it carries a significant percentage of assets (mainly mortgages) whose interest is linked to benchmark rates and a high percentage of household and corporate deposits for which it is extraordinarily difficult to cross the zero-rate barrier.

Unfortunately, the Spanish banking system is among the most vulnerable to negative rates as it carries a significant percentage of assets (mainly mortgages) whose interest is linked to benchmark rates and a high percentage of household and corporate deposits for which it is extraordinarily difficult to cross the zero-rate barrier.

An analysis of the European banks' stock market performance relative to other sectors evidences the fact that the market has taken stock of the extraordinarily challenging business environment facing banks across Europe, more acutely during

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Exhibit 3
Relative valuation – Banks *versus* Eurostoxx

Source: Factset, AFI.

24
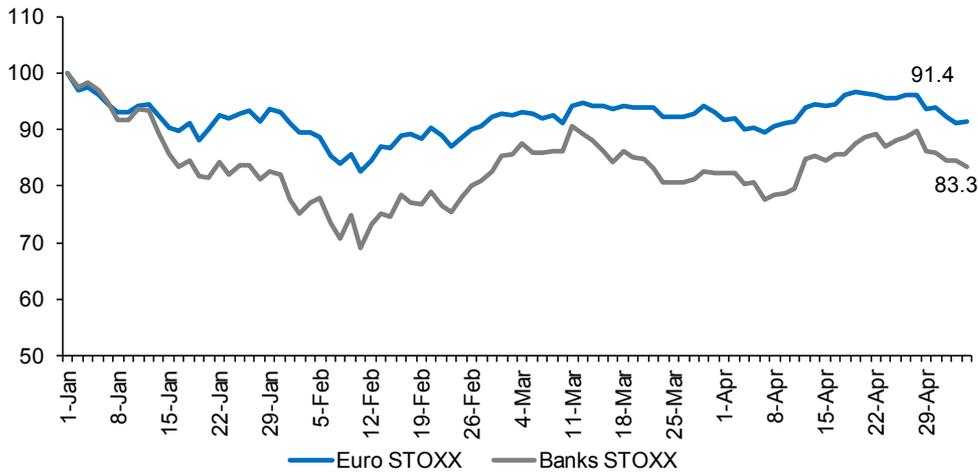
the early part of this year. The accompanying exhibit illustrates how European banks (those included in the Eurostoxx) have seen 17% wiped off their market cap so far in 2016, which is more than twice the correction in the overall index (9%).

This underperformance by the European banks relative to other sectors unquestionably reflects the perception that the banking business is far more exposed than other sectors to economic weakness and ultra-low interest rates (which are in fact likely to benefit other sectors).

Within this generally adverse banking business environment, our interest lies with inferring whether the banks' share prices have also been hurt by changes in banking regulations and the resulting uncertainty. To do so, we have opted to differentiate between countries, emphasising those that have experienced –or continue to experience– the greatest regulatory blows and/or associated implementation uncertainty, essentially Italy and Germany, as we explain further on.

The accompanying exhibits illustrate the stock market performance by the banks relative to

the respective general indices in the four major eurozone economies, *i.e.,* Germany, France, Italy and Spain. Note, firstly, that the banks have underperformed the general indices across the board. In fact, the general indices have performed very similarly in Germany, France and Spain (correcting by 7% to 9%), correcting by a more substantial 16% in Italy.

Although the Spanish banking system is the most exposed to the zero/negative rate environment, it has performed the best on the stock market on a relative basis. This paradox is partly explained by the Spanish banking system´s large provisioning effort since the start of the crisis, leaving it less exposed to regulatory developments.

The banks' share price performances can, however, be grouped into two clearly different categories; in our opinion, this divergence has a lot to do with regulatory developments and uncertainty.

Exhibit 4

Relative valuation – Banks *versus* national indices

4.1 - Spain

91.1

86.1

IBEX — Banks IBEX

4.2 - Italy

83.7

61.8

MIB — Banks MIB

4.3 - Germany

91.7

69.2

DAX — Banks DAX

4.4 - France

93.3

83.4

CAC — Banks CAC
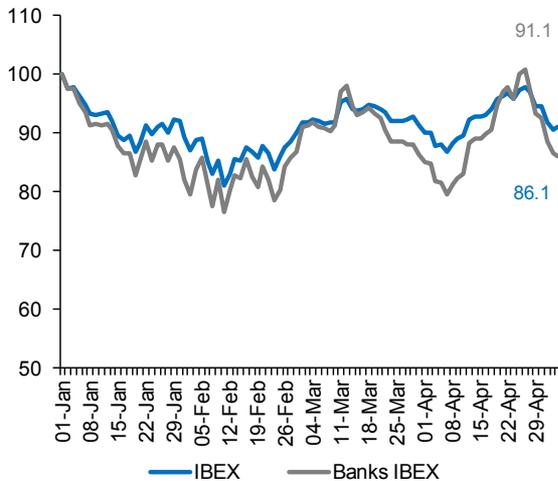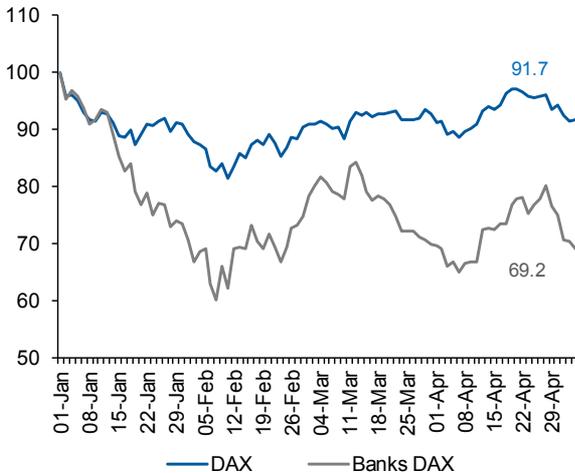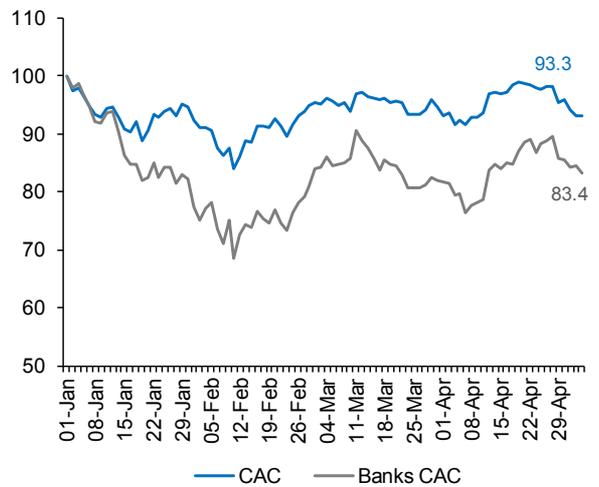
Source: Factset, AFI.

The Spanish banks' valuations have held up the best, relatively speaking, correcting 14%, followed very closely by their French counterparts, which have seen their market caps correct by 17%. Paradoxically, although the Spanish banking system is the most exposed to the zero/negative rate environment, as noted above when analysing the IMF's report, it has performed the best on the

stock market on a relative basis. One possible explanation for this paradox is the fact that the Spanish banking system is the system which has made the biggest provisioning effort since the start of the crisis, which probably leaves it currently less exposed to regulatory developments which impose additional capitalisation measures and/ or sources of uncertainty with respect to burden-

sharing by shareholders and investors in general in the event of resolution.

Leaving the French case aside (whose relative performance is similar to that of Spain), it is worth highlighting the sharp share price corrections sustained by the German and Italian banks, which have seen 31% and 38%, respectively, wiped off their valuations year-to-date. In our opinion, the fact that these two countries' banks have underperformed their French and Spanish counterparts is closely correlated to the impact of several regulatory changes which have had a particularly significant impact on the banks in Italy and Germany, changes which moreover are associated with considerable uncertainty with respect to their effective implementation and, by extension, their ultimate impact on the affected banks.

A series of new regulations took effect in early 2016 which radically change the rules of the game in terms of the risk borne by holders of various financial instruments issued by banks.

The change in the rules of the game is underpinned by two basic principles. Firstly, the idea that the cost of future bank crises needs to be shared by various classes of investors in troubled banks rather than by taxpayers, as was the case in the recent crisis. In a nutshell, a shift away from a bail-out to a bail-in regime when resolving failing banks.

Coupled with this, and framed by the basic principle of macro-prudential regulation analysed above, the imposition of limits on the amounts which can be distributed by credit institutions (the maximum distributable amounts or MDAs), specifically restrictions on the payment of dividends on shares or coupons on contingent convertible capital instruments (the so-called CoCos, which have recently emerged as the main instrument being used to reinforce capital within the Additional Tier 1 category).

The start of the year has brought to light two cases which clearly illustrate the problems which such

radical changes, particularly when associated with uncertainty in terms of implementation, can bring: Italy and Germany are, respectively, examples of the collateral effects of the first and second of the above-mentioned principles (bail-in regime and MDAs).

Italy and Germany, respectively, are examples of the collateral effects of radical regulatory changes, as well as uncertainty regarding their implementation, related to the bail-in regime and MDAs.

In the case of Italy, the market woke up to the fact that its financial system faces steep provisioning requirements (non-performing loans stand at 350 billion euros, compared to 130 billion euros in Spain, the two banking systems being of similar size) just as the new bank resolution regulations took effect in Europe (on January 1st). Under the new regime, any sort of public support for Italy's provisioning effort (either via recapitalisation or the provision of guarantees as part of the creation of a 'bad bank' for the transfer of toxic assets) will first necessitate a full bail-in process in which the affected banks' investors (its shareholders first, its convertible bondholders next and, eventually, even its senior debt holders) would incur substantial losses.

Against this backdrop, the Italian government's efforts to enact the state aid procedure have entailed an unusual loss-sharing scheme: the good banks will have to come to the aid of the bad banks by investing in securitisation vehicles which repackage bad loans in order to recapitalise the latter. Either way, the losses incurred by the holders of the banks' securities would not be limited to the failing banks but be borne by the system as a whole: the shareholders of the 'good banks' will indirectly share the losses of the bad banks in order to prevent a massive bail-in which would affect the holders of the senior securities (bonds and even maybe deposits) of the most troubled institutions.

In our view, that risk of generalised losses across the Italian banking system's shareholder base is what is really behind the share price collapse in that market.

In Germany, meanwhile, the problems related with the new regulations and associated uncertainty are far more concentrated in the country's largest bank, Deutsche Bank (DB). Under pressure from more stringent capital requirements, particularly in order to meet the leverage ratio (a metric on which this bank has rated consistently below international standards), since the start of the crisis, DB has been one of the most active issuers of contingent convertibles (CoCos, AT1 capital): at year-end 2015, its outstanding balance of these securities stood at almost 5 billion euros. Against this backdrop, in February, DB announced sharp losses (> 5 billion euros) in 2015, shaped mainly by fines and provisions related to unorthodox conduct in the wholesale funding markets (index manipulation, etc.).

Despite the non-recurring nature of those losses, which should not be extrapolated when projecting DB's business potential, they could hamstring the banks' ability to pay coupons on its CoCos; this prospect triggered a genuine stampede out of these instruments, driving a correction in their market value and, more importantly, shutting down the market for new issues. In fact, as shown in the accompanying Exhibit, not only did its so-called CoCos sustain losses, the price of all the financial instruments issued by DB corrected.

The fear of widespread contamination to financial instruments (CoCos, subordinated bonds, senior bonds) believed safe until now prompted DB's management to buy these instruments back in an attempt to curtail this contagion risk. However, that buyback effort ultimately implies transferring a higher bail-in risk to its shareholders, as is evident in the recent relative performance by the various classes of quoted financial instruments. The price recovery in CoCos and subordinated bonds has been offset by a fresh correction in the share price, which is down by over 32% year-to-date. DB's significant weight in the German bank index, exacerbated by an element of contagion –fear that other German banks could encounter a similar situation–, is responsible for the widespread correction in the German banking sector's market

Exhibit 5
Deutsche Bank - Loss of share value and other instruments
(Base 100 1-1-16)
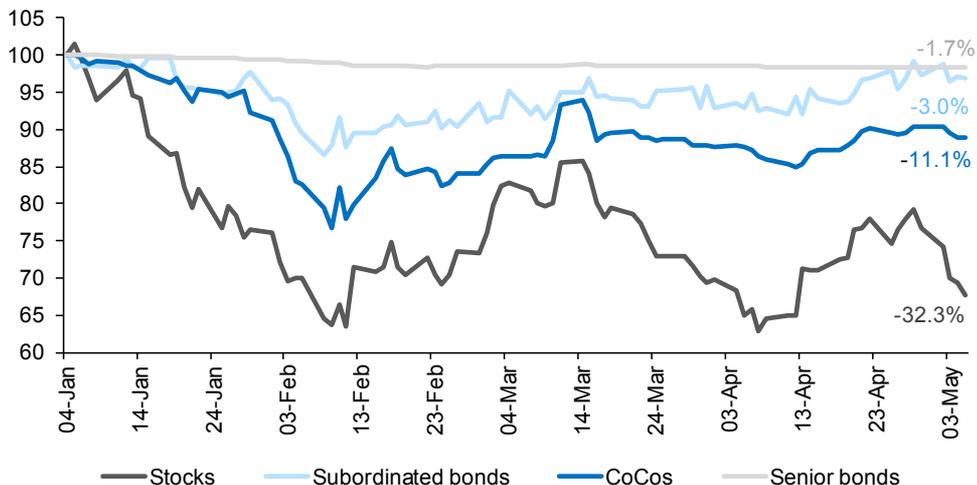
Source: Factset, AFI.

value. It also provides a telling story of what can happen as a result of exposure to a drastic change in regulations (especially change associated with a significant element of uncertainty in terms of how it will play out) regarding relative ranking when it comes to risk-sharing.

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European banks' annual reports: Comparative analysis of complexity and tone

Nieves Carrera[1], Jie Mein Goh[2] and Ronny Hofmann[3]

In recent years, financial reporting across European banks has, on average, become more complex, reflecting the more challenging operating environment faced by banks. Focusing on improving readability and tone of financial reporting could represent one way to increase the clarity and transparency of quantitative financial disclosures.

The increased complexity and intensity of banks´ operating environment has raised the need for transparency in financial reporting to all stakeholders. In the face of more onerous reporting obligations imposed by regulators and standard setters, empirical evidence suggests banks´ reporting has actually become more complex. In particular, the way banks are using linguistic features probably reduces the clarity and brevity of their quantitative reports. Surprisingly, banks from non-Anglo-Saxon countries make an effort to produce more concise and readable reports than their Anglo-Saxon counterparts. As regards the tone of reports, as expected, during the crisis years, report language was more negative and uncertain, reflecting overall concerns over macroeconomic and financial market conditions. In the case of Spain, evidence suggests that financial reports were more readable and optimistic compared to the European average, although readability measures were more volatile.

Introduction and background

Recent reports on the financial services industries reveal that banks' business models and financial products became more complex in the last years. This led to an increase in profitability on average, but on the downside also increased the risk position of financial institutions (Oliver Wyman, 2015). Due to this increased complexity in operations, it is crucial that banks report their financial (risk) position and performance in a clear and concise way to all stakeholders (shareholders, creditors, regulators, and government agencies among others). A *Financial Times* article reported that banks and other financial companies "are publishing annual reports that are overly complicated and indigestible" (FT, 2014; KPMG, 2012). In recent years, mandatory reporting under International Financial Reporting Standards (IFRS) and U.S. Generally Accepted Accounting Principles (US-GAAP) required further disclosures of information to

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[1] IE Business School and IE University.

[2] Beedie School of Business and Simon Fraser University.

[3] IE Business School and IE University.

increase the transparency of annual reports and to strengthen the communication between banks and investors. As this increased the complexity of understanding the reports, the *International Accounting Standards Board* (IASB) started an initiative on disclosures in 2011 that aims at making disclosures less complex and finding new ways of reporting specific accounting information more efficiently. With regard to European banks, a report titled *Assessment of Banks' Pillar 3 Disclosures* (2009) has been published by the *Committee of European Banking Supervisors* (CEBS). CEBS comes to the conclusion that "banks have made a huge effort to provide market participants with information, allowing a better assessment of their risk profile and their capital adequacy" and also mentions that "banks have notably heightened the level of quantitative and qualitative disclosures on their credit risk and securitizations activities." Nevertheless, the overall "reporting burden" still leads to annual reports that significantly increased in length and complexity. Although the focus of standard setters and regulators is on the complexity of quantitative content included in the financial reports (*e.g.*, information related to asset quality, tier-1 capital, liquidity and performance), the way banks make use of linguistic features of the qualitative information may also alter the transparency and conciseness of the reported information. Overall, it may impact the usefulness of the quantitative disclosures.

In this study, we analyze the narrative of annual reports to investigate the way in which financial reporting information embedded in banks' annual reports is disseminated to investors. Specifically, we examine different lexical properties (readability/complexity and tone) of the information provided by banks in their financial reports. For this purpose, we use different linguistic metrics previously used in the context of financial disclosures.

Especially in the current globalized economy, investors and users of financial statements face the challenge of dealing with information published in different languages. With the aim to reach a broader set of investors, more firms and

banks in non-English-speaking countries use English, the *lingua franca*, for financial reporting purposes. Providing information in English may reduce information frictions faced by investors across countries and it, in turn, increases the company's investor base and analyst following, as suggested by prior studies (Jeanjean *et al.*, 2015). This is particularly relevant in Europe given the diversity of languages and cultures that coexist in a relatively small geographic area. The potential benefits conferred through the publication of annual reports in English are contingent upon the extent to which the documents contribute to an effective communication of relevant information which can be interpreted by shareholders, individual investors, analysts, the general public and other users of financial information (Loughran and McDonald, 2014). Our focus is on European banks that provide financial information in English language.

Sample and methodology

We use data from *Thomson Datastream and the European Banker* to identify the top European financial institutions during the period 2005-2012. Our original sample comprised of 72 European financial institutions from 18 countries. Financial data was collected from ORBIS (*Bureau van Dijk Electronic Publishing*). To compute the linguistic metrics, we use the annual reports published in English language, which were downloaded from the banks' websites. We excluded those banks for which the annual reports published in English language were not available. The original file format of the document was in PDF format. These files were converted into pure text and then parsed with software programs written to obtain the various linguistic measures. Due to the security settings of the PDF files, some of the documents could not be converted into pure text which reduced our sample to 69 banks.

Table 1 provides information about the number of banks included in the sample and the total number of observations per country. We have a complete

Table 1

Number of banks/observations by country

Country	Nº. of Banks in the sample	Total nº. of observations (2005-2012)
Austria	4	32
Belgium	2	16
Denmark	4	32
Finland	1	8
France	6	48
Germany	12	96
Greece	4	32
Hungary	1	8
Ireland	3	24
Italy	6	48
Netherlands	3	24
Norway	1	8
Poland	1	8
Portugal	3	24
Spain	6	48
Sweden	4	32
Switzerland	2	16
United Kingdom	6	48

Source: Authors' own elaboration.

panel of 69 banks located in 18 different European countries, with 552 observations for the period 2005-2012. All countries are European Union (EU) member states except Norway and Switzerland. Of the 16 EU countries included in the sample, 5 do not belong to the Eurozone (Denmark, Hungary, Poland, Sweden and the United Kingdom (UK)). The largest number of observations comes from Germany (12 banks) followed by France, Italy, Spain and the UK (6 banks in each country). Around 70% of the banks in the sample are listed in stock markets and the average size is 203 million euro (minimum 11.3 million euro and maximum 2,200 million euro).

Most prior studies have analyzed the readability of 10-K (annual) and 10-Q (quarterly) reports submitted to the Securities and Exchange Commission (SEC) in the US (Li, 2010). There are several differences between our sample and the 10-K (or 10-Q) filings: First, the structure of annual reports varies from country to country; second, in many cases, the annual report is not a translation of the official document submitted to the regulators (the local-language annual report) but a document prepared on a voluntary basis to communicate financial information to a large base of potential investors and analysts. As a result, the content and structure of the English-language annual report varies significantly from bank to bank even in the case of banks located in the same country. Given the nature of our sample, we do not compute the complexity and tone metrics for the different sub-sections of the document but for the document as a whole.

Table 2

Complexity metrics

Metric	Formula / Description	Interpretation
FOG Index (Li, 2008)	FOG=0.4* (Average number of words per sentence + Percentage of complex words).	>=18 Unreadable 14-18 Difficult 12-14 Ideal 10-12 Acceptable 8-10 Childish
LogFILESIZEPDF (Loughran and McDonald, 2014)	Log (Size in bytes of original PDF file)	All else equal, the higher the number, the more complex the disclosure
Length (Li, 2008; Lang and Stice-Lawrence, 2015)	Log (Wordcount) being Wordcount the number of words in the document	All else equal, longer annual reports are expected to be more informative (Lang and Stice-Lawrence, 2015). Because of the cost of processing, longer documents are more difficult to read (Guay *et al.,* 2015)

Source: Authors' own elaboration.

We use various linguistic metrics to measure the complexity of the financial reports. The most basic and frequently used metric developed for determining readability of documents is the FOG index (Gunning, 1969). The FOG Index measures the complexity of a text as a function of the average number of words per sentence and the percentage of complex words. Higher values of the index correspond to more complex text. The formulae of the FOG Index and its interpretation is provided in Table 2.

Several recent studies have used the FOG index as a proxy for the complexity of annual reports (*e.g*., Lang and Stice-Lawrence, 2015; Guay *et al*., 2015). Furthermore, the SEC has even contemplated the use of the FOG index as a standard metric to identify poorly written corporate documents. As noted by prior studies, the FOG Index has significant advantages as a metric of linguistic complexity: it is an objective measure (not based on surveys or opinions) that can be computed for any narrative disclosure and it provides a measure of the overall syntactic complexity of written communications (Lehavy *et al.*, 2011). However, this metric is not free of criticism. For example, Loughran and McDonald (2014) demonstrate that the FOG index is poorly

specified in financial applications. In their view, the first component of the index is misspecified and the second is difficult to measure. They argue that file size is a better proxy for readability because it "does not require document parsing, facilitates replication, and is correlated with alternative readability constructs" (Loughran and McDonald, 2014). Accordingly, we also consider the variable LogFILESIZEPDF, defined as the logarithm of the size of the PDF file measured in bytes as a proxy for the complexity of the financial reports. All else equal, the higher the number of LogFILESIZEPDF, the more complex the disclosure. Other researchers (*e.g*., Li, 2008; Guay *et al*., 2015) propose the number of words as a proxy for the complexity of financial documents. This variable is likely to capture the amount of disclosure as well as the complexity of the disclosure (Li, 2010). Under the assumption that the cost of processing longer documents is higher, longer document are considered to be more difficult to read (Guay *et al*., 2015). In some studies, this variable is used as a proxy for informativeness, suggesting that all else equal, longer documents are expected to be more informative (Lang and Stice-Lawrence, 2015). Following prior studies, we use the natural logarithm of the number of words to account for a non-normal distribution across all banks (variable

LENGTH). The advantage of using this metric is that it is simple to calculate; the downside is its high correlation with respect to the amount of disclosure.

To obtain measures for the tone of financial narratives, we use Loughran and McDonald's (2011) six sentiment word lists (uncertain, positive, negative, litigious, strong modal and weak modal) created specifically for measuring the tone of financial documents.[4] The lists include 285 words denoting uncertainty (*e.g.*, *risk*, *believe* and *assume*), 354 positive words (*e.g.*, *beneficial* and *successful*), 2,349 negative words (*e.g.*, *loss*, *against*, *failure* and *decline*) and 871 litigious words (*e.g.*, *contract* and *lawsuits*). Two lists refer to modal words, which are used to express possibility (weak modal words, for example *may*, *could*, and *possible*) and necessity (strong modal words, such as *always*, *must* and *will*). Some words appear in more than one list (for example, words like *unpredictable* appear on both the list of uncertain and negative words). These lists have been applied specifically to 10-Ks and newspaper articles (*e.g.*, Jegadeesh and Wu, 2013).

A final sentiment score of the text is calculated using the proportional weight, *i.e.*, the ratio of the sum of frequency of occurrences in that document of each word in the word list to the total number for words in the document (variables UNCERTAIN, POSITIVE, NEGATIVE, LITIGIOUS, MODALSTRONG and MODALWEAK). Following Davis *et al.* (2012), we also compute the language measure NET_OPTIMISM defined as the difference between the percentage of positive words and the percentage of negative words. This type of metric is not free of criticism. Previous work analyzing the positive tone of text suggests that the measure of positive sentiment is often challenging because positive words are often wrapped around in negative phrases (Loughran and McDonald, 2011). To mitigate this problem, we included a window of words around the focal phrase to account for these instances. Like in the case of the linguistic metrics, we compute the tone metrics for the entire document.

Complexity and tone of banks' financial reports 2005-2012

Table 3 presents the summary statistics of the complexity metrics. Besides the variables described above (FOG index, LENGTH and LogFILESIZEPDF), we also provide information about the size of the TEXT document (FILESIZETEXT), the number of words

Table 3
Summary statistics complexity metrics

Variable	Mean	Median	Std. Dev.	1st	25th	75th	99th	N
FOG Index	18	17.9084	1.8202	14.2905	16.8019	19.0884	23.3148	517
LogFILESIZEPDF	15.0514	15.0696	0.7287	13.145	14.6315	15.5439	16.6546	522
FILESIZETEXT	11.2911	11.3428	0.6428	9.5915	10.9183	11.767	12.3728	522
Wordcount (WC)	745,198	641,227	422,890	123,977	440,116	1,011.791	1,883.319	522
Length	95,892	84,356	54,035	14,640	55,179	128,918	236,294	522
ΔFOG Index	0.1216	0.1164	1.0502	-3.4513	-0.2948	0.4933	3.6228	443
ΔLength	0.0598	0.072	0.2864	-1.0552	-0.0081	0.141	0.9132	451

Source: Authors' own elaboration based on a sample of annual reports (published in English) of European Banks.

[4] The most updated version of the word lists of Loughran and McDonald is available at http://www3.nd.edu/~mcdonald/Word_Lists.html#Master_Dictionary

(WORDCOUNT), and the change in the FOG index (∆FOG Index) and in the length of the document (∆LENGTH). For completeness, we show the descriptive statistics of all complexity metrics even though we focus our analysis on the FOG Index.

The mean and the median of the variable FOG are 18.00 and 17.91, respectively. This suggests that, following the standard interpretation of this index (see Table 2), the financial reports of banks are very difficult to read and empirically supports the criticism provided by regulators and investors. Besides the already complex and unclear quantitative disclosures provided by financial institutions in their annual reports (FT, 2014; KPMG, 2012), the transparency of financial reports may be negatively affected by the linguistic features of the qualitative information and narratives included in the documents.

Exhibit 1 shows the mean and median of the FOG Index for the sample firms for the period 2005-2012. We observe a consistent increase of the FOG Index after 2006 to 2011, suggesting

an increase in the linguistic complexity of banks' disclosures during the years of the economic and

Although regulators and standard setters demanded clear and concise financial reporting during the recent financial crisis, evidence suggests that the way banks used linguistic features reduced the clarity and brevity of the disclosures.

financial crisis. Although regulators and standard setters demanded clear and concise financial reporting during the recent financial crisis, our evidence suggests that the way banks used linguistic features in their reports reduced the clarity and brevity of the quantitative disclosures.

We run a t-test to compare means of the linguistic metrics for the years 2005-2007 (before the financial crisis) and the period 2008-2012. The results reported in Table 4 suggest significant

Exhibit 1

Mean and Median FOG Index

Source: Authors' own elaboration based on a sample of annual reports (published in English) of European Banks.

Table 4
T-test complexity metrics period 2005-2007 (Non-crisis) *vs.* period 2008-2012 (Crisis)

Variable	Period	N	Mean	t-test of difference (Pr(|T|>|t|))	
FOG index	2005-2007	194	17.5899	-4.0691	
	2008-2012	323	18.2527	(0.0001	****
Length	2005-2007	194	11.1147	-5.7075	
	2008-2012	323	11.4256	(0.0000)	****
LogFILESIZEPDF	2005-2007	194	14.8911	-3.9171	
	2008-2012	328	15.14618	(0.0001)	****

*Notes: Two-sample t test with equal variances. Diff = mean (0) - mean (1). Ho: Diff !=0; * Significant at p<0.10; ** Significant at p<0.05; *** Significant at p<0.01; ****Significant at p<0.001*
Source: Authors' own elaboration based on a sample of annual reports (published in English) of European Banks.

changes in the readability, length and size of the annual reports from the years 2005-2007 to the period 2008-2012. That is, the mean of the FOG index for the crisis period (2008-2012) is significantly higher than that for the non-crisis period (2005-2007). Similarly, the size of the report measured in number of words (LENGTH)

and in the size of the PDF file (LogFILESIZEPDF) increased during the financial crisis.

The tone metrics for the complete sample are reported in Table 5. We find that the proportion of negative words used by European financial institutions during the period 2005-2012 was

Table 5
Summary statistics tone metrics

Variable	Mean	Median	Std. Dev.	1st	25th	75th	99th	N
Uncertain	0.0135	0.0137	0.0035	0.0039	0.01135	0.0157	0.0226	516
Positive	0.0093	0.0086	0.0030	0.0050	0.0069	0.0108	0.0186	516
Negative	0.0137	0.0137	0.0035	0.0049	0.0114	0.0161	0.0213	516
Litigious	0.0058	0.0056	0.0020	0.0016	0.0043	0.0071	0.0106	516
Modalstrong	0.0023	0.0022	0.0009	0.0006	0.0017	0.0029	0.0054	516
Modalweak	0.0018	0.0016	0.0007	0.0006	0.0013	0.0022	0.0036	516
Net_optimism	-0.0044	-0.0052	0.0052	-0.0141	-0.0083	-0.0009	-0.0091	516

Notes: Definition of variables (all based on Loughran and McDonald (2011) list of words).
Uncertain: Percentage of uncertain words divided by the total number of words.
Positive: Percentage of positive words divided by the total number of words.
Negative: Percentage of negative words divided by the total number of words.
Litigious: Percentage of litigious words divided by the total number of words.
Modalstrong: Percentage of modal strong words divided by the total number of words.
Modalweak: Percentage of modal weak words divided by the total number of words.
Net_optimism: Percentage of positive words (Positive) minus percentage of negative words (Negative).
Source: Authors' own elaboration based on a sample of annual reports (published in English) of European Banks.

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Table 6

T-test tone metrics period 2005-2007 (Non-crisis) *vs.* period 2008-2012 (Crisis)

Variables	Period	N	Mean	t-test of difference	(Pr(|T| > |t|))
Uncertain	2005-2007	193	0.01253	-4.8776 (0.0000)	****
	2008-2012	323	0.0140		
Positive	2005-2007	193	0.0099	3.1315 (0.0018)	***
	2008-2012	323	0.0090		
Negative	2005-2007	193	0.0116	-12.5058 (0.0000)	****
	2008-2012	323	0.0150		
Litigious	2005-2007	193	0.0053	-3.7694 (0.0002)	****
	2008-2012	323	0.0060		
Modalstrong	2005-2007	193	0.0023	-0.1988 (0.8425)	
	2008-2012	323	0.0024		
Modalweak	2005-2007	193	0.0016	-4.9269 (0.0000)	****
	2008-2012	323	0.0019		
Net_optimism	2005-2007	192	-0.0017	9.8653 (0.0000)	****
	2008-2012	323	-0.0060		

*Notes: Two-sample t test with equal variances. Diff = mean (0) - mean (1). Ho: Diff !=0; * Significant at p<0.10; ** Significant at p<0.05; *** Significant at p<0.01; ****Significant at p<0.001. See Table 5 for the definition of variables.*
Source: Authors' own elaboration based on a sample of annual reports (published in English) of European Banks.

1.37%, slightly higher than the proportion of uncertainty words (1.35%) and the proportion of positive words (0.93%). The mean of the variable NET_OPTIMISM is negative, which is not surprising if we expect annual reports to capture information not only about the economic

Exhibit 2

Mean tone metrics of annual reports
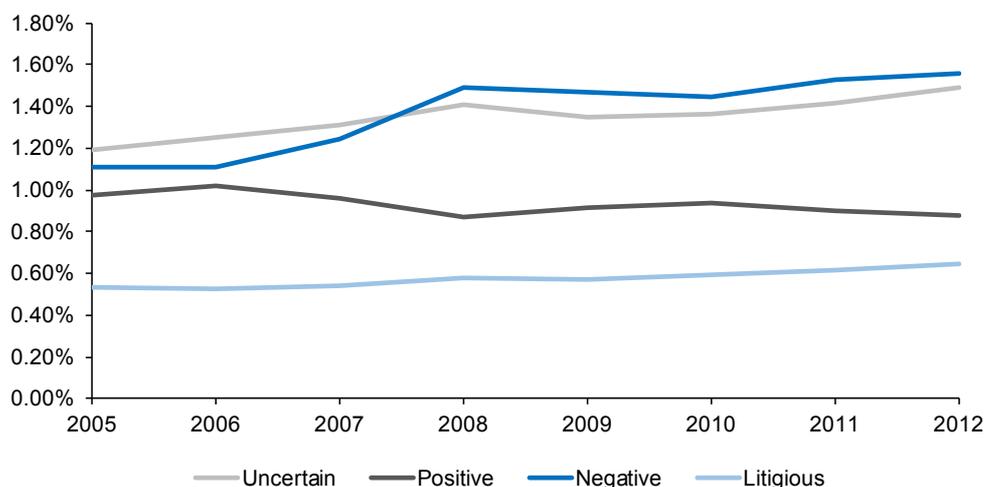
Source: Authors' own elaboration based on a sample of annual reports (published in English) of European Banks.

and financial position of the entity but also about the macroeconomic environment. On average, the reports have 0.58% of litigious words. Regarding the proportion of modal strong and modal weak words, the average percentages are 0.23% and 0.18% respectively.

A t-test for the means of the tone metrics for the crisis and non-crisis periods suggests that there are significant differences (see Table 6). Except for the modal strong words, we find significant differences for the tone metrics of reports published in the period 2005-2007 compared to those published in 2008-2012.

As showed in Exhibit 2, the annual reports during the crisis period contain significantly more negative and uncertain words and less positive words than the reports published in the period 2005-2007. These reports also have more litigious words and more modal weak words. Overall, the annual reports published during the crisis are more pessimistic.

Differences within Europe: Cross-country comparisons

Does the home country language make a difference in the complexity and tone of the narratives of banks' annual reports?

Our sample is comprised of annual reports published in English from banks located in different countries with different languages. Previous research suggests that there are significant differences in financial reporting in English depending on the language of the home country of the company (*e.g.*, Lundholm *et al.*, 2014). To explore the potential influence of the home country language on the disclosure characteristics of the reports, we consider whether the banks are located in English-speaking countries. One could argue that banks headquartered in Anglo-Saxon countries (Ireland and the UK) have an advantage when disseminating financial reporting information

in a more concise and understandable way than their non-English-speaking counterparts (all countries in Table 1 except Ireland and the UK) due to their proficiency in the English language.

The results of the t-tests for the equality of means (untabulated) suggest that there is a significant difference between the complexity metrics of banks of different countries depending on whether or not the bank is located in an English-speaking country. Annual reports of banks located in Anglo-Saxon countries are more complex and difficult to read than the reports published by banks located in non-Anglo-Saxon countries. Specifically, banks in Anglo-Saxon countries have on average, a higher FOG index and longer size (variable LENGTH). We also observe a weak significant difference (p-value <0.10) in the case of the variable LogFILESIZEPDF. A potential explanation for these findings is that non-Anglo-Saxon banks are very cautious, on average, when translating their reports into the English language. In addition, we should also take into account that in some cases the annual reports published in English are not a translation of the annual report prepared in the official language of the country of origin but a summary or a simplified version of such document. Our results are in line with the findings of Lundholm *et al.* (2014). Overall, these

Banks from non-Anglo-Saxon countries make an effort to write more readable reports in English than their Anglo-Saxon counterparts.

results suggest that banks from non-Anglo-Saxon countries make an effort to write more readable reports in English than their Anglo-Saxon counterparts.

When comparing the tone metrics for Anglo-Saxon countries and non-Anglo-Saxon countries, our results (untabulated) suggest that there exist significant differences in the means of the

percentage of uncertain, negative, litigious and modal weak words. Our findings indicate that annual reports produced in English-speaking countries contain more positive, negative, litigious and uncertain words. That is, banks located in Ireland and the UK communicate more non-neutral sentiments in the annual reports than banks located in other countries.

Does the severity of the crisis at a country level make a difference in the complexity and tone of the narratives of banks' annual reports?

The impact of the crisis on the economy in general and on the banking sector in particular has not been homogenous across countries. Moreover, several European countries were so badly affected by the crisis that their governments were forced to seek external financial assistance. We test whether there are significant differences in the disclosures of banks located in countries that received funds provided by the European Stability Mechanism or its predecessors (the European Financial Stability Facility (EFSF) and the European Financial Stabilization Mechanism (EFSM)). Specifically, we compare the complexity and tone metrics of banks located in Greece, Ireland, Portugal and Spain (the four bailed-out countries) with the rest of the banks included in the sample.

The results for the complexity metrics (untabulated) suggest that there are no significant differences in the readability of annual reports produced by banks located in the bailed-out countries, except for the variable LogFILESIZEPDF. We do find, however, significant differences in the tone of the annual reports. Contrary to our expectations, the annual reports produced by banks located in Greece, Ireland, Portugal and Spain include more optimistic words and less pessimistic words. This result seems to suggest that those banks located in the bailed-out countries adopt a more optimistic tone in their annual reports in an attempt to alleviate the potential negative effect of

the economic situation at a country level on their stakeholders. They include a significantly higher percentage of legal and litigious words.

Spanish banks' annual reports compared to their European peers

In order to examine the characteristics of the annual reports provided by Spanish banks, we look at their FOG Index and the LENGTH variables and compare them to the same metrics for all European banks included in the sample (see Exhibits 3-4-5). Exhibit 3 shows the median level of FOG index for all banks *versus* banks in Spain from 2005-2012. We observe that while the median FOG Index for all banks shows a general upward trend, the median FOG index for Spanish banks suggests that their financial reports were more readable compared to the median fog index of all banks. The readability index for the non-Spanish banks increased from 2006 to 2011 suggesting that the annual reports were more complex over time, as noted before. The FOG index for Spanish banks shows a different pattern: it increased significantly in 2008 with no significant variations in 2009 and 2010. For the years 2011 and 2012, the readability of the annual reports of Spanish banks was significantly higher than the readability of the reports published by their European peers.

Exhibit 4 shows the median level of LENGTH for the Spanish banks included in the sample

Spanish banks' annual report are consistently more optimistic than the reports produced by banks located in other European countries. While the trend is similar for both groups, the gap in the tone of Spanish banks and other European banks increased after 2008.

compared to the other European banks. We observe that over time the length of the Spanish

Exhibit 3

Median FOG index annual reports of Spanish banks *vs.* other European banks
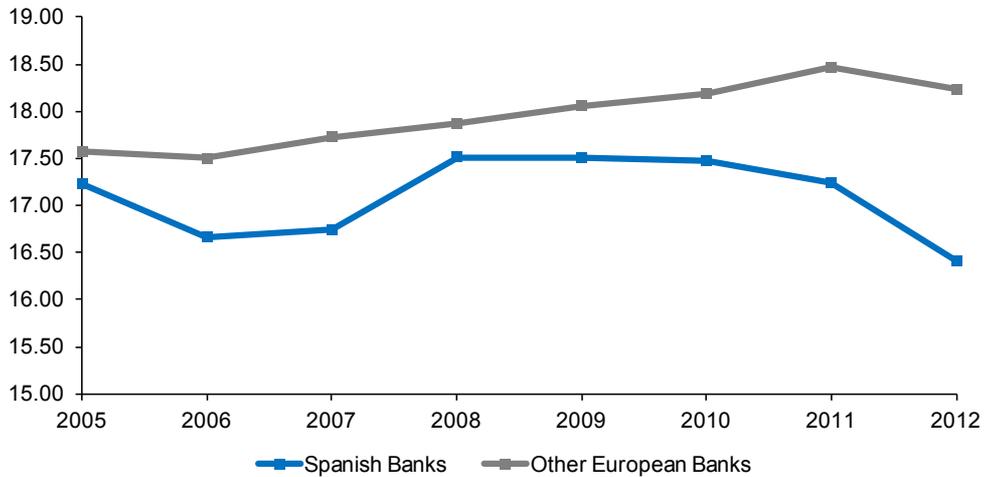
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banks' annual reports is similar to the length of other European financial institutions. While there was a significant difference in the first years examined (2005-2006), for the period 2008-2012 there are no significant differences in terms of size between both subsamples. Overall, while Spanish banks' annual reports were significantly longer than those of their European counterparts, since 2008 there are no significant differences and both groups of

Exhibit 4

Median variable LENGHT annual reports of Spanish banks *vs.* other European banks
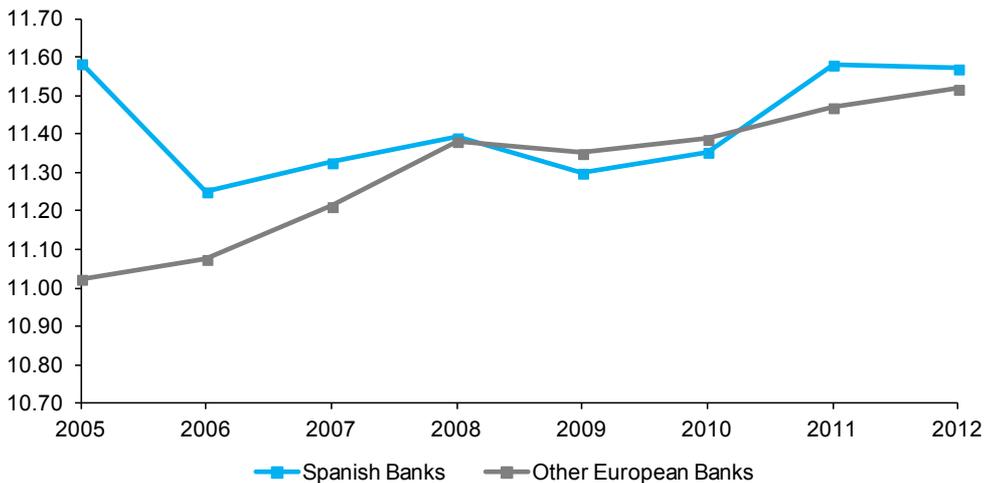
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Exhibit 5

Net_Optimism annual reports of Spanish banks and other European banks
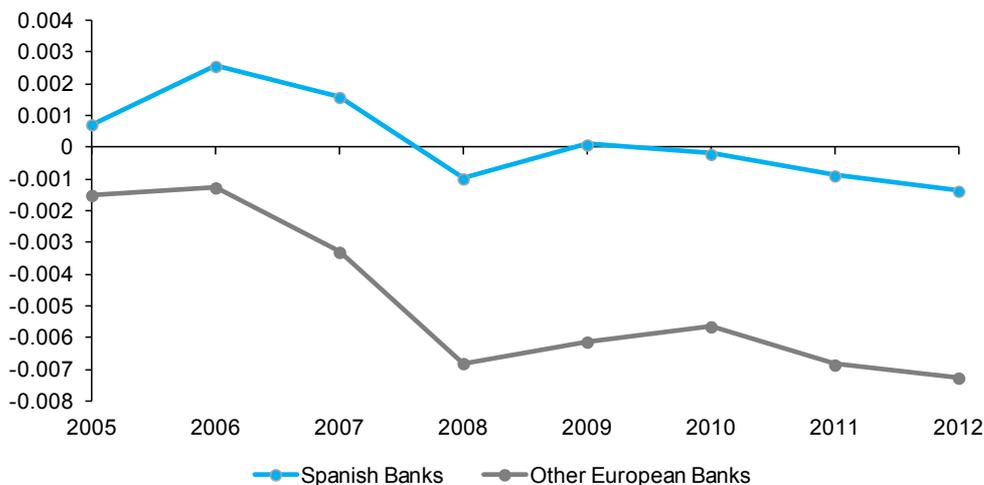
Source: Authors' own elaboration based on a sample of annual reports (published in English) of European Banks.

banks show an increased size in their annual reports in the years of the financial crisis.

As far as the tone metrics is concerned, Exhibit 5 shows the evolution of the variable NET_ OPTIMISM for Spanish Banks compared to their European peers. Overall, Spanish banks' annual report are consistently more optimistic than the reports produced banks located in other European countries. While the trend is similar for both groups, the gap in the tone of Spanish banks and other European banks increased after 2008.

Conclusion

Our results for a sample of European banks' annual reports for the period 2005-2012 suggest that the complexity of the narratives in the reports increased over time. We also observe an increase in the percentage of negative, uncertain and litigious words in the annual reports during the period. The change in the tone of the reports reflects the significant deterioration of macroeconomic conditions in Europe and the concerns about the

financial markets at the end of the year 2008. Both the increase in the complexity of annual reports for all banks over time and the more pessimistic tone, specifically after the onset of the financial crisis in 2008, can be interpreted as reflecting the increased intensity and complexity of banks´ operating environment.

The complexity and the tone of messages and narratives influence individuals' behavior and judgment. Overall, we recommend that readability and tone measures should be incorporated by banking regulators and supervisors and accounting standard setters when formulating new rules and policies on disclosures and footnotes for financial institutions, as a focus alone on improving the quantitative disclosures in the annual report might be reduced if the language used by preparers potentially conceals those clear and concise financial disclosures.

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Spain's public accounts: Analysing stability and sustainability

Alain Cuenca[1]

Spain´s recent fiscal slippage is raising concerns over long-run fiscal and debt sustainability. Reforms of Europe's fiscal rules, along with improvements to Spain´s internal fiscal framework, will be necessary to ensure consolidation.

Despite strong economic growth (3.2%), the Spanish government ran a deficit of 5.1% of GDP in 2015. This result implies falling short of both European and internal fiscal targets. Recent fiscal slippage, together with increased public debt since the start of the crisis, are casting doubt on Spain's ability to restore its budgetary equilibrium and ensure debt sustainability. The biggest difficulties are apparent in the regional governments and social security system. Correcting these imbalances is a general economic policy problem that will require reforms.

The economic climate for the general government was favourable in 2015. Real-term GDP growth was 3.2%, basically driven by the pick-up in domestic demand (Laborda and Fernández, 2016). Nevertheless, the public deficit reached 5.1% of GDP, exceeding the budgetary stability target and deviating from the path laid down by the European Commission under the Excessive Deficit Procedure by eight tenths of a percent.[2] Economic growth and the public deficit are two interrelated variables, such that the favourable performance of one is partly due to poor performance of the other.

In comparison with its euro area partners, Spain has less public sector revenue (8.4 points), less expenditure (5.3 points) and a clearly higher observed deficit (Table 1). The cyclically adjusted deficit (3.1% in Spain) is almost three times the euro-area average (1.2%), and it is above average in terms of the ratio of public debt to GDP.

Table 1

Spain *vs.* the Euro area

As % of GDP	Spain	Euro area
Total receipts	38.2	46.6
Total expenditure	43.3	48.6
Net lending (+) or net borrowing (-)	-5.1	-2.1
Interest expenditure	3.1	2.4
Primary balance	-2.0	0.3
Cyclically adjusted buget balance	-3.1	-1.2
Gross debt	99.2	92.9

Source: European Economic Forecast. Spring 2016

[1] University of Zaragoza.

[2] The deficit was 5%, against a target of 4.2%, excluding (in both cases) the net balance of assistance for financial institutions.

Alain Cuenca

Net borrowing requirement

Table 2 shows the main items of the Kingdom of Spain's public accounts between 2012 and 2015. The net borrowing requirement has gone from 6.8% to 5% of GDP. The rate of fiscal consolidation since the Spanish economy began to grow in 2014 has been around 0.8 points a year. This rate is too slow, at least as far as the European Union is concerned, as the excessive deficit procedure aims for Spain's need for financing to fall below 3% in 2017, according to the stability programme update the government has just presented.[3]

Deficit reduction has been achieved with an increase in income of 0.7 points of GDP (22,288 million euros more) and a reduction in expenditure (excluding financial support) of 1 point (although non-financial expenditure increased, albeit by just 5,786 million euros). Reduced spending meant capital uses dropped by 0.3 percentage points (excluding financial support). Current expenditure

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Interest expenditure alone represents 3.1% of GDP, such that the recent cut in interest rates due to the European Central Bank's monetary policy helps Spanish public accounts.

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has fallen by 0.7 percentage points since 2012, of which 0.3 points was from public consumption (including salaries) and 0.4 from monetary social transfers (including unemployment benefits).

Table 2 shows some other significant data. Firstly, the primary balance (excluding support for financial institutions) went from -3.8% of GDP to -1.9%, and was still negative at about 20,990 million euros in 2015. Interest expenditure alone represents 3.1% of GDP, such that the recent cut in interest rates due to the European Central

Bank's monetary policy helps Spanish public accounts (in 2014 interest expenditure was 3.4% of GDP).

Secondly, saving – defined as the difference between current revenues and current expenditures – remains negative at 2.7% of GDP,

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Spain's general government is financing its expenditure on service delivery and income transfers with debt. This is an unsustainable situation over the medium term and makes Spain's public services highly vulnerable in the event of possible market turbulence.

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having improved one percentage point since 2012 (3.7%). These data show that Spain's general government is financing its expenditure on service delivery and income transfers with debt. This is an unsustainable situation over the medium term and makes Spain's public services highly vulnerable in the event of possible market turbulence.

Finally, uses of capital, *i.e.* public investment, whether direct or through other agents, came to 2.9% of GDP in 2015. This spending item was drastically cut in the early years of the crisis, as in 2007, public investment had reached 5.9% of GDP. The current volume of public investment is somewhat less than that of the euro area, although there does not seem to be a need to return to pre-crisis levels.[4] Nevertheless, capital expenditure has grown for the first time, 5.8% higher than in 2014.

To get a more accurate view of Spain's public accounts, it is necessary to analyse each of the country's constituent levels of government.

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[3] We refer to the Spanish government's proposal pending approval by the EU at the time this article was written.

[4] Public investment in the euro area reached 4.3% of GDP in 2014, compared with 3.6% in 2015.

Table 2

General government revenues and expenditures

Items	2012 EUR million	% GDP	2013 EUR million	% GDP	2014 (P) EUR million	% GDP	2015 (A) EUR million	% GDP
Non-financial revenues	391,168	37.5	394,196	38.2	401,722	38.6	413,456	38.2
Current revenues	389,572	37.4	390,358	37.9	395,783	38.0	407,053	37.6
Capital revenues	1,596	0.2	3,838	0.4	5,939	0.6	6,403	0.6
Non-financial expenditure	500,071	48.0	465,437	45.1	463,041	44.5	468,421	43.3
Current expenditure	427,719	41.0	431,889	41.9	432,588	41.5	436,205	40.3
Compensation per employee	113,925	10.9	114,711	11.1	114,938	11.0	118,699	11.0
Intermediate consumption	58,599	5.6	54,974	5.3	54,957	5.3	56,389	5.2
Subsidies on products and on production	10,004	1.0	10,853	1.1	11,400	1.1	12,536	1.2
Interest	30,922	3.0	34,669	3.4	35,291	3.4	33,122	3.1
Social benefits other than social transfers in kind	168,472	16.2	170,608	16.5	170,655	16.4	170,311	15.8
Social transfers in kind: production purchased on the market	28,570	2.7	28,204	2.7	28,092	2.7	28,489	2.6
Other current uses	17,227	1.7	17,870	1.7	17,255	1.7	16,659	1.5
Capital expenditure	72,352	6.9	33,548	3.3	30,453	2.9	32,216	3.0
Saving	-38,147	-3.7	-41,531	-4.0	-36,805	-3.5	-29,152	-2.7
Net lending (+) or net borrowing (-)	-108,903	-10.4	-71,241	-6.9	-61,319	-5.9	-54,965	-5.1
Primary balance	-77,981	-7.5	-36,572	-3.5	-26,028	-2.5	-21,843	-2.0
Net balance of assistance for financial institutions	-38,289	-3.7	-3,019	-0.3	-997	-0.1	-853	-0.1
Primary balance excluding assistance for financial institutions	-39,692	-3.8	-33,553	-3.3	-25,031	-2.4	-20,990	-1.9
Net lending (+) / net borrowing (-) excl. assistance for FIs	-70,614	-6.8	-68,222	-6.6	-60,322	-5.8	-54,112	-5.0

Notes: (P) = Provisional, (A) = Advance.
Source: IGAE. Updated on April 7th, 2016.

a) Central government

Half of Spain's public deficit in 2015 originated in the central government level and its autonomous agencies. However, the need for financing has dropped almost by half since 2013, which is explained by the reduction in expenditure (income remained constant in GDP terms). In particular, since 2013, total expenditure has dropped by 2 points of GDP from the 1.1 due to the reduction in transfers to other levels of government and

Table 3
Central government revenues and expenditures

Items	2012 Million euros	% GDP	2013 Million euros	% GDP	2014 (P) Million euros	% GDP	2015 (A) Million euros	% GDP
Non-financial revenues	185,604	17.8	181,394	17.6	186,291	17.9	192,560	17.8
Current revenues	188,850	18.1	183,444	17.8	186,807	17.9	193,987	17.9
Capital revenues	-3,246	-0.3	-2,050	-0.2	-516	0.0	-1,427	-0.1
Non-financial expenditure	268,196	25.7	230,601	22.4	224,500	21.6	220,736	20.4
Current expenditure	214,586	20.6	214,467	20.8	211,371	20.3	209,218	19.4
Capital expenditure	53,610	5.1	16,134	1.6	13,129	1.3	11,518	1.1
Saving	-25,736	-2.5	-31,023	-3.0	-24,564	-2.4	-15,231	-1.4
Net lending (+) or net borrowing (-)	-82,592	-7.9	-49,207	-4.8	-38,209	-3.7	-28,176	-2.6
Primary balance	-55,369	-5.3	-18,196	-1.8	-6,309	-0.6	1,813	0.2
Net balance of assistance for financial institutions	-38,289	-3.7	-3,019	-0.3	-997	-0.1	-853	-0.1
Net lending (+) / net borrowing (-) excl. assistance for FIs	-44,303	-4.2	-46,188	-4.5	-37,212	-3.6	-27,323	-2.5

Notes: The negative balance of capital resources is due to the adjustment for uncertain collection. (P) = Provisional, (A) = Advance.
Source: IGAE. Updated on April 7th, 2016.

bodies (autonomous regions, local authorities, and the social security system). The positive note in the case of the central government is that in 2015, it managed to obtain a primary surplus for the first time since the start of the crisis. However, the savings rate is still negative, indicating that current income remains somewhat inadequate.

b) Social security

For their part, the social security funds have a deficit of over 1% over the four-year period, reaching 1.3% in 2015 (Table 4).

The social security account includes both spending on unemployment benefits and pensions. The National Accounts for 2015 do not disaggregate these two items, so to distinguish the pensions system from unemployment protection it is necessary to look at the details of budgetary execution.[5] Table 5 presents expenditure and income recognised by the social security system, revealing that the deficit arises on the income side. This shortfall was initially caused by the drop in employment, and then, when employment began to recover, by legislative changes to reduce contributions via various formulae. Expenditure growth has been driven by the continuously rising number of pensioners and the fact that new pensions are, on average, higher than existing ones.

In short, the upward trend in the social security pensions´ system deficit is worrying. The

[5] The data in Table 4 also include the Wage Guarantee Fund, which is not discussed here as it is relatively small. The differences between the national accounts and the budgetary figures are small in this case.

Table 4

Social security revenues and expenditures

Items	2012		2013		2014 (P)		2015 (A)	
	Million euros	% GDP	Million euros	% GDP	Million euros	% GDP	Million euros	% GDP
Non-financial revenues	150,272	14.4	149,947	14.5	149,363	14.3	146,255	13.5
Current revenues	152,033	14.6	151,071	14.6	150,226	14.4	146,949	13.6
Capital revenues	-1,761	-0.2	-1,124	-0.1	-863	-0.1	-694	-0.1
Non-financial expenditure	160,443	15.4	161,488	15.7	160,229	15.4	159,847	14.8
Current expenditure	160,122	15.4	161,381	15.6	160,060	15.4	159,639	14.8
Capital expenditure	321	0	107	0	169	0	208	0
Saving	-8,089	-0.8	-10,310	-1.0	-9,834	-0.9	-12,690	-1.2
Net lending (+) or net borrowing (-)	-10,171	-1.0	-11,541	-1.1	-10,866	-1.0	-13,592	-1.3

Notes: (P) = Provisional, (A) = Advance.
Source: IGAE. Updated on April 7th, 2016.

budgetary execution figures show the trend in unemployment benefits to be more positive, as can be seen in Table 6. Total expenditure by the Public State Employment Service (SEPE in its Spanish initials) decreased by 12 billion euros, representing a significant saving for the public sector. The drop in expenditure has also made it possible to reduce the State's annual contribution, which came to 10,009 million euros in 2015.

Table 5

Revenues and expenditures by the social security system

Million euros	2012	2013	2014 (P)	2015 (A)
Non-financial revenues	121,658.23	118,498.39	121,430.67	119,496.22
Non-financial expenditure	122,145.50	124,311.17	130,156.02	133,258.54
Balance	-487	-5,813	-8,725	-13,762

Notes: (P) = Provisional, (A) = Advance.
Source: Social security budget settlement.

Table 6

Revenues and expenditures by the SEPE

Million euros	2012	2013	2014 (P)	2015 (A)
Non-financial revenues	36,916	35,613	33,280	30,231
Non-financial expenditure	37,164	34,065	28,981	25,355
Balance	-248	1,548	4,299	4,876

Notes: (P) = Provisional, (A) = Advance.
Source: Execution of SEPE budget.

c) Autonomous regions and local government

In the case of sub-national governments, the autonomous regions registered a similar deficit to the previous year (1.7%), such that regional deficit shows a certain reluctance to decrease. Since 2013, the regions' income and expenditure have decreased by 0.3 points of GDP. They also have a negative savings rate that in 2015

Table 7

Autonomous regions' revenues and expenditures

Items	2012 Million euros	2012 % GDP	2013 Million euros	2013 % GDP	2014 (P) Million euros	2014 (P) % GDP	2015 (A) Million euros	2015 (A) % GDP
Non-financial revenues	171,805	16.5	148,050	14.4	146,447	14.1	152,104	14.1
Current revenues	164,617	15.8	141,326	13.7	139,514	13.4	144,512	13.4
Capital resources	7,188	0.7	6,724	0.7	6,933	0.7	7,592	0.7
Non-financial expenditure	191,252	18.3	164,232	15.9	164,629	15.8	170,066	15.7
Current expenditure	174,388	16.7	149,220	14.5	150,464	14.5	153,233	14.2
Capital expenditure	16,864	1.6	15,012	1.5	14,165	1.4	16,833	1.6
Saving	-9,771	-0.9	-7,894	-0.8	-10,950	-1.1	-8,721	-0.8
Net lending (+) or net borrowing (-)	-19,447	-1.9	-16,182	-1.6	-18,182	-1.7	-17,962	-1.7
Primary balance	-13,553	-1.3	-8,522	-0.8	-10,510	-1.0	-13,743	-1.3

Notes: (P) = Provisional, (A) = Advance.
Source: IGAE. Updated on April 7th, 2016.

Table 8

Local government bodies' revenues and expenditures

Items	2012 Million euros	2012 % GDP	2013 Million euros	2013 % GDP	2014 (P) Million euros	2014 (P) % GDP	2015 (A) Million euros	2015 (A) % GDP
Non-financial revenues	64,854	6.2	66,433	6.4	67,821	6.5	68,156	6.3
Current revenues	60,876	5.8	62,693	6.1	63,731	6.1	63,861	5.9
Capital revenues	3,978	0.4	3,740	0.4	4,090	0.4	4,295	0.4
Non-financial expenditure	61,547	5.9	60,744	5.9	61,883	5.9	63,391	5.9
Current expenditure	55,427	5.3	54,997	5.3	55,188	5.3	56,371	5.2
Capital expenditure	6,120	0.6	5,747	0.6	6,695	0.6	7,020	0.6
Saving	5,449	0.5	7,696	0.7	8,543	0.8	7,490	0.7
Net lending (+) or net borrowing (-)	3,307	0.3	5,689	0.6	5,938	0.6	4,765	0.4
Primary balance	4,705	0.5	7,015	0.7	7,135	0.7	5,429	0.5

Notes: (P) = Provisional, (A) = Advance.
Source: IGAE. Updated on April 7th, 2016.

came to 0.8 points of GDP. The primary balance is also negative (-1.3).

The local government appears to be in better shape, running a surplus overall, with a positive savings rate and primary surplus over the four-year period considered.

Therefore, except in the case of local government, all levels of the Spanish public sector are suffering from similar problems: current expenditure exceeds income, despite the cost of interest dropping considerably. This situation is not sustainable over the medium term, given that it can lead to continual debt growth, the variable examined in the following section.

Government debt

Spain's public debt came to 99.2% of GDP in 2015, well above the euro area average (92.9%), although below that of the world's advanced economies (see IMF, 2016). However, as Exhibit 1 shows, Spain's debt trend and outlook are a cause for concern.

In the first seven years of the crisis, public debt almost tripled relative to GDP, and only in 2015 was a degree of stabilisation achieved, despite a borrowing requirement of 5.1%. The 0.1 percentage point reduction in the debt was achieved through the strong rise in nominal GDP

In the first seven years of the crisis, public debt almost tripled relative to GDP, and only in 2015 was a degree of stabilisation achieved due to a strong rise in nominal GDP, despite a borrowing requirement of 5.1%.

(3.8%), but also thanks to the sale of assets worth 1.5% of GDP (16,269 million euros). Thus, although 2015 marked the start of a gradual reduction in the debt-to-GDP ratio, primary surpluses will be needed each year, provided the interest burden does not exceed nominal GDP growth (see, for example, Maudos (2014)). It is worth noting that the autonomous regions are facing more rapid debt growth than the other levels of government, although on average their debt levels

Exhibit 1

General government debt as % of GDP
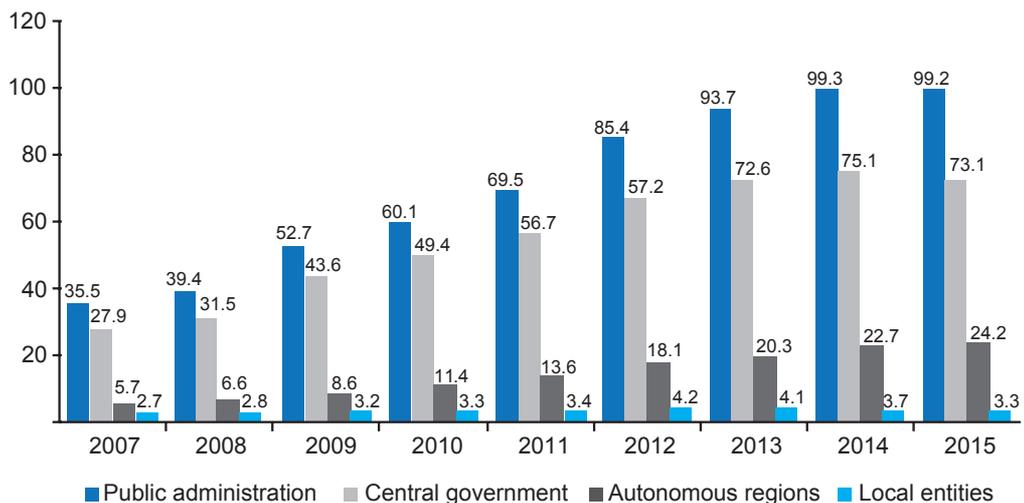
Source: Bank of Spain.

are still moderate relative to their relative share of public spending.

Noncompliance with fiscal rules

Spain has a fiscal rule enshrined in the Organic Law on Budgetary Stability and Financial Sustainability (LOEPSF in its Spanish initials), passed in 2012, implementing Article 135 of the Constitution.[6] The legislation establishes annual budgetary stability targets, and expenditure and debt rules for all public sector entities. In aggregate terms, the first two were not complied with in 2015.

The stability target, which may be for a deficit, equilibrium or a surplus, was set at -4.2% for 2015 for the general government as a whole. After discounting financial support to credit institutions (853 million euros) and costs incurred as a result of the Lorca earthquake (39 million euros), it came to 5.0%. The deviation was therefore 0.8% of GDP. This deviation is distributed across the four subsectors in the European System of National and Regional Accounts, as shown in Table 9.

The autonomous regions and social security system emerge as the cause of the deviation. However, the degree of compliance by the various agents needs to be qualified for two

reasons. Firstly, the targets are set by the central government and the national parliament, such that

The autonomous regions and social security system emerge as the cause of the deviation from budgetary stability targets. However, the degree of compliance by various agents needs to be qualified.

there is a big imbalance between each agent's autonomy of income and volume of spending. Experience shows that although formally the targets have to be approved by the fiscal policy coordination body (the Fiscal and Financial Policy Council), in which the autonomous regions are represented, the target set is much easier for the central government to reach than for the autonomous regions.

Secondly, the income and expenses of the various agents are interrelated. To mention just two significant examples: the balance of the social security fund depends on a transfer to SEPE by the central government. In 2015, this was 0.9% of GDP, which was 0.3 points lower than in 2014. Another relevant example is that the autonomous regions' main source of income is their share of

Table 9
Compliance with the 2015 budgetary stability target

As a percentage of GDP	Balance for the purposes of meeting the objective	Budgetary stability objectives	Deviation
Central government	-2.53	-2.9	0.4
Autonomous regions	-1.66	-0.7	-1.0
Local government	0.44	0.0	0.4
Social security funds	-1.26	-0.6	-0.7
Total general government	-5.00	-4.2	-0.8

Source: Ministry of Finance and Public Administration (2016).

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[6] Organic Law 2/2012 of April 27th, 2012, on Budgetary Stability and Financial Sustainability (LOEPSF).

income tax collection. This is distributed in the form of advances, which represent a reduction in the central government revenues.[7] Thus, increased regional income means reduced central government income. Consequently, any noncompliance of the budgetary stability target is at the overall level, and cannot be attributed just to an isolated subsector.

As regards the expenditure rule, the reference rate for medium term gross domestic product growth, calculated for 2015 by the Ministry of Economic Affairs and Competitiveness on the basis of the European Commission's methodology, was set at 1.3%. The relevant spending by the central government, the autonomous regions, and local authorities ought to have been kept within this limit. Table 10 shows that the target was not complied with across the board.

Table 10

Compliance with the spending rule
(In percentage)

	Change in eligible expenditure 2015/2014	Expenditure rule
Central government	5.5	1.3
Autonomous regions	4.4	1.3
Local government	1.7	1.3

Source: Ministry of Finance and Public Administration (2016).

The central government did not comply with the expenditure rule due to the impact of tax reform on the valuation of eligible expenditure, as it meant a permanent reduction in tax revenue of 5,225 million euros. It is also worth remembering that the central government alone met the stability target, illustrating the redundancy between the two targets, the spending target being more demanding.

In the case of the autonomous regions, noncompliance was due to the increased spending

on hepatitis C treatment and the recording of investments made in previous years through public-private partnerships. If these two items are discounted, the regions' eligible expenditure would have grown by 2.2%. Moreover, almost all the autonomous regions failed to comply with the spending rule, the only exceptions being the Canary Islands, Galicia and the Basque Country (which also met the stability target).

Finally, the debt target had been set at 101.7% of GDP and has therefore been met in aggregate terms. By levels of administration, only the autonomous regions overshot the target at the end of 2015, with a debt of 24.2% compared with 24%, after various adjustments were made raising it from the initial 21.5%.

LOEPSF is the fiscal rule governing internal stability, but Spain is also subject to the European Union's Stability and Growth Pact. In April 2009, the Council of the EU started Excessive Deficit Procedure under Art. 126 of the Treaty on the Functioning of the European Union (TFEU). In June 2013 the deadline for correcting the excessive deficit was extended to 2016, in view of the fact that despite the corrective measures adopted, the adverse developments in the economy had made it impossible to comply with the original timetable. The new deadline meant correcting Spain's deficit to bring it to 4.2% in 2015, which as mentioned above, was not achieved.

In October 2015, the Commission gave an opinion on the draft budget plan for 2016 and warned that there was a risk of falling short of the forecasts in the Stability and Growth Pact, due to the budgetary impact of increased spending and the income tax reform. Later, the Commission Recommendation of March 9th, 2016, said that "Spain should take measures to ensure a timely and durable correction of the excessive deficit, including by making full use as appropriate of the preventive and corrective tools set out in Spain's Stability Law to control for slippages at the

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[7] This refers to the autonomous regions in the so-called common system, *i.e.* excluding the Basque Country and Navarre.

subcentral government level from the respective deficit, debt and expenditure rule targets."[8]

It is therefore clear that neither Europe's nor Spain's fiscal rules have been complied with. Following the Commission's recommendation, sanctions of up to 0.2% of GDP may be imposed under TFEU. Spain is in a delicate position because, unlike other previous episodes of noncompliance, it is clear in this case that the overshoot was caused by expansionary fiscal policy, which was pursued contrary to the European Commission's expectations. A series of budgetary measures were taken in 2015 that reduced revenues while increasing expenditure. This policy was a result of the electoral cycle affecting three levels of government (except in the Basque Country and Galicia, which hold elections in 2016), but this did not preclude the structural deficit rising from 1.9% of 2014 to 2.9% in 2015.

The consequences of imposing this penalty are difficult to predict. In any event, the fact that it is necessary to impose a penalty on a Member State illustrates that the "preventive arm" of the Stability and Growth Pact has been ineffective and its institutional design needs to be rethought.[9]

Outlook for 2016 and 2017

The state of the public accounts needs to be corrected without delay. However, for the time being, the European Central Bank's monetary policy and other favourable factors make the situation less urgent than in the 2010 and 2012 debt crises. The level reached by public debt, and the fact that there is still a primary deficit and negative savings rate, makes public services

and social-security benefits vulnerable to future international financial market tensions.

The macroeconomic forecasts for Spain produced by the government, in its 2016-2019 Stability Programme Update, the European Commission in its recent spring report, and private analysts are all positive. The government forecasts GDP growth of 2.7% in real terms for 2016 and 2.4% in 2017.[10] On the hypothesis that no new legislative measures will be adopted, both the Independent Fiscal Responsibility Authority and Laborda and Fernández (2016) estimate that the economic cycle will reduce the deficit to 4% of GDP in 2016 (see AIReF, 2016a). Spain has proposed a new course towards correcting the deficit to the European Commission, which would situate it at 3.6% in 2016 and 2.9% in 2017. To this end it has adopted budgetary non-availability agreements for both the central government and most autonomous regions, set at 0.4% of GDP. Nevertheless, the European Commission, in its Council Recommendation on May 18th, 2016, highlighted that Spain should adopt permanent measures and establish a deficit target for 2016 of 3.7% of GDP and for 2017 of 2.5% of GDP.[11]

Beyond the short-term measures being adopted, Spain needs to consider long-term reforms. These cannot be put off any longer given the risks the public accounts face. First of all, reforms are needed to boost the productivity of the economy. Some of these affect revenues and public expenditure, in particular their composition. For example, those concerning the education system, R&D, public-private financing of infrastructure (and its evaluation), administrative reform, etc. There is also an urgent need to address structural problems in the budgetary stability policy and financial sustainability of the public sector. As

[8] See: http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/30_edps/other_documents/2016-03-09_es_commission_recommendation_en.pdf

[9] For a critical assessment of the current Stability and Growth Pact see, for example, Clays, Darvas and Leandro (2016).

[10] The European Commission's estimates are very similar, at 2.6% in 2016 and 2.5% in 2017. See European Commission (2016). Private analysts, such as Laborda and Fernández (2016), give the same figure for 2016 (2.7%) but are slightly more pessimistic about 2017 (2.3%).

[11] See COM(2016) 329 final.

described by the figures above, the central issues at the moment are the low level of fiscal pressure, the pension system and social security deficits, and coordination of budgetary stability policies with the autonomous regions.

As regards resources, in the 2016-19 Stability Programme Update (SPU) the Spanish government projected that public revenues would rise above their current level of 38.2% of GDP only slightly, to 38.5%, in 2019. This is despite the fact that, as Table 1 shows, the level of fiscal pressure in Spain is more than 8 percentage points below the euro area average. This projection appears to be inconsistent with the growth forecast for the reference period, as AIReF (2016b) says: "proceeding towards the 2019 forecast horizon certain risks are increasingly apparent associated with inconsistencies between the macroeconomic context and the fiscal projections." This translates into an upside risk "in the public revenue forecast. Given the strong cyclical recovery of productive activity and the labour market, the effect on tax revenues envisaged in the SPU may be considered conservative." From this it may be deduced that if revenues grow in accordance with the expected economic cycle, new legislative measures will be taken to cut taxes in order to maintain the level of fiscal pressure approximately constant. This is a legitimate option, but it places the burden of correcting the budgetary imbalance entirely on the public expenditure side. In the government's view, the tax reforms that came into force in 2015 and 2016 "were entirely neutral in terms of the public sector deficit. Moreover, in macroeconomic terms, there is increased dynamism in the tax base in 2015 relative to 2014 due to the implementation of the income tax reform."[12]

However, perhaps Spain needs a thorough reform that broadens the tax base, reduces fraud and evasion, and sets fiscal pressure in line with the level wanted by society. Keeping public revenues at 38.5% of GDP does not seem to be compatible with Spanish society's demand for more and better public services. In any event, this is a political decision that has to be based on an adequate social consensus.

As regards the sustainability of the social security system, as we have seen, the growing deficit is explained by trends in social security contributions, which are insufficient to meet the increase in costs arising out of new pensions and annual updates (at least 0.25%). According to the Independent Fiscal Responsibility Authority, the deficit observed in 2015 will persist in 2016, because "employment, trends in workers' remuneration, and the increased social security contribution basis make it possible to explain an increase in contributions of around 3% in 2016." Revenues from contributions will continue to suffer from the effect of the contribution cuts adopted (flat rate, 500 euro exemption, etc.) and the decrease in interest from the Reserve Fund. The State Budget for 2016 includes a merely declarative provision, opening up the possibility of broadening the social security benefits considered non-contributory. This would allow the State's contribution to social security revenues to be increased in the future.[13] More funding from general taxation would probably enable the social security system to return to equilibrium, while recent reforms restricting access and the size of benefits will have longer-term effects. In this regard, the European Commission (2015) estimates that pension spending will be 11.8% of GDP in 2020 (the same as in 2013), and 11% in 2060. This all assumes that current legislation remains unchanged and that the hypotheses regarding economic growth, labour market participation, etc. are fulfilled. Although this projection is reassuring, it should be noted that it implies a reduction in the ratio of average public pensions to average wages of

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[12] SPU 2016-2019 p. 44.

[13] The eightieth additional provision states that: "The government will advance on ensuring the compatibility of the budgetary stability and financial sustainability objectives with the full funding of universal non-contributory benefits from the general government budget, and to do so shall evaluate the conditions of the benefits included in the system that may be considered to belong to this category."

19.9% in 2060. This casts into doubt the political feasibility of the estimates' underlying assumption that there will be no legislative changes.

In the case of the autonomous regions, since 2012, the regional deficit seems to have stabilised between 1.6% and 1.9% of GDP. This suggests that the margin for fresh cuts may have been exhausted and that the time has come for serious reforms. The core problem is that current expenditure exceeds current income, which is not sustainable over the medium term. A set of measures based on three pillars is needed to correct this situation. First of all, it is necessary to broaden the autonomous regions' own fiscal leeway by enabling them to raise more revenue themselves. This may require a reform of the current financing system in the common system. Secondly, the budgetary stability rules need to be reformed so that the deficit objectives are more realistic and corrective measures – or penalties, where applicable – are applied automatically to regions that do not meet their targets. This also means that the stability targets have to be different for each region, as AIReF has recommended.

And finally, it will be necessary to return the regions to the discipline of the markets. To do so it will

It will be necessary to return the regions to the discipline of the markets through putting an end to the cost-free and almost unlimited finance from the regional liquidity fund (FLA in its Spanish initials) and other State funding mechanisms. This will help ensure that future debt is solely intended to finance investments.

be necessary to put an end, within a reasonable timescale, to the cost-free and almost unlimited finance from the regional liquidity fund(FLA in

its Spanish initials) and other State funding mechanisms. This will help ensure that future debt is solely intended to finance investments, provided long-term ability to pay.

In short, the overall assessment of Spain's public accounts in 2015 is that the process of fiscal consolidation begun in 2010 was deliberately interrupted. The change in direction was a result of the electoral cycle and will hopefully be corrected as of 2016. However, Spain's experience reveals the failure of the current fiscal rules. European legislation should be simpler and more credible. This means applying the expenditure rule, coupled with control on the level of public debt.[14] A reform of Europe's fiscal rules is not incompatible with improvements to Spain's Budgetary Stability and Financial Sustainability Law, in particular as regards its practical application.

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Spain's business landscape: Structure, recent developments and remaining challenges

Ramon Xifré[1]

Business creation in Spain is recovering for the first time since the latest crisis. However, some recent trends in business demography and innovation dynamics are raising questions regarding existing and potential future challenges for strengthening Spain´s business landscape.

Spain's business landscape has undergone major ups and downs, with a period of rapid growth up until 2008, followed by a phase of severe business destruction up until 2014. Fortunately, in 2015, there was a return to net business creation in Spain for the first time since the crisis. However, the way in which the business landscape is recovering raises some questions. Firstly, the number of self-employed people is rising rapidly, while the number of joint-stock companies continues to fall, and the number of limited companies is recovering only slowly, suggesting a substitution effect in the organisation of work. Secondly, the number of Spanish firms innovating – a key vector in boosting the country's competitiveness – plummeted between 2008 and 2014 (the most recent year for which data are available). This affected both technology firms and non-technology firms. Recently published studies have addressed the various – often interrelated – economic problems affecting Spain, and holding back growth, from a wide range of perspectives and have proposed measures for tackling them, including improving human capital and promoting innovation, among others.

Introduction

The Spanish economy will only be able to recover if its companies recover and improve their productivity. Although this statement may seem obvious, it entails an effort to better understand the Spanish business landscape: its structural characteristics, recent evolution, and main outstanding challenges.

This article aims to address these points. First, it reviews the literature on the basic features of Spanish companies, which have remained fairly stable over time, and their best-known limitations, in terms of size and productivity. The data studied in this section are compared with those from four other large EU economies and cover the period up to 2011.

Second, the article analyses the most recent data on business dynamics in Spain, based on the INE's Central Business Directory (DIRCE in its Spanish initials), which, in most cases, covers the period up to December 31st, 2015. This section

pays particular attention to the dynamic behaviour of Spain's business demography, distinguishing between the legal nature of its businesses.

Third, this article takes a closer look at innovation activities (both technological and non-technological), which are a key factor in raising businesses' competitiveness.

Finally, the article concludes with an assessment of the results and looks at some of the proposals recently made by various authors to strengthen Spain's business landscape.

Structural features of Spanish companies

The main structural features of Spanish companies are well known, thanks to a number of recent studies (see, for example, Huerta Arribas and Salas, 2012; Instituto de la Empresa Familiar, 2013; Fundación BBVA-Ivie, 2014; Huerta Arribas and Salas, 2014; Fariñas and Huergo, 2015; Andrés and Doménech, 2015).

As Fariñas and Huergo (2015) point out, Spain's business landscape is dominated by micro-enterprises and differs from that of other neighbouring countries in that it has a smaller

proportion of large companies. These authors, based on OECD data, give a breakdown of employment and value added in the economy by company size in 2011 for the five biggest EU economies (Table 1).

As the table shows, the size distribution of businesses in Spain is skewed towards the smallest companies. This combines with another

Spain´s productivity shortfall can in part be explained by its business landscape being skewed towards the smallest companies, which are generally less productive relative to similarly sized firms in neighbouring countries.

important fact, namely the lower productivity of smaller Spanish companies when compared to similarly sized firms in other countries. In conjunction, these two factors explain a large part of the difference between the Spanish economy's productivity and that of neighbouring economies.

Using OECD data for 2011, Fariñas and Huergo (2015) find labour productivity in Spanish companies with fewer than 50 employees to be lower than in the five largest EU economies

Table 1

Distribution of employment and value added by size
(2011 or latest year for which data available, as percentage)

	Employment				Value-added			
	Micro	Small	Medium-sized	Large	Micro	Small	Medium-sized	Large
Germany	19.5	24.4	19.6	36.5	16.5	20.5	19.3	43.7
United Kingdom	19.8	20.7	16.4	43.2	21.7	17.2	17.9	43.2
France	31.8	18.5	16.6	33.1	29.8	16.4	16.1	37.7
Italy	48.5	20.8	12.5	18.1	32.5	21.0	17.5	29.0
Spain	41.5	21.6	13.4	23.4	28.3	21.4	17.7	32.6

Notes: Micro-enterprise: 1-9 employees; small: 10-49 employees; medium: 50 to 249 employees; large: over 250 employees.
Source: Fariñas and Huergo (2015) based on OECD data.

Exhibit 1

Businesses' labour productivity by size
(2011 thousands of dollars per employee, total economy)
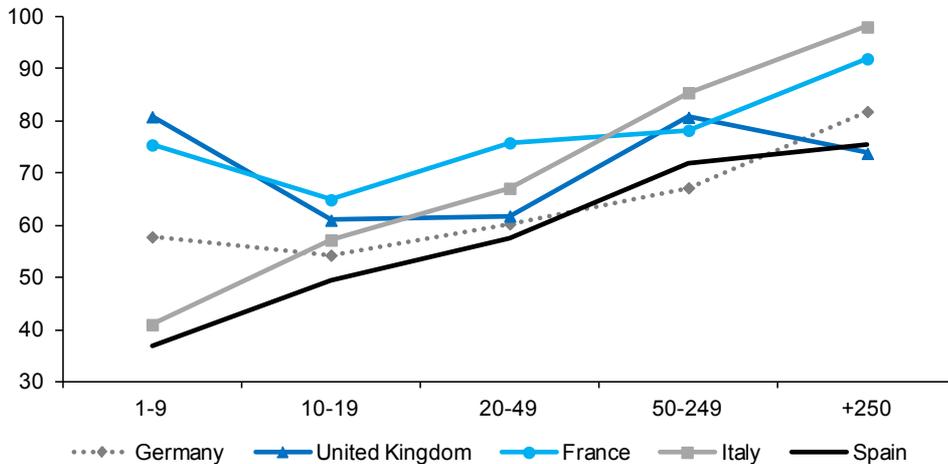
Source: Fariñas and Huergo (2015) based on OECD data.

(Exhibit 1). Using OECD data for 2010, Andrés and Doménech (2015) confirm small Spanish firms' productivity gap qualitatively in both manufacturing and services.

The significance of company size for the economy's competitiveness is an established fact, as highlighted by the studies mentioned above. Larger companies are better situated to take on key activities to improve their products, processes, and devote more resources to them. This enables them to raise their competitiveness by investing in innovation and participating in internationalisation processes. Relatively large companies also tend to have access to bank finance on better terms and are better able to tap credit markets in general. They often have departments specialising in managing some of the legal requirements associated with business activity (Instituto de la Empresa Familiar, 2013).

However, it is worth noting, as Huerta Arribas and Salas (2012 and 2014) point out, that the causal relationship between company size and productivity is complex and it cannot simply be assumed that increasing company size will

improve productivity. After analysing the wealth of literature on the subject in Spain and elsewhere,

While it is generally accepted that larger company size boosts an economy´s competitiveness, there are other fundamental factors that play an important part.

they suggest that it is more plausible that there are fundamental factors determining both company size and productivity and competitiveness. They point to the role that "the endowment of human capital, professional standards of company management, and implementation of good practices encouraging more decentralised company operation" can play an important part (Huerta Arribas and Salas, 2014).

Recent developments in Spain's business demography

2008 was a clear turning point in the recent evolution of Spain's business demography. In the period prior to the outbreak of the economic

Exhibit 2
New registrations and closures of businesses
(1999-2015)
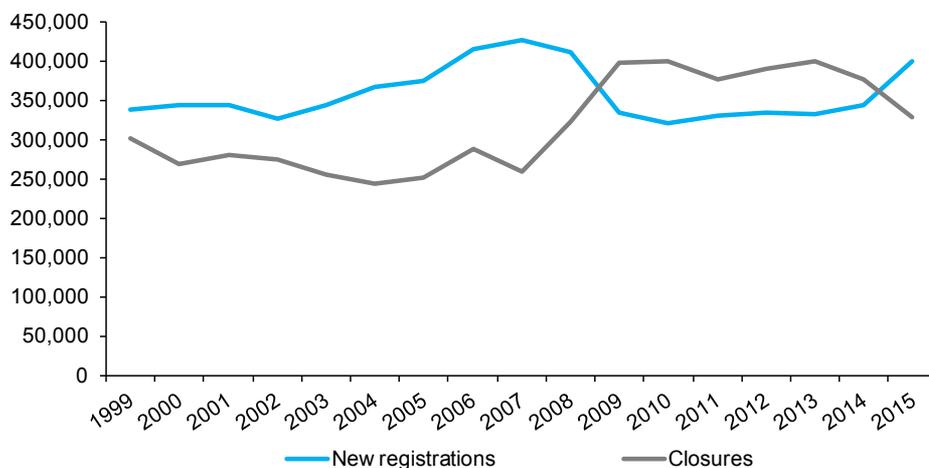
Source: INE.

crisis, new business formation, understood broadly to include self-employed as well as all kinds of legal persons (joint-stock companies, limited companies and other types of companies) exceeded closures by a wide margin. The data for the analysis in this section come mainly from the Central Business Directory (DIRCE) maintained by the National Statistics Institute (INE) and refer to December 31st of each year.

Between 1999 and 2008, an average of around 100,000 businesses (94,386) a year were created (net). Growth was particularly strong in 2007, with the creation of over 160,000 businesses, and in 2004 − 2006 net new business registrations exceeded 120,000 a year (Exhibit 2).

Spain´s new wave of business creation between 1999-2007 was largely due to the construction boom.

As the study by the Instituto de la Empresa Familiar highlights, this wave of new business creation was largely due to the boom in the construction industry, which accounted for 42% of new registrations between 1999 and 2007 (Instituto de la Empresa Familiar, 2013).

They dynamics of business creation began to change in Spain in 2009, with net business contraction just under 60,000 businesses (57,509) a year until 2014. As can be seen from Exhibit 2, the pattern changed again in 2015, the first year in which there was a net positive business registration rate (70,054) since the crisis, reflecting a slight recovery in Spain's business landscape.

However, the recovery was atypical in historical terms on account of the composition of the businesses created. Exhibit 3 shows the net business registration figures broken down by legal nature.

Empirical data suggest business recovery could in part be being sustained by a process of substitution where self-employed persons replace companies.

As can be seen, most of the net business registrations in 2015 (75%) were self-employed

Exhibit 3

Net new registrations by legal nature
(1999 - 2015)

Self-employed   Joint-stock companies   Limited companies
Other legal natures   Total
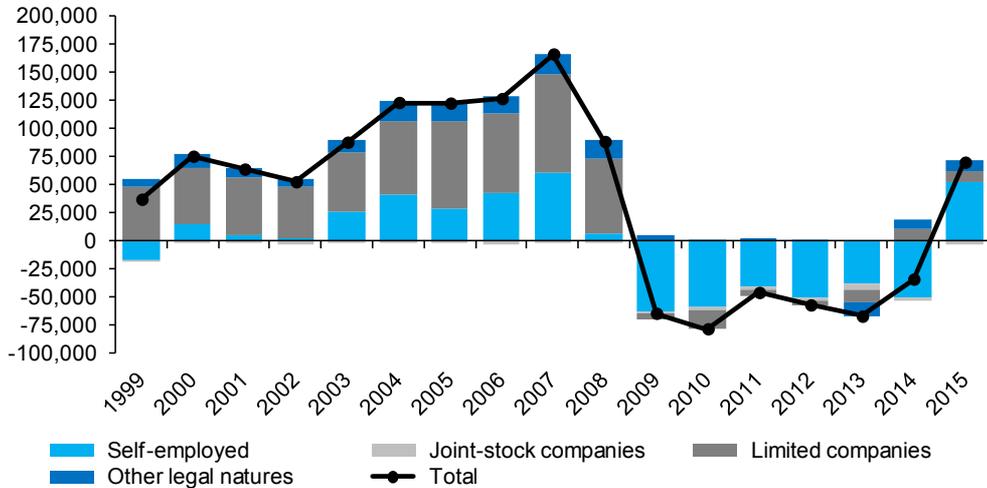
Source: INE.

persons. This represents a difference from the trend prior to 2008, when limited companies made up the largest share of new businesses. In the absence of more information and trend analysis, the data suggest that the business recovery could in part be being sustained by a process of substitution of legal nature, in which self-employed persons replace legal persons (limited companies, in particular).

Taking into account the absolute number of businesses registered as active in the DIRCE,

61

Exhibit 4

Number of businesses by legal nature
(Base year 2008 = 100 1999-2015)

Self-employed   Joint-stock companies   Limited companies
Other legal natures   Total
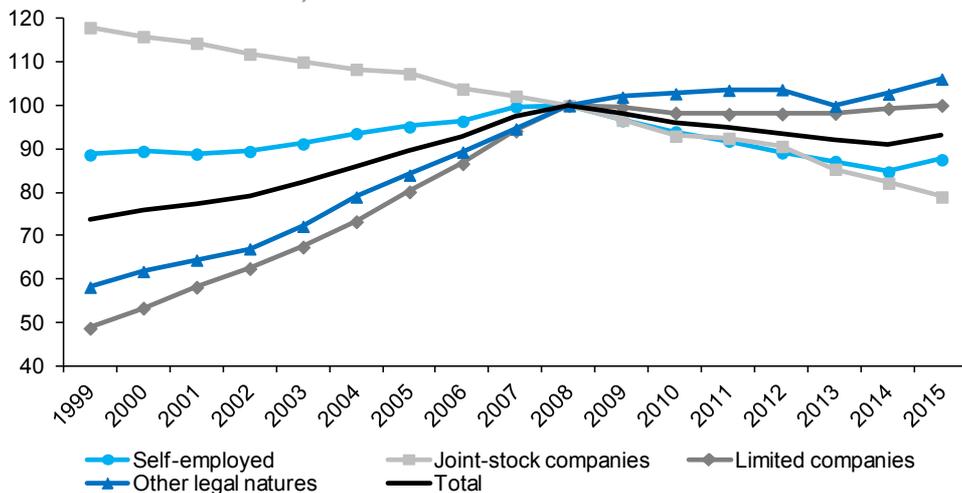
Source: INE.

Exhibit 4 shows the number of businesses of each legal type, standardising the value of each series based on the value in 2008.

As can be seen, the number of joint-stock companies declined continuously between 1999 and 2015, and 2008 did not seem to have any additional impact on this trend. As a result, the number of joint-stock companies active in 2015 is 20% less than in 2008. In the case of limited companies, growth in net terms in 2014 and 2015 compensated for the drop in the years 2009 to 2013, with a similar total number of businesses active as in 2008. In the case of self-employed persons, the large increase in 2015 has not totally compensated for the losses experienced between 2008 and 2014. As a result, in 2015, the number of people registered as self-employed was still less than 90% of that in 2008. The business types on a clear upward trend since 2008 are the other types of legal natures (mainly corporate partnerships, partnerships, joint ownership, autonomous agencies, although no disaggregation is possible).

Demography of business innovation

To complete this overview of business trends in Spain, this section presents the most recent data available (from 2014) on Spanish businesses that carry out some form of innovation activity, drawn from the INE Innovation Survey.

Exhibit 5a shows the number of Spanish businesses undertaking technological innovation activities in any year during the period 2008-2014. Exhibit 5b shows a breakdown of the number of businesses in four categories obtained by crossing-referencing two dimensions: the business' main activity (manufacturing industry or services) and its size (whether it has more than 250 employees or not) and it shows the number of businesses in each year relative to that in 2008.

Exhibits 6a and 6b present analogous information for Spanish businesses that have conducted non-technological innovation activities.

As can be seen, there has been a significant decline in the number of Spanish businesses carrying out innovation activities between 2008 and 2014, the drop being bigger in the case of technological innovation. Just 44% of companies that were technologically innovative in 2008 continued to be so in 2014, while in the case of

Exhibit 5a

Businesses undertaking technological innovation activities in Spain
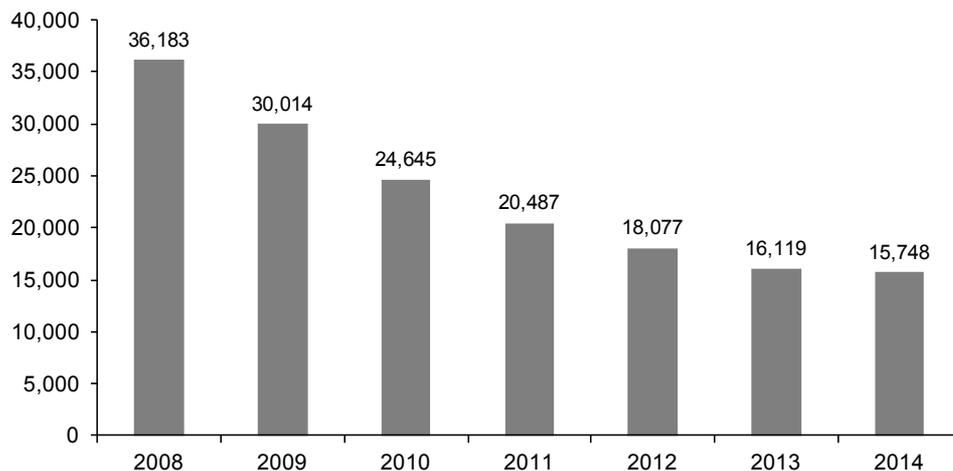
Source: INE.

Exhibit 5b

Businesses undertaking technological innovation activities in Spain, by size of company and main sector of activity
(Base year 2008 = 100)
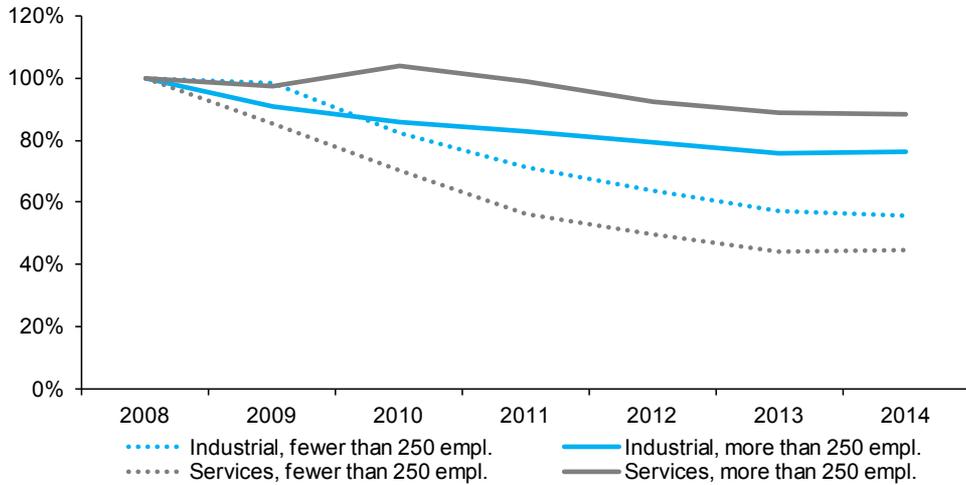
Source: INE.

non-technological innovation, the figure is almost 60% of the initial value.

This slump in business innovation activity manifests itself differently according to the business profile. In general, the reduction affects small businesses (fewer than 250 employees) much more than larger ones. Indeed, for large companies, regardless of the type of innovation (technological or non-technological) and their main sector of

Exhibit 6a

Businesses undertaking non-technological innovation activities in Spain
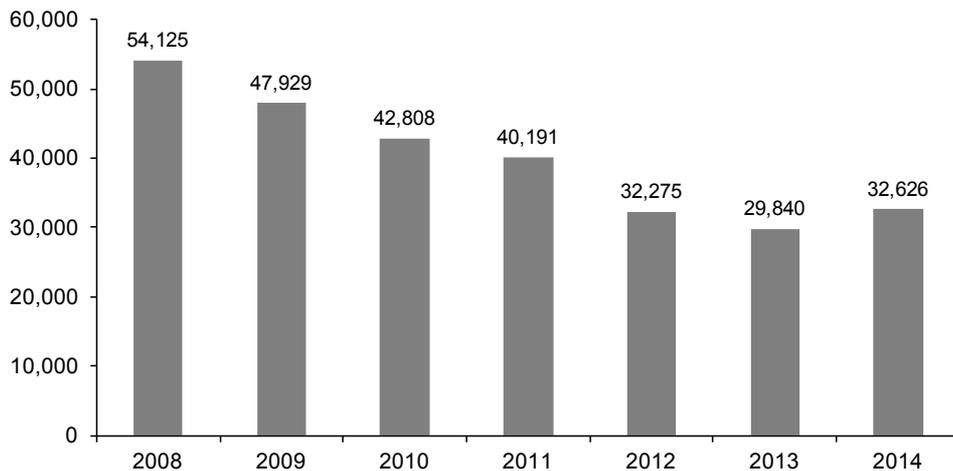
Source: INE.

Exhibit 6b

Businesses undertaking non-technological innovation activities in Spain, by size of company and main sector of activity
(Base year 2008 = 100)

Industrial, fewer than 250 empl.
Industrial, more than 250 empl.
Services, fewer than 250 empl.
Services, more than 250 empl.
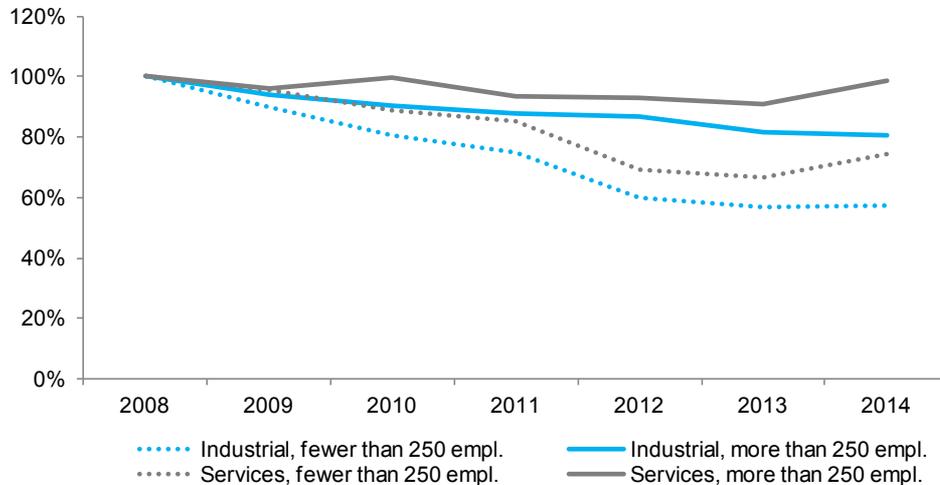
Source: INE.

business (industry or services), the number of companies undertaking innovation activities in 2014 was more than 80% of the 2008 figure.

There has been a significant decline in the number of Spanish businesses´ innovation activities, with small businesses more affected than larger ones.

Conversely, businesses with fewer than 250 employees suffered a very sharp drop in innovation, particularly in the case of technological innovation (and this was especially severe in the services sector, where the level of innovation activity in 2014 was just 40% of that in 2008) and in that of non-technological innovation in industry.

Conclusion and remaining challenges

Spain is putting the worst years of the crisis behind it. This is reflected in the main macroeconomic

indicators and in key microeconomic variables, such as those relating to business demography and dynamics. Whereas, in net terms, Spain experienced business destruction between 2009 and 2014, in 2015, there was a return to net growth, as had been the case in the years prior to the crisis.

However, the way in which the business landscape is recovering leaves some questions unanswered.

First, the recovery in the number of businesses in 2015 has mainly been driven by the sharp rise in the number of people becoming self-employed, and this suggests that job contracts are being replaced by business relationships between companies and self-employed people. There is insufficient data to evaluate this trend, but if it becomes established, it will require more analysis to understand its consequences.

Second, the economic recovery does not generally seem to be based – with some exceptions – on the acquisition and application of knowledge

by businesses. This can be observed at the macroeconomic level (Xifré, 2015) and it is also apparent at the microeconomic level. The number of companies undertaking innovation activities (technological and non-technological) plummeted between 2008 and 2014, the most recent year for which data is available.

These two recent phenomena are in addition to the structural conditions that differentiate Spain's business landscape from that of neighbouring countries: a larger share of small businesses, and on average – with exceptions – lower productivity among these smaller businesses.

Numerous proposals for changes or reforms have been made to address these challenges. We briefly mention two of these proposals. Huerta Arribas and Salas (2014) highlight the importance of improving human capital, making business management more professional, increasing delegation and worker participation, and strengthening the mutual trust between employees and employers. In a complementary way, Andrés and Doménech (2015) agree on the importance of promoting the accumulation of human capital, and also highlight that action is needed to promote innovation, encourage companies to take risks and foster employees' careers.

Just as Spain has had to undergo a far-reaching reform of the labour market to raise its competitiveness, these reflections seem to suggest that a "business reform" is also needed to resolve some of the issues alluded to here.

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Keys elements behind the success of Spanish exports

Rafael Myro[1]

Following decades of rapid expansion, Spain´s export performance today boasts impressive results relative to many European countries. Despite progress, stable and sustainable economic growth requires Spanish production to continue to become even more export oriented.

Spanish exports have outperformed many of their European peers during the latest economic crisis. Recent export growth has received a boost from the past crisis, which accelerated Spanish companies´ expansion to foreign markets to compensate for decreased domestic demand. However, Spain´s solid export performance is largely underpinned by decades of rapid expansion, beginning with Spain's joining the European Economic Community in 1986, and achieved its greatest successes in the 1990s. Spain´s favourable export performance can be explained by transformational changes of the economy's productive structure, as well as within its companies, which were forced to respond to increased international competition resulting from globalisation. Spanish companies have now reached high levels of internationalisation, both in terms of exports and FDI, reflecting their highly competitive products, which are increasingly attuned to global demand, and offer quality and differentiation. Despite progress, support measure will be necessary to ensure Spanish production remains focused on foreign markets, and increasing companies' export intensities, as the recovery in domestic demand stimulates imports, raising the risk of recurrence of trade imbalances.

Introduction

Spain's worsening economic situation over the course of 2008 and the sharp drop in GDP in 2009 −although slightly less than that in other developed countries− was accompanied by severe job losses and increased concerns over the weakness of Spain´s productive system, something which is frequent in a period of crisis not only in Spain but also abroad.

These concerns had arisen even during the strong economic growth of the preceding years.

In particular, the warning signs were the trade deficit with the rest of the world in both goods and services, and the poor progress of labour productivity, which is a fundamental pillar of national economic growth. Both indicators lent support to the hypothesis that the Spanish economy was suffering from serious supply-side issues and problems with the price of its products, hindering growth and competitiveness.

In the midst of the latest crisis, politicians´ and economists´ search for a positive feature in the Spanish economic model led to a focus on

[1] Madrid Complutense University.

export performance, which reflected relatively rapid growth. Sceptical observers attributed such performance to firms looking for markets abroad to compensate for the weakness of domestic demand, *i.e.* a temporary solution that did not alter the underlying weakness of the productive system.

However, the reality is that from 2009 to 2013, Spain's economy has been shored up by exports, which even without a devaluation became the motor of the economic recovery in the wake of the crisis. This strong performance of exports is the product of a long and fortunate path Spanish companies have taken to orient themselves towards markets in the rest of the world, in response to economic globalisation.[2]

Exports during the crisis

After the slump in economic activity in 2009, which affected world trade, given its general scope and greater intensity in developed countries, Spanish exports began to grow rapidly, to the extent that at the end of 2015, they were 22% higher in volume terms than in 2007, the last year of the expansionary phase at the start of the turn of the century. In terms of annual change, the years since 2010 have registered increases of more than 4.5% in volume terms, *i.e.* discounting the effect of price alterations. This strong increase made a decisive contribution to averting an even bigger collapse in economic activity, sustaining employment levels.

Foreign sales have also grown in comparative terms, exceeding Europe's leading exporter, Germany, by a few tenths of a point, and exceeding the EU-15 average by a full percentage point. It is no surprise, then, that exports have become the most salient positive feature of the Spanish economy. Or that their performance has made it necessary to take a closer look at the Spanish productive system.

This increase in Spanish exports is also surprising because their main market –Europe– was hit particularly hard by the economic crisis. As a result, the expansion abroad has had to rely more on emerging markets, where Spanish firms have a weaker foothold. This fact, while highlighting Spanish companies' delay in diversifying their markets, also reveals their notable adaptation to a changing environment. As a result, the differences in activity, efficiency and profitability between companies that export and those that do not has grown over the course of the crisis (Eppinger *et al.,* 2015).

Contrary to the popular belief that Spain's export capacity rests on tourism, goods exports account for 67% of the total and have performed particularly well, with increases of close to 5% a year over the period 2009-2015. In reality, tourism accounts for around 14% of income from exports of goods and services.

Contrary to the popular belief that Spain's export capacity rests on tourism, goods exports account for 67% of the total and have performed particularly well, with increases of close to 5% a year over the period 2009-2015. In reality, tourism accounts for around 14% of income from exports of goods and services, and grew moderately over the years of recession, reflecting the difficulties of its main European consumers from Germany, Britain and France. Moreover, exports of non-tourism services, which exceed tourism by volume, have grown faster.

It should not be concluded from this that tourism is irrelevant, however. It is a key industry, in which Spain excels, ranking among the world leaders in terms of earnings and number of tourists, which after a record in 2014, reached new highs in 2015

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[2] This article summarises part of Myro (2015).

with the arrival of 68 million people. The industry's significance lies above all in that its operations always yield a highly positive balance with the rest of the world, which helps finance part of the deficit on the goods trade balance.

The paralysis of the internal market, as households, businesses and the government pay down their debt, has undoubtedly spurred companies to look for new markets abroad. But the main stimuli came from growth in developing country markets in the period to 2013, when the first signs of deceleration became apparent, and with the drop in value of the euro until 2012.

The paralysis of the internal market, as households, businesses and the government pay down their debt, has undoubtedly spurred companies to look for new markets abroad. Indeed, some estimates have placed more weight on this factor in the years the recession was deepest, starting in 2009. But the main stimuli came from growth in developing country markets in the period to 2013, when the first signs of deceleration became apparent, and with the drop in value of the euro until 2012. In 2013 and 2014, the European currency appreciated, as a consequence of Germany's foreign trade surplus – and that of the EU as a whole – and the application of a less expansionary monetary policy in the Euro area than that of the United States or United Kingdom, which were offering lower returns on financial assets. This factor combined with increasing world trade to slow Spanish exports in the summer of 2014. The subsequent depreciation in the euro, together with the falling oil price, encouraged a recovery in the following months, but not as vigorous as desired, as world trade is showing signs of stagnation, having grown at 2.8% in 2015, *i.e.* less than world GDP. With the exception of 2009, this is something that has not happened for a long time (Jääskelä and Mathews, 2015; Gros, 2016).

One final characteristic is worth noting: growth in Spanish exports in the past few years has not only been driven by the main exporting companies selling more of their products on markets in which they were already operating (what economists term *intensive margin),* but Spain's presence abroad has also been expanded with new companies and products, and its companies have penetrated new markets *(extensive margin).* In particular, although it remains low, the percentage of small and medium-sized enterprises that export has grown steadily. A very large share of companies with over 200 employees already export. According to information from the Foreign Trade Institute (Instituto de Comercio Exterior, ICEX), the number of exporting firms with an export turnover of more than 50,000 euros has grown at rates of more than 3% since 2010. The number of firms exporting regularly has also grown, albeit more slowly.

Meanwhile, there has been a rise in the number of firms in the leading group, including both those with foreign sales in 2014 of over 50 million euros but less than 250 million euros (almost 500 firms), and those with exports of over 250 million euros (101 firms, with Telefónica, Repsol, Inditex, Bayer Hispania, Cepsa, Seat, Abengoa and Corporación Gestamp topping the ranking). Large exporters have strengthened their share of total exports.

A long growth trajectory

Although it may be surprising, the positive trend in exports in recent years forms part of a long-term trend dating back to 1960, when the Spanish economy abandoned the principles of self-sufficiency that had prevailed during the first twenty years after the civil war. This was followed by a period of rapid expansion, taking advantage of the golden age of post-war European growth. However, it was Spain's joining the European Economic Community that would expose Spanish firms most directly to international competition, forcing them to turn to foreign markets to replace domestic ones.

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Indeed, Spain's industrialisation during the 1960s and 1970s was consolidated in a context of a domestic market that still enjoyed a relatively high degree of protection. The profound crisis in the 1970s, resulting from rising prices of oil and other commodities and the adoption of restrictive fiscal and monetary policies by developed countries to rein in the resulting inflationary tensions, spurred companies to turn increasingly towards foreign markets. Finally, joining the European community forced Spanish firms to undergo a profound transformation, supported by fiscal measures to encourage them to re-equip.

Spain's membership in the European community in 1986 ultimately meant the dismantling of its protectionist barriers against other member countries. This process was a gradual one, lasting seven years and being completed in 1993. This period also saw the construction of the European single market by eliminating non-tariff barriers restricting competition within the community, removing border posts, which had raised the cost of sending goods abroad, and harmonised health and safety specifications, so they could not be used

to disguise domestic market protection. Spanish companies therefore faced a huge process of change, opening up the domestic market to companies from other member countries.

Any process of international competition exposes companies to a more competitive environment in which they face foreign rivals. This incentivices them to raise their levels of efficiency and degree of product specialisation. To do so, they give up producing goods and services at which they were less skilled and efficient, to concentrate on those in which they have a competitive advantage, being more unique than those of their rivals, or for which they can obtain a better price. The outcome of this process is a more open and competitive international market, with a wider variety of goods and lower prices.

This process is normally beneficial for the country concerned, given that, as Adam Smith pointed out, consumers have a wider variety of goods available at lower prices and firms have new business opportunities. The less efficient firms disappear, but the more efficient ones produce

Exhibit 1

Spain´s participation in exports of goods and services to the EU-15
(Constant prices, percentages)
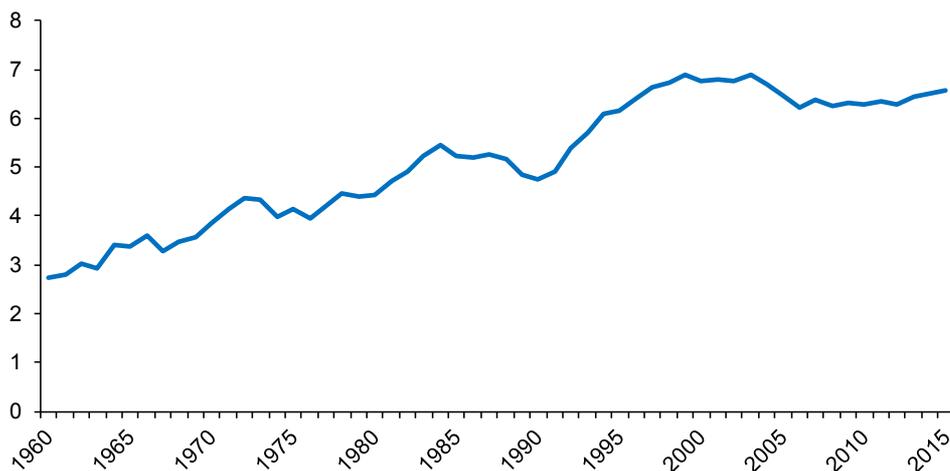
Source: Eurostat.

at a lower cost and find bigger markets for their products. Focusing on these new markets is a necessary survival strategy, because firms have to share space in their domestic market with firms entering it from abroad and offering new varieties of products. However, at the same time, it is an opportunity to consolidate their products and advance towards new ones, manufactured with the latest technologies, utilising the information received from new consumers and rival companies.

Exhibit 1 shows how Spain's exports have grown as a share of the EU-15 total, reflecting in simple terms how Spain's firms have internationalised. This share has risen from below 3% in 1960 to close to 7% today. This figure is not close to Spain's share of the region's output, which is slightly more than 10%, but this is a trait shared with France, Italy and the United Kingdom. The reason for this is that Germany is more focused on foreign trade than these other countries, and accounts for a proportionately larger share. This is also true of some smaller countries, whose size means they rely on exports for their producers to achieve economies of scale.

It is worth looking more closely at some of the details of Spain's trajectory. For example, Spain's share of exports rose rapidly until the crisis in 1973, receiving a boost from the Preferential Agreement with the European Economic Community that was very favourable to Spain's interests. The following decade was marked by the pressing need to find alternative foreign markets. This began to moderate in 1985, thanks to the recovery in domestic demand. The 1990s, in which the creation of the European Single Market begun in 1987 was culminated, was a period of rapid expansion in Spanish exports, growing at an average annual rate of 10% in volume (11% in the case of goods). This rise was given a considerable boost by three devaluations of the peseta in the early years, which corrected the overvalued rate at which it joined the European Monetary System (the precursor of the European Monetary Union) in 1989.

In the 2000s, export growth slowed in developed countries, including Spain, although remaining at a healthy 4.3% in volume terms, one percentage point higher than annual GDP growth. However, this strong rate of growth was insufficient for Spain

Exhibit 2

Evolution of goods imports
(Annual percentage change)
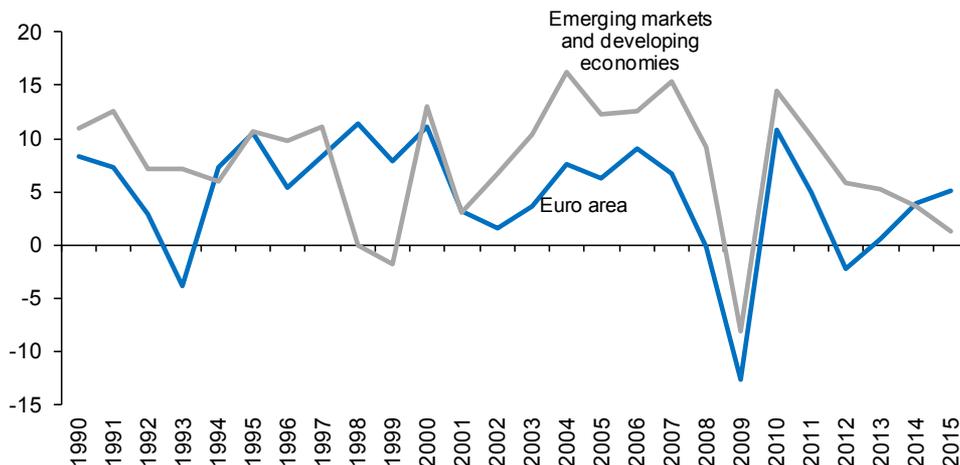
Source: IMF.

to maintain its share of European community exports, which had been on a steep downward

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The main reason for Spain's loss of market share between 2003 and 2008 is not the country's higher labour costs, or the rapid growth of domestic demand, but rather the concentration of exports to EU countries, whose imports slowed during the period, in contrast to the situation in emerging countries.

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trend since 2003. The current crisis has aided its recovery, with export growth ending 2015 at 6.5%, close to the peak it reached in 2003 (6.9%). The main reason for Spain's loss of market share in EU exports between 2003 and 2008 is not the country's higher labour costs, as the Bank of Spain[3] has often argued, or the rapid growth of domestic demand. It has rather been the concentration of Spain's exports to EU countries, whose imports slowed during the period, in contrast to the situation in emerging countries (Exhibit 2). Countries better positioned in Asia than Spain, such as Germany in particular, managed to increase their exports considerably. Although Spanish companies were increasingly targeting these new emerging markets, they were unable to take advantage of their potential for expansion in the period concerned, although they have done so since 2010.

The big transformation in the 1990s

The 1990s undoubtedly deserve particular attention in view of the rates of export growth achieved. This is the period in which everything that began the previous period, following Spain's joining the European community, seems to have come to fruition, and was the prelude to the final mature phase in the 2000s.

Indeed, the preceding decade –the 1980s– in which Spain joined what is now the European Union, was characterised by a sharp rise in exports to the region. Spain finally realised its dream of being a part of Europe, and its companies did so too, by making inroads into European markets, which must have implied a serious effort. Exhibit 3, which shows trade in goods only, shows the sharp rise in the proportion of exports aimed at the European community (intracommunity exports), which almost double as a share of the total. Spain's companies took advantage of the European market's opening up to their products, as they sought to offset the inevitable loss of domestic market share to companies from other European countries.

At the end of this decade of European integration, just over 70% of Spanish exports were destined for the European community. For many companies, particularly the larger ones, this was the culmination of their first stage of internationalisation, allowing them to leverage their comparative advantages, based in particular on lower labour costs, while undertaking a profound transformation of their products and production techniques.

However, as mentioned, it was in the 1990s that Spain's exports enjoyed their biggest expansion, with rates of growth in volume terms of 10% a year, doubling those of the previous decade. This performance was not unique to Spain. Other countries on Europe's periphery, such as Ireland and Greece, followed the same pattern, in sharp contrast to France, Germany and Italy, whose export growth was slower.

Over the course of this golden decade many companies with less than 200 employees started exporting, following the example of larger companies in the preceding decade. The data from SEPI's Business Strategy Survey (Encuesta sobre Estrategias Empresariales, ESEE) show the percentage of firms with less than 200 employees that export to have almost

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[3] In the period mentioned, Spanish exports grew faster than France's or Italy's, and at the same rate as Britain's.

Exhibit 3

Weight of goods exports to the EU
(Percentage of total)
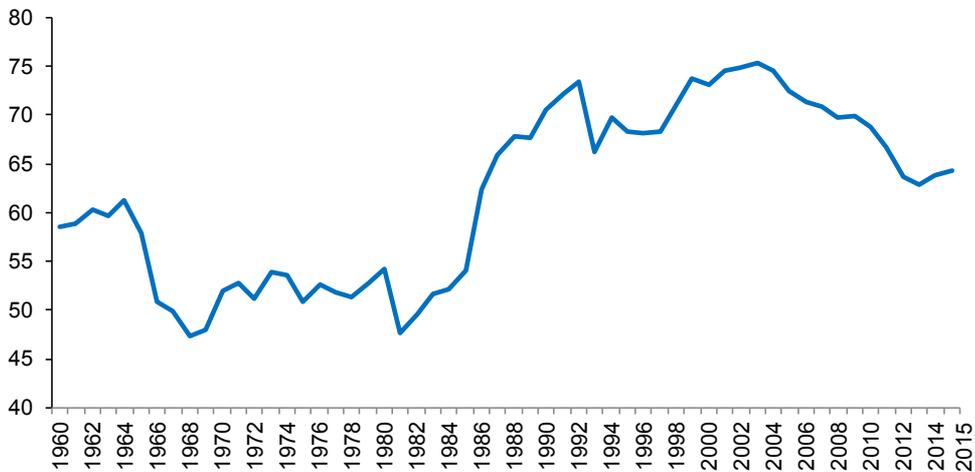
Source: Eurostat.

doubled over the decade, with the increase in the number of small companies (with fewer than 100 employees) standing out in particular.[4] Moreover, this change was most intense in those sectors that are currently the leading exporters, namely foodstuffs, textiles, chemicals, machinery, and transport equipment.

No less significant was the change that took place in the export intensity of the various types of companies, *i.e.* the percentage of their output they sold on foreign markets. As a group, large companies, *i.e.* those with over 200 employees, changed most. They started out with the same export intensity as small firms (around 20% of output), which is generally considered to be relatively low, with little transformative impact on companies' manufacturing basis, and consequently, with limited capacity to prepare

them for global competition. Over the 1990s, this share rose to 35%, with big increases in all the key exporting sectors, with the exception of food, drink and tobacco, which remain hampered by a low export intensity. This change led to large companies taking on a clear export orientation. In the case of firms with fewer than 200 workers, their export intensity also rose, although less vigorously, reaching the 25% threshold, which a recent study suggests is decisive.[5] These achievements remained largely unchanged until the onset of the crisis.

Following the transformation that took place in the 1990s, the internationalisation of Spanish companies in terms of exports reached new heights, but remained basically reliant on EU markets. After the turn of the century, the following decade was characterised by the extension to new

[4] In the following decade, the 2000s, the number of exporting companies grew much more slowly, except in the case of firms with between 20 and 50 employees, which had been left behind in the previous decade. However, once again there has been considerable progress in the number of exporting companies during the crisis, which has obliged them to look for foreign markets.

[5] Past this threshold, companies seem to obtain greater productivity gains and start behaving like multinationals, setting themselves apart from non-exporting companies (or companies who export less) (Merino de Lucas, 2012).

markets, with a significant decline in the share of European markets, and the introduction of new

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The first decade of the new century was characterised by Spanish exporting companies' extension to new markets and the introduction of new products and quality improvements, in addition to the transformation of Spanish firms into multinationals.

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products and quality improvements. The decade was also characterised by a new and higher stage of internationalisation by large companies, with foreign investments to set up production abroad. This transformed Spanish companies into multinationals. This was a process that was mainly led by companies in the services industry, banking, telecommunications and power, but was followed by manufacturing companies in various sectors (metallurgy, non-metallic ores, chemicals, motor vehicles, and foodstuffs), thus boosting exports.

Thus, by degrees, Spanish exports, and more broadly, the internationalisation of Spanish companies, have become established, first spearheaded by a group of large companies, and then followed by other smaller ones. Spanish companies first made gradual inroads into markets to which they were geographically or culturally close, and then spread across the world. This is perhaps the most common path to internationalisation, taking place in a demanding context, and yielding good results.

It is also the path described by the Uppsala model, which posits that exporting is difficult, and that firms begin by increasing the share of exports in their business gradually, thereby gaining the experience they need to set up abroad as multinationals, and setting off a virtuous cycle in which exports and foreign investments reinforce one another.

Exports, economic recovery and the new growth model

A series of factors underpin Spain's impressive export performance, including:

■ A product mix increasingly attuned to the structure of global demand. Indeed, Spain's specialisation in a mix of high, medium and low technologies has worked well. In high technology, exports include medical products, in medium technology, motor vehicles, chemicals and mechanical machinery, and in low technology, basic metals, and agrofoods products, in particular. Valuation of exports based on their levels of sophistication, in line with the work of Ricardo Hausman and Cesar Hidalgo, shows that half of exports belong to the group of medium-high to high sophistication exports (Alvarez and Vega, 2016).

■ The high quality of the products offered, particularly in relation to their price, and a wide range of products with characteristics differentiating them from their rivals.

■ A good combination of old and new markets. The geographical structure of Spain's exports means that, despite the efforts made in recent years, they have a somewhat limited presence in Asia and North America, The focus on the EU has driven expansion until recently, and will do so again once Europe starts growing again, given the slowing of GDP growth in the emerging economies. Of course, that should not mean efforts to penetrate these markets should be stopped.

■ A sizeable group of exporting companies with high comparative efficiency has already undertaken the most advanced stage of internationalisation, namely setting up subsidiaries in a large number of countries.

■ The growing skill and capacity of Spanish firms to join global value chains has given greater stability to their foreign sales (Gandoy, 2014).

The value of Spain's exports is currently 34% of GDP, a larger share than in France or Italy. Goods exports, which in Spain's case are not as buoyant as services, have also surpassed France's levels, and are close to those of Italy, at 24%.

Nevertheless, these achievements are insufficient to guarantee the sustained high levels of growth the Spanish economy needs for significant job creation without creating imbalances. It should not be forgotten that Spain's domestic demand growth tends to be accompanied by a strong increase in imports. Thus, the period of expansion preceding the recent crisis was characterised by a sharp deterioration in the goods and services trade balance (Exhibit 4). External demand therefore made a negative contribution to GDP growth, mainly reflected in the excessive and uncontrolled rate of domestic demand growth. This was compounded by the impact of other important factors, such as the strong rise in the euro against the dollar, which raised the price of

Spanish products and lowered those of competitor countries.[6]

Despite progress, these achievements are insufficient to guarantee the sustained high levels of growth the Spanish economy needs for significant job creation without creating imbalances.

A developed economy's response to booming imports is to raise exports, and if it fails to do so, the inevitable result is excessive growth and domestic demand needs to be reined in. There is relatively little scope for substituting imports with domestic products and thereby reducing purchases from abroad. Developed economies specialise in certain ranges of products to achieve economies of scale and leverage their relative cost advantages (more in some ranges than

Exhibit 4
Goods and services trade balance as % of GDP
(Percentages at constant prices)
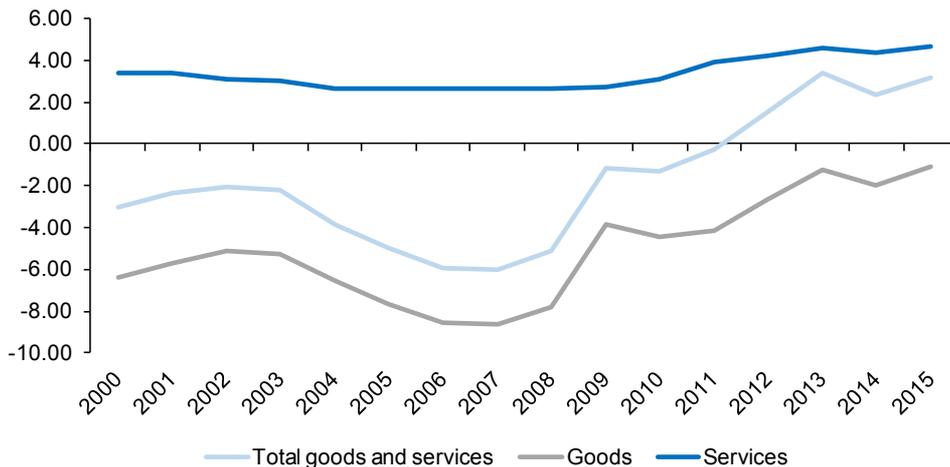
Sources: National Accounts, INE.

[6] Another factor was the rise in unit labour costs, although this probably had a much smaller effect than the increasing value of the euro, which firms consider to be exogenous and harder to predict.

others, depending on the price of their factors of production: labour and capital). It is difficult for production to meet demand for the entire range of products.[7]

The recovery from the crisis and the future growth of the Spanish economy mean exports need to play a bigger role. Consequently, the upward trend in foreign sales should continue over the coming years, and there is sufficient competitive strength for it to do so. This does not alter the fact that solid support measures are needed, particularly today, with global trade stagnant. The current growth of domestic demand, at over 3%, tends to increase imports by almost 6% in normal conditions (although the average increase in 2014 and 2015 was 7%).[8] This is a level exports could reach under normal circumstances, but is difficult at present unless global economic growth picks up.

Economic growth with more support for exports offers many additional advantages as well as keeping the external accounts more balanced. The first is fostering industrial development, with countless incentives for innovation and a better qualified workforce. This is precisely the big advantage associated with the reindustrialisation strategy announced by the European Commission, establishing the ambitious target of increasing industry's share of total output from 16% to 20% of GDP by 2020. The second is to step up the rate of growth, efficiency and effort in innovation by exporting companies, whose progress is less sensitive to the domestic economic cycle. The third is a better understanding of emerging markets, encouraging and reducing the cost of the internationalisation of other companies, by offering strong support to public export promotion policy.

Concluding remarks

This article has described how Spanish exports have risen during the economic crisis, showing Spain's performance to have excelled in comparison to that of other European countries. The strength shown by this rise is partly due to the crisis, which represents an incentive to look for foreign markets, but above all it rests on a trajectory of decades of rapid expansion, which was given a strong boost by Spain's joining the European Economic Community in 1986, and achieved its greatest successes in the 1990s. This successful track record was the result of a profound transformation of the Spanish economy's productive structure and the technological and organisational basis of its constituent companies, which were obliged to respond to the challenge of the Spanish market's greater exposure to international competition resulting from globalisation and membership in the European Economic Community. Spanish companies have now reached high levels of internationalisation, not only through exports, but also foreign investment, reflecting their highly competitive products, which are increasingly attuned to global demand, and offer quality and differentiation.

In any event, more stable and sustained economic growth requires Spanish production to remain focused on foreign markets, and increasing companies' export intensities, as the recovery in domestic demand stimulates imports and so raises the risk of imbalances recurring in goods and services trade.

Making growth more export based offers a number of advantages, such as increasing companies' efficiency and productivity, as well as sustaining

[7] This can be illustrated with an example. If demand for motor vehicles grows, this increases sales of top-of-the range models as well as mid-range and cheaper vehicles. However, if Spain's advantages are based more on lower salaries than higher technology, domestic production will tend to specialise in the lower end of the market (in practice, Spain's car manufacturers are largely foreign owned). Spain's response should therefore be to increase exports of the models it manufactures, rather than try to produce more sophisticated cars, which would take longer to achieve as it would mean first raising the technological level of the companies operating in Spain. This does not mean that Spain's output is not competitive, quite the contrary, to the extent that it is ever more closely integrated in the grand European assembly line, as recent studies show (Córcoles, Díaz Mora and Gandoy, 2012).

[8] Income elasticity of exports is near 2.

rapid rates of growth. It is therefore one of the main changes required to Spain´s productive model.

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Assessment of support schemes promoting renewable energy in Spain

Fidel Castro-Rodríguez[1] and Daniel Miles-Touya[2]

Spain´s 2013 reform of the renewable energy support mechanism was essential to reducing the tariff deficit, which arose as a consequence of shortfalls in the previous subsidy regime. However, the new support mechanism inherent to the post-reform regime is already increasing investor uncertainty, and endangering Spain´s ability to meet EU renewable energy installed capacity and output targets.

As part of an effort to comply with EU renewable energy targets, Spain has relied on various renewable energy support mechanisms over the last few decades. From 1998-2013, Spain essentially used various versions of the feed-in-tariff (FIT) to successfully promote renewable energy installed capacity and generation, in line with EU objectives. By 2013, the overly generous FIT regime had overstimulated investment and resulted in a large electricity sector deficit. With a view towards fiscal consolidation, the government undertook a necessary reform of the subsidy regime, replacing FIT with compensation based on obtaining a reasonable return for the project. While the new regime put into place in 2013 was an improvement as regards financial sustainability, its interventionist and discretionary character is generating significant investor uncertainty, possibly hindering compliance with the goals of the EU Renewable Energy Directive going forward.

Renewable energy has become one of the main tools to combat global warning. To promote it, countries have been using support mechanisms aiming to cover the differences in cost between renewable and conventional power plants. Spain used various versions of the feed-in tariff (FIT) system between 1998 and 2013. However, in 2013, constrained by a burgeoning deficit, the government switched over to a compensation system that tops up market income to ensure a reasonable return on "standardised" renewable facilities. This article describes both systems of incentives, analyses the effects of the former system on installed capacity, energy output, and the cost of support, and studies the features of the new mechanism. While FIT has been highly effective but somewhat inefficient, the new mechanism should ensure the financial sustainability of the system but likely at the cost of reduced effectiveness. This may put compliance with EU directives on renewables at risk if additional incentives are not introduced.

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[1] Department of Economic Analysis and ECOBAS, University of Vigo.
[2] Department of Applied Economics and ECOBAS, University of Vigo.

Fidel Castro-Rodríguez and Daniel Miles-Touya

Introduction

Renewable energy has become one of the main tools countries are using to cut their greenhouse gas (GHG) emissions, which climate scientists regard as being one of the main drivers of global warming. To stimulate investment in these technologies and accelerate their development, governments have been using support mechanisms geared towards covering the differences in cost between renewable plants and conventional, fossil fuel plants.

The success of these promotion programmes can be seen from the spectacular increase in installed renewable energy (RE) capacity in recent years, and the growing share in energy production from renewable energy sources (RES). Worldwide renewable capacity has risen from 880 GW in 2004 to 1,712 GW in 2014, when it accounted for 58.5% of new installed capacity, and allowed 22.8% of electricity generated that year to be from renewable sources (REN21, 2015). Additionally, investment in renewables mobilised a flow of approximately 270 billion euros in 2014 (not counting large hydroelectric projects) (REN21, 2015; IEA, 2014).

However, these promotion policies have often suffered from serious errors of design and implementation. Firstly, because the incentives were not linked to any emission-reduction indicators, and only their effects on the volume of investment was considered. Secondly, because insufficient attention was paid to the risk of creating speculative bubbles in the investment process, due to the high returns on some renewable projects, as a consequence of the generous public subsidies granted, exceeding that on alternative investments by a wide margin.[3]

In Spain's case, renewable energy promotion policies allowed installed renewable capacity to rise by more than 200% between 1990 and 2014, from 15,662 MW to 50,017 MW. The percentage of primary energy consumption from renewable sources rose from 7% in 1990 to 14.6% in 2014, and the production of electricity from renewable facilities came to account for 41.4% of total net output in 2014, compared with 18% in 1990. These policies also made it possible to reduce the amount of electricity generated using fossil fuels, avoiding atmospheric emissions of close to 300 million tonnes of CO_2 (APPA, 2015). But, at the same time, subsidies for renewable projects have grown enormously, reaching a cumulative figure of over 43 billion euros in 2014. This support, together with *overcompensation to certain utilities, such as nuclear and large hydro power generators* (European Commission, 2012), resulted in a deficit in the electricity sector of over 40 billion euros in the period 2000-2014. Therefore, in 2013, constrained by the tariff deficit, the Spanish government modified the renewable energy promotion mechanism to switch from a feed-in tariff (FIT) system to one based on compensation to cover the cost of "standardised" renewable plants, and allow them to obtain a "reasonable" return, equivalent to that on ten-year government bonds plus 300 basis points.

In 2013, constrained by the tariff deficit, the Spanish government switched from an FIT system to one based on allowing "standardised" renewable plants to obtain a "reasonable" return, equivalent to that on ten-year government bonds plus 300 basis points.

This article describes the incentive systems employed in Spain to promote renewable energy, both old and new, analyses the effects of the former mechanism on installed capacity, the technology mix, energy production, and the cost of the support given, and studies the main features of the new mechanism. It highlights how

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[3] First of all, it is necessary to ask whether renewable energy is the best tool governments have available to reduce GHG emissions. Some authors, such as Novan (2015) and Cullen (2013) address this question.

the specific design of FIT used over the period 1998-2013 was more effective at promoting investments, but too generous in its payments for certain technologies, leading to peaks in investment that undermined the system's financial stability. Moreover, the mechanism lacked instruments with which to update and revise the subsidies depending on each technology's learning curve, the installed renewable capacity, and the overall volume of support provided. The new support mechanism implemented in 2013 substantially improves financial sustainability and enhances efficiency somewhat by periodically updating the compensation granted. However, it rests on a technically complex procedure, which is highly interventionist and somewhat lacking in transparency. This results in considerable uncertainty among investors, which may reduce the mechanism's effectiveness and jeopardise the achievement of the stated renewable targets.

The new mechanism rests on a technically complex procedure, which is highly interventionist and somewhat lacking in transparency. This results in considerable investor uncertainty which may reduce the mechanism's effectiveness and jeopardise the achievement of renewable targets.

There is extensive international literature analysing how renewable energy support mechanisms operate (Konidari and Mavrakis, 2007; Ragwitz *et al.,* 2007; Held, *et al.,* 2014). There is also a long list of studies looking at the characteristics and impacts of FIT used in Spain (see, for example, Río, 2008; Sáenz de Miera *et al.,* 2008; Costa and Trujillo, 2014; Ciarreta *et al.,* 2014; Río and Mir-Artigues, 2014). The aim of this article is firstly to complement the foregoing research into the FIT system applied in Spain using more up-to-date information, and secondly, to assess quantitatively the characteristics of the new incentive mechanism.

The article is structured as follows. The next section presents the renewable energy objectives for Spain over the period 2000-2020 deriving from European Directives and national energy plans. Then, it describes the renewable energy promotion policies in place since 1998 to achieve the proposed objectives. Subsequently, it analyses the effects of the policies implemented in the period 1998-2013 regarding installed capacity, electricity production, and the cost of subsidies. What follows is an examination of the possible effects of the new promotion instrument put in place with the 2013 reform. Finally, the last section presents the study's conclusions.

Renewable energy objectives for Spain

The renewable energy objectives for Spain have been shaped by community policy on renewable energy, which began with the publication in 1997 of the white paper on renewable energy sources entitled: *Energy for the future: Renewable Energy Sources* (European Commission, 1997). This document was the basis for Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. This Directive set an overall target for electricity from RES in the EU of 21% of total gross electricity consumption by 2010 with individual indicative targets for Member States. In Spain's case, this was 29.4%. Member States were allowed to choose their support system themselves. For its part, Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport established indicative targets for the EU of 2% at the end of 2005, and 5.75% at the end of 2010.

Subsequently, Directive 2009/28/EC, amending Directives 2001/77/EC and 2003/30/EC, implemented a common framework to promote energy from renewable sources and set compulsory national targets for 2020 in relation to the share of energy from renewable sources in final gross energy consumption (20%) and

Table 1

Indicative trajectory of renewables for Spain (2011-2020)
(Percentage)

	2011-2012	2013-2014	2015-2016	2017-2018	2020
Indicative trajectory	11	12.1	13.8	16	20

Source: PER 2011-2020, Ministry of Industry.

the share of energy from renewable sources in transport (10%).[4] The national targets for 2020 were set based on each country's starting point and its renewable energy generation potential. For Spain the target is for 20% of the energy consumed in 2020 to be from renewable sources. At the same time, Directive 2009/28/EC also proposed an indicative trajectory for the share of renewables in gross final energy consumption up to 2020 for each Member State. Table 1 shows the indicative trajectory for Spain as biennial averages over the period 2011-2020.

European policy on renewable energy and climate change was subsequently expanded with the publication of a roadmap defining the stages on the way to achieving emissions reductions from 1990 levels of 40% in 2030, 60% in 2040, and at least 80% in 2050 (European Commission, 2011).

With a view to complying with European Directives, the Spanish authorities drew up three plans which have set the targets for renewable energy across the various periods and sectors, and the amount of the planned subsidies to achieve them. In 1999 the Renewable Energy Promotion Plan (PFER 1999-2010) was enacted. This was substituted in 2005 by the Renewable Energy Plan (PER 2005-2010) to comply with the objectives set for 2010. In 2011 a new Renewable Energy Plan (PER 2011-2020) was enacted, which is currently in force, setting targets in line with Directive 2009/28/EC. This plan is based on the Renewable Energy National Action Pla++n (PANER), which the government drew up in 2010 to comply with the requirements of Directive 2009/28/EC. Table 2 shows the target trajectory for renewables as a share of gross energy consumption proposed for Spain by PER 2011-2020. This is slightly less ambitious than the EU Directive's indicative trajectory and the target for 2010 set by PER 2005-2010.

Table 2

Target trajectory for the share of renewables in biennial averages
(Percentage)

	2010	2011-2012	2013-2014	2015-2016	2017-2018	2020
Target	12.1[1]	14.7	15.9	17.0	18.5	20.8

Note: [1] PER Target 2005-2010.
Source: PER 2005-2010, PER 2011-2020 and Ministry of Industry.

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[4] These requirements form part of the "2020 Climate and Energy Package," an EU action plan against climate change that contains a triple objective for 2020: reducing GHG emissions by 20% from 1990 levels; achieving a share of primary energy from renewable sources of 20%; and reducing energy consumption by 20% (see European Council, 8 and 9 March 2007, and "Energy 2020 - A strategy for competitive, sustainable and secure energy," European Commission (2010) 639 November 2010). In October 2014 the European Council approved the new 2030 Climate and Energy Package, replacing the 2020 Package. This set targets for combating climate change taking into account the various economic difficulties the Member States were facing. Specifically, it proposed for 2030 a cut in CO_2 emissions of at least 40% from 1990 levels, a share of renewables of at least 27%, and an energy saving of 27%. However, these last two targets, unlike their equivalents in the 2020 Package, are not binding at the national level. See EUCO 169/14, European Council (23 and 24 October 2014), Conclusions. 2030 Climate and Energy Policy Framework.

Table 3

Targets for electricity production from renewable sources
(Percentage)

2010[1]	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
29.4	31.0	32.0	32.7	33.5	34.1	34.4	35.5	36.4	37.4	39.0

Note: [1] Directive 2001/77/EC and PER 2005-2010.

Source: PER 2005-2010 and PER 2011-2020, Ministry of Industry. Gross electricity production from renewable sources as a share of gross electricity consumption (considering average values of wind power and hydroelectric power output, as established by Directive 2009/28).

Table 4

Technology objectives in the electricity sector
(Percentage)

	2010[1]		2015		2020	
	Power (MW)	Output (GWh)	Power (MW)	Output (GWh)	Power (MW)	Output (GWh)
Hydro	18,977	38,186	19,860	37,963	22,672	41,597
Geothermal	0	0	0	0	50	300
Solar Photovoltaic	400	609	5,416	9,060	7,250	12,356
Solar thermoelectric	500	1,298	3,001	8,287	4,800	14,379
Tidal/wave power	0	0	0	0	100	220
Onshore wind power	20,155	45,511	27,847	55,538	35,000	70,734
Offshore wind power	0	0	22	66	750	1,822
Biomass, wastes, biogas	2,463	16,665	1,162	7,142	1,950	12,200
Total	23,663	53,772	57,308	118,056	72,572	153,608

Note: [1] PER 2005-2010.

Source: PER 2005-2010 and PER 2011-2020, Ministry of Industry.

In the specific case of the electricity sector, Table 3 shows the renewable energy production targets, and Table 4 the installed capacity and energy generation targets for the various different renewable energy technologies over the period 2010-2020. The proposal of PER 2011-2020 was that by 2020 39% of gross electricity consumption should be supplied from renewable sources, with an installed capacity of over 70,000 MW. This is to be distributed such that 48% is from onshore wind power, 31% hydraulic power, 17% solar, and the remaining 4% from the various other renewable sources.

Instruments to support renewable energy in Spain

1998-2013

Although there were various versions, and changes were made during the period, the main instrument used to support renewable energy in Spain from 1998 to 2013 was based on premiums and tariffs for renewable energy, applying the feed-in tariff mechanism. In particular, renewable facilities had two ways of selling their electricity, which shaped the way in which it was paid

for. The first option was to sell directly to the market obtaining market price plus a regulated supplement (feed-in premium, FIP). Alternatively, producers could sell to a distributor for a regulated tariff per kWh produced (feed-in tariff, FIT). This type of intervention instrument set the price and left the market to determine the quantity. Moreover, the payment facilities received depended on their actual production.

At the structural level, premiums and tariffs varied with technology and plant size, and were independent of plant location. Remuneration followed a continuously upward trend: first it was updated by government decision R.D. 2018/1998, then the reference tariff was updated (R.D. 436/2004), subsequently it was linked to the CPI (R.D. 661/2007), and finally, based on the underlying CPI at constant taxes (as of R.D. Law 2/2013).

In all the forms of the support instrument used in Spain up until the 2013 reform, the level of remuneration was determined in a centralised manner following the principles of Law 54/1997 on the Electricity Sector, with a view to guaranteeing the owners of renewable energy facilities a reasonable return on their investment. Remuneration was reviewed at intervals (generally every four years) to factor in the lower cost of the technology as knowledge was acquired and as the technology developed, although this was not conditional on the level of cumulative investment. Only in R.D. 1578/2008, which set a new compensation framework for PV installations, a pre-established rule was introduced revising tariffs based on pre-registered power and the power quota established by the regulator. Electricity consumers financed this tariff support, which formed part of the regulated costs of the system under the name of premiums. Renewable facilities have always been given priority in grid access.

Reform to the incentive mechanism

In 2013, with a new political party in government and pressure from the European Commission to

reduce the public deficit, a thorough reform of the legal and economic system applicable to facilities generating power from renewable sources was embarked upon in order to guarantee facilities a reasonable return and ensure the financial sustainability of the electricity system.

The reform began with the promulgation of Royal Decree-Law 9/2013 of July 12th, 2013, abandoning the feed-in tariff incentive model, which remunerated the amount of electricity generated (via premiums), in favour of a compensation system that allows the costs necessary for renewable plants to compete in the market on an equal footing with other technologies, and obtain a reasonable return on the project as a whole. Specifically, a reasonable return on a project was defined as being approximately the average return on ten-year government bonds on the secondary market incremented by an appropriate spread for the investment.

Subsequently, Law 24/2013, regulating the electricity sector, was passed, substituting for Law 54/2007, and incorporating new operating and financing conditions for renewable energy sources. Firstly, it eliminated the special system such that all plants, whether renewable or not, came under the same regulations. Secondly, it established that the compensation facilities received should be equal to their income from the market plus specifically regulated remuneration sufficient to cover their costs and ensure a reasonable return.

To determine the specific remuneration for each plant, according to its characteristics in terms of power output, technology and age, a standard facility type is assigned, defined by a series of remuneration parameters calculated taking an efficient and well-managed company as the reference. These parameters make it possible to calculate the income from the sale of energy, valued at market price, operating costs, and the value of the initial investment. The specific remuneration comprises two terms: one, per unit of installed capacity, to cover the investment

cost that cannot be recouped from the sale of power on the market (return on investment); and a second to cover the difference between the operating costs and income from participation in the market (remuneration for operations). At the end of their regulatory lifetime, facilities cease to earn specific remuneration. Moreover, if facilities achieve a reasonable return during their regulatory lifetime, they will receive no remuneration for the investment, although they will still continue to receive remuneration for operations during their regulatory lifetime. New renewable facilities will access the specific remuneration system by means of a competitive process in which the initial value of the investment will be determined. Moreover, bids from renewable energy plants will have dispatch priority in the market on equal economic conditions.

The parameters determine the value of the relevant variables for each standard facility type, such as initial investment, average annual price in the daily and intraday market, number of hours of operation, regulatory lifetime, rate of return, and operating costs.[5] These parameters in general, and the remuneration derived from them, will be reviewed every six years, except the initial value of the investment and project lifetime. There will also be an interim review of these values every three years, except in the case of operating costs, which depend on the price of fuel, which will be reviewed annually. The level of remuneration is set so that operators earn a return equivalent to ten-year government bonds plus an adequate spread, which will be 300 basis points during the first regulatory period for facilities existing when RD 9/2013 came into effect (until December 2019). Standard facility types are differentiated by technology, size and climatic zone.

The value of this remuneration is set within upper and lower bounds on the estimate of market energy prices. When the daily market's average annual price is outside these limits, a positive or negative

balance accrues, which will be compensated over the facility's lifetime. Remuneration also depends on the facility's hours of operation and is set to zero when a given threshold is not passed. Once facilities pass their regulatory lifetime, they cease to receive the specific remuneration and their income is solely that obtained from the sale of power on the market.

Political effects of promoting renewable energy over the period 1998-2013: A major boost but at high cost

The renewable energy support instrument used in Spain up until 2013 was highly effective. Exhibit 1 shows the strong growth in renewable installed capacity over the period, rising by almost 150% from 20,503 MW in 2000 to 49,995 MW in 2013, and placing Spain second in the EU in terms of the level of installed renewable power, behind only Germany. This increase was basically due to the continuous investment in wind farms throughout the period and the strong growth in photovoltaic facilities in the later years of the period.

The country also easily met its installed capacity and output targets. Tables 5, 6 and 7 show the degree of fulfilment of the various challenges. In the case of the targets set in the indicative trajectory in Directive 2009/28/EC for the share of renewables relative to final energy consumption, the Spanish energy sector more than met the challenge. As regards the trajectory set by the Spanish government in the PER 2011-2020 for this share, the level of fulfilment was very close to the targets set.

Similarly, the targets set for electricity generation from renewable energy sources were also met. As Table 6 shows, the targets have been met practically every year since 2010, although this has been conditional upon the availability of

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[5] Royal Decree 413/2014 implements the calculation method for the specific remuneration, and Ministerial Order IET/1045/2014 establishes the remuneration parameters for the standard facility types.

Exhibit 1
Trend in renewable power by technology
(MW)

Hydro ■ Wind ■ Solar photovoltaic ■ Solar thermoelectric
■ Biomass ■ Wastes ■ Biogas ■ Others
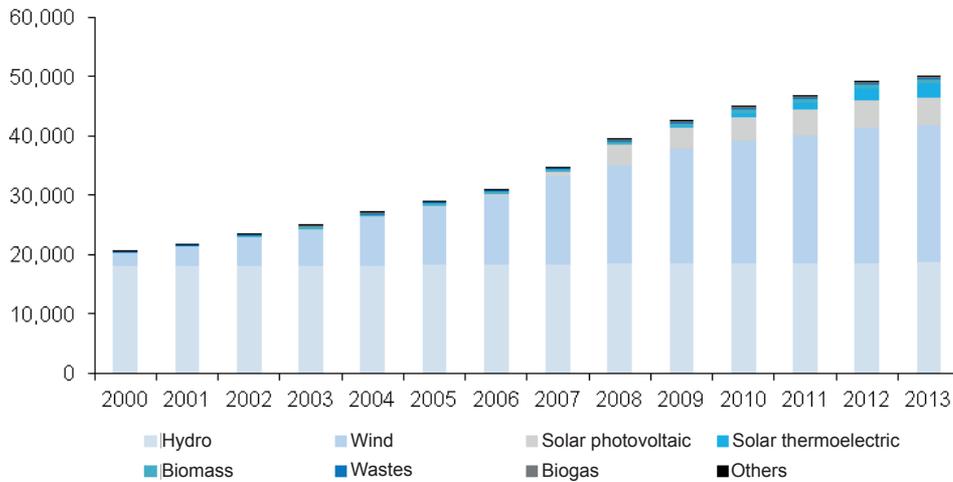
Source: IDAE.

hydroelectric resources in each year. In 2014, the most recent year for which data are available, the target was exceeded by almost 25%.

As regards fulfilment of the targets for individual technologies, the results vary. As Table 7 shows, except for biomass, all the technologies achieved their plans for 2010, and in the case of photovoltaic

the level of investment was much higher than the proposed objective. As regards fulfilment in 2015, using the actual figures from 2014 as an approximation, the results look less satisfactory. This is particularly so in the case of solar and wind technologies, where levels of investment have been substantially below those required. This was possibly a result of the change in renewable

Table 5
Share of renewables in gross final energy consumed
(Percentage)

	2010	2011-2012	2013-2014
Directive's indicative trajectory[1]	--	11.0	12.1
PER target trajectory[2]	12.1[3]	14.7	15.9
Actual trajectory	13.8	13.8[4]	14.5[5]
Degree of fulfilment:			
- actual / indicative (Directive)	--	125	120
- actual / target (PER)	114	94	94

Notes: [1] Directive 2009/28/CE. [2] PER 2011-2020. [3] PER 2005-2010. [4] 13.2% in 2011 and 14.3% in 2012. [5] 15.4% for 2013 and 15.3% for 2014 (Informe Estadístico Energías Renovables [Renewable energy statistical report] MINETUR/IDAE as at May 2015).
Source: PER 2005-2010, PER 2011-2020, Ministry of Industry, Energy and Tourism, and IDAE.

Table 6

Share of electricity generation from renewable sources
(Percentage)

	2010	2011	2012	2013	2014
Target	32.3[1]	31.6	31.4	32.1	32.7
Actual	34.3	30.7	30.5	40.5	40.8
Degree of fulfilment	106.1	97.0	97.0	126.1	124.8

Note: [1] PER 2005-2010.
Source: PER 2005-2010, PER 2011-2020 and REE. Generation of electricity from renewable sources over gross electricity generation for the national electricity system.

Table 7

Degree of fulfilment of installed generating capacity targets by technology

	2010			2015	2014[1]	
	Target power (MW)	Actual power (MW)	Level of fulfilment (%)	Target power (MW)	Actual power (MW)	Level of fulfilment (%)
Hydro	18,977	18,573	97.9	19,860	19,898	100.2
Solar Photovoltaic	400	3,787	946.8	5,416	4,672	86.3
Solar thermoelectric	500	632	126.4	3,001	2,300	76.6
Onshore wind power	20,155	20,744	102.9	27,847	23,002	82.6
Offshore wind power	0	0	--	22	3	13.6
Biomass, wastes, biogas	2,463	825	33.5	1,162	1,174	101.0
Total	42,494	44,561	104.9	57,308	51,049	89.1

Note: [1] Data from 2014 used to compare with the target set for 2015.
Source: PER 2005-2010 and PER 2011-2020, IDAE and Ministry of Industry.

energy promotion incentives since 2008, and in particular, the 2013 reform.

To help meet the targets, the Spanish government granted renewable energy operators over 35 billion euros over the period 2000-2013. Exhibit 2 shows the trend in this support over the period. Moderate growth was apparent in an initial phase up until 2007, with a strong increase in 2008, and above all in 2009, in which there was 95% growth on the previous year as a result of the expansion of the number of PV facilities. After 2010, financial support continued to rise, but more slowly, with

the exception of 2011, when it declined as a consequence of the drop in wind power generation caused by the scarcity of wind that year.

Analysing the trend in premiums by technology, as shown in Table 8, reveals 20% growth per year between 2000 and 2013. Premiums for photovoltaic energy grew particularly strongly during the period, rising at an annualised rate of more than 103%.

Table 9 shows the implicit average premium per technology, calculated as the difference between

Exhibit 2

Annual premiums on renewable energy and cumulative amount
(Million euros)
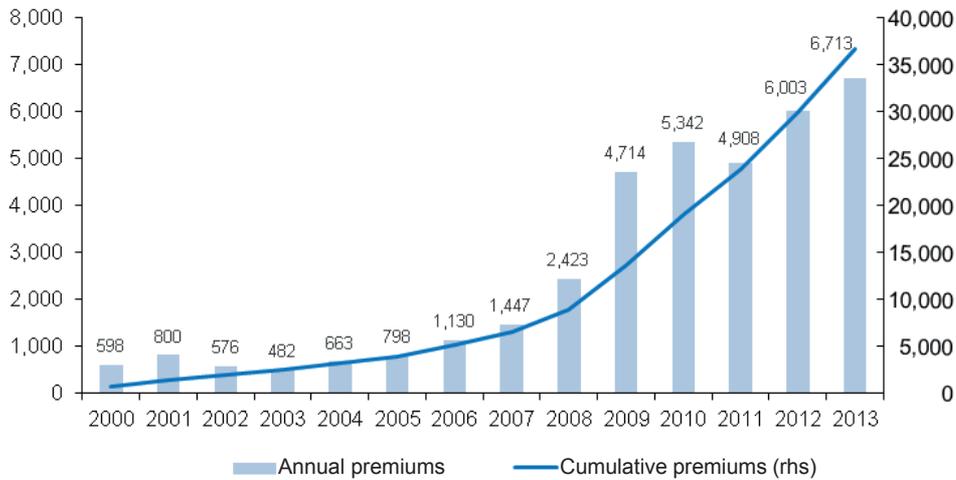
Sources: CNE, CNMC.

the total average compensation less the average market price. Over the period 2000-2013, when average remuneration for renewable energy was 103.4 euros/MWh, the implicit average premium was 60.21 euros/MWh. This table also reflects the extraordinary premium paid for solar energy –principally photovoltaic– which, at 386.46 euros/ MWh, was more than eight times the market price in the period. As Rio and Mir-Artigues (2014) point out, this meant that projects investing in solar photovoltaic energy achieved rates of return of between 10% and 15%, well above the economy's reasonable rates of return for investments with similar risks, which were around 7%.

Table 8

Premiums on renewable energy by technology
(Million euros)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Annualised rate of growth (%)
Solar PV	0	0	1	3	6	14	40	195	991	2,634	2,651	2,282	2,448	2,891	103
Solar Thermal											185	427	926	1,122	23
Wind	315	464	379	294	452	613	866	1,004	1,156	1,621	1,965	1,711	2,053	2,123	16
Hydro	266	289	152	142	150	112	150	147	147	234	297	206	187	228	-1
Biomass	16	46	44	44	55	59	74	101	129	225	244	282	353	349	27
Total	598	800	576	482	663	798	1,130	1,447	2,423	4,714	5,342	4,908	6,003	6,713	20

Source: CNMC and the authors.

Table 9

Average remuneration for renewable energy by technology 2000-2013
(Euros/MWh)

2004-2013	Average premium	Average market price	Average remuneration	Premium / Price (%)
Solar PV	343.27	43.19	386.46	795
Solar TE	259.68	43.19	302.87	601
Wind	41.45	43.19	84.64	96
Hydro	44.71	43.19	87.90	104
Biomass	54.11	43.19	97.30	125
Total	60.21	43.19	103.40	139

Source: CNMC and the authors.

The mix of renewable technologies was inefficiently configured as premiums skewed investments towards more profitable facilities, without taking into account the level of maturity or the real contribution of output to the system. There was particularly strong investment in PV energy thanks to the generous premiums granted to this technology. This big increment in photovoltaic capacity, representing around 60% of the increase in renewable capacity in 2008, caused the volume of premiums to double in 2009.

The incentive mechanism used in Spain to promote renewable energy in the period 1998-2013 was somewhat inefficient, paying for excessive output, and resulting in an inappropriate mix of technologies.

It may, therefore, be concluded that the incentive mechanism used in Spain to promote renewable energy in the period 1998-2013 was somewhat inefficient, paying for excessive output, and resulting in an inappropriate mix of technologies. Exhibit 3 confirms this. The average premium obtained by RES in Spain in 2012 was one of the highest in the EU, behind only Germany and Italy, with a value of 20.7 euros/MWh compared with an EU average of 13.7 euros/MWh.

In terms of efficiency, the only positive feature of the RES promotion instrument used up until 2013 was its contribution to the development of immature technologies, such as photovoltaic. However, the generous and fluctuating remuneration mechanism stimulated excess investment in production systems for which learning gains have still to be made. This meant that the biggest investments in renewable plants were not made when the costs were lowest. Therefore, the system cannot be considered successful from the point of view of dynamic efficiency either.

This cost increment and the mismatch in electricity tariffs has led to a budget deficit jeopardising the very stability of the Spanish electricity system.

This exponential increase in premiums on renewables, together with the extraordinary profits obtained by hydro and nuclear plants, which received energy prices well above their production costs (European Commission, 2012), has been one of the main drivers of the substantial rise in electricity generating costs Spain has experienced. This cost increment and the mismatch in electricity tariffs, the only mechanism

Exhibit 3

Average premium for RES in EU countries in 2012
(Euros/MWh)
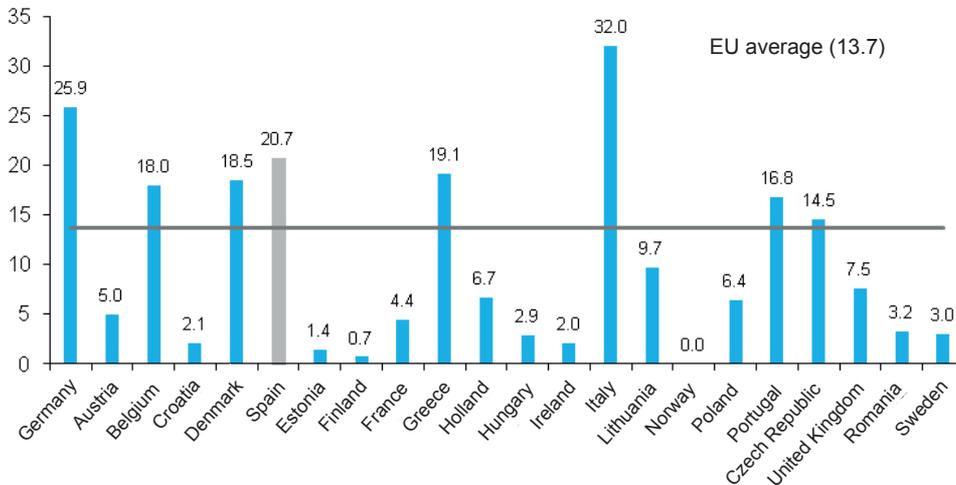
Source: Council of European Energy Regulators (CEER, 2015).

90

covering the cost items on the electricity bill, has led to a budget deficit jeopardising the very stability of the Spanish electricity system. Exhibit 4 shows the annual deficit and its cumulative level, which exceeded 40 billion euros in 2014.

Moreover, the support instrument used has also influenced market operation in several ways. Firstly, renewable plants have displaced many conventional plants due to their dispatch access priority. This has particularly affected combined

Exhibit 4

Tariff deficit by year and cumulative
(Million euros)
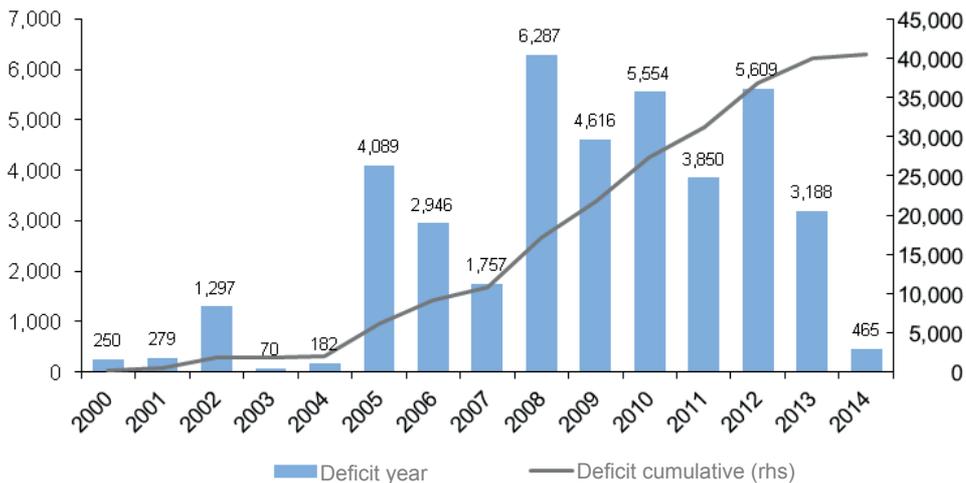
Note summarising the electricity system debt balance: Settlement of regulated activities (definitive up to 2007, provisional from 2008 to 2014).
Source: CNMC.

cycle power stations, which have reduced their hours of operation considerably, putting many of them in a delicate financial position. Meanwhile, the shift in the supply curve caused by the entry of renewable plants with lower marginal costs has pushed down prices in the wholesale market (Sáenz de Miera *et al.,* 2008; Gelabert *et al.,* 2011; Ciarreta *et al.,* 2014). Furthermore, the intermittent and variable nature of production from RES has made it harder to balance the system. This has made it necessary to use complementary adjustment services to avoid imbalances between production and demand (Pérez-Arriaga and Batlle, 2012).

Cutting premiums and limiting the number of hours during which renewable facilities set up since 2009 are entitled to subsidies, along with the suspension of incentives for new facilities in 2012, was insufficient to eliminate the deficit, making the 2013 reform necessary.

The 2013 reform: Better financial sustainability but heightened uncertainty

The new instrument to support renewable energy put in place with the 2013 reform greatly improved the financial sustainability of the incentive system by introducing rigid control over the installed generating capacity and level of support. However, this came at the cost of arbitrary intervention, which had a negative impact on investor confidence. The retroactive downgrade to remuneration for plants already in operation[6] considerably heightened uncertainty, damaging the general investment climate and jeopardising the achievement of the stated objectives. This, together with the characteristics of the new instrument, which is complex and lacking in transparency on many points, may put many projects in serious financial difficulties and has triggered a flood of lawsuits in national and international courts,

The new remuneration mechanism for renewable facilities is based on various parameters characterising an efficient and well managed standard facility. To the extent that these parameters reflect real trends in plant earnings and costs, their remuneration and profitability will remain under control. That is to say, companies will have incentives to operate their plants efficiently and the cost cuts they achieve will translate into lower subsidies through the updating and revision of the parameters. This will ensure that facilities are remunerated at the lowest cost (static efficiency). Moreover, the value of new facilities will also be adjusted, as it is determined by a competitive process.

At the same time, as the new system of incentives guarantees the same profitability to various standard installations, differentiated by technology, size, age and geographical location, it does not bias investment decisions towards any specific technology. It is therefore fostering the configuration of an efficient stock of renewable facilities by incorporating technologies according to their levels of maturity, thus allowing the learning curve gains to be leveraged. However, on the other hand, by not incentivising investment in emerging technologies with large potential improvements, it could be jeopardising the future configuration of the RES generating stock by weakening dynamic efficiency.

Moreover, being entirely interventionist, the new mechanism leaves little room for the market. Whereas in the previous model, the premium was set and companies had freedom to determine their profitability based on their performance, under the new model, subsidies and profitability are restricted. This discourages any action that might raise profitability. Moreover, the role of the wholesaler price as an investment or operation signal has disappeared, given that income will remain tied to the standard facility type. On the positive side, however, a competitive procedure

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[6] The reform entailed a cut of approximately 1.7 billion euros in the remuneration for facilities entitled to premiums. The impact on each technology varied, such that hydroelectric suffered worst, losing between 50% and 90% of its previous remuneration (CNMC, 2014).

has been put in place for the selection of new facilities, and facilities are obliged to participate in the market.

With the new instrument, companies also lack incentives to introduce technological improvements in their facilities, for example, via rerating, as the productivity gains do not translate into increased earnings, given that profitability is capped and the revision periods are short. Similarly, plants also have no interest in extending their operating hours beyond the maximum number remunerated. This implies lower output than would be the case if this restriction did not exist, in detriment to compliance with European renewable energy targets.

However, the biggest weakness of the new mechanism is that various aspects of its design cause uncertainty among potential investors. Firstly, the process of configuring standard facilities and their allocation to each plant, which has an important influence on future income from renewable facilities, is not transparent, thus increasing the investment risk. Secondly, the rate of return that is guaranteed with the support is arbitrarily tied to the return on government bonds plus a spread, without taking the specifics of investments in renewable assets into account. It would be more appropriate, as the CNE report (2013) suggests, for this spread to be determined by a more appropriate measure of the cost of capital for this type of investment, such as the weighted average cost of capital (WACC). Thirdly, the criteria by which the parameters and rate of return will be updated and revised are not sufficiently clear. This means that investors applying for or renegotiating bank loans will face capital cost increments to compensate for the higher risk premium. Finally, the investment risk is also increased by the fact that renewable energy is not guaranteed dispatch priority, but has to compete with non-renewable technologies under similar economic conditions.

In short, the new mechanism's heightened uncertainty and the fear of future retroactive changes is affecting Spain's regulatory and legal reputation, heralding a slowdown in investments in RES and higher costs for existing projects. This seems to be supported by data. In 2014, the first full year with the new mechanism, installed renewable potential in Spain was just 51 MW. On top of this are the restrictions that will be imposed on distributed generation by the introduction of a back-up toll, which will significantly reduce its development.

The new mechanism's heightened uncertainty and the fear of future retroactive changes is affecting Spain's regulatory and legal reputation, heralding a slowdown in investments in RES and higher costs for existing projects.

The new regulatory rules may hinder compliance with the European Commission's directives on renewable energy. This was already mentioned by the European Environment Agency in one of its reports (EEA, 2014), which considered it unlikely, in light of the current data, that Spain would meet its target of 20% of final energy consumption being produced from RES by 2020. It points out that to do so, the Spanish government will have to make major investments and design new measures to meet the targets. Also, in its report on the position of renewable energy, the European Commission warns that Spain needs to assess whether its policies and tools are adequate and effective means of meeting its renewable energy targets (European Commission, 2015).

Concluding remarks

For many years, Spain's RES promotion policies focused on achieving the targets set by the EU rapidly, while seeking to benefit from the other advantages associated with promoting renewables (industrial and economic development, job creation), but paid little attention

to how installed capacity evolved and the size of the subsidies. When the subsidies soared as a result of the investment bubble in the mid-2000s, each government in turn struggled to keep the mechanism effective enough to meet the EU's requirements while introducing modifications to make it financially sustainable and more efficient. Over the period 2008-2013 various measures were implemented to contain the cost of premiums and avoid increasing the tariff deficit, including changes to some of the eligibility conditions for incentives, reducing tariffs, deferring the tariff deficit to future years, and eliminating the financial incentives for new facilities as of January 2012 (R.D.L. 1/2012). However, these measures were insufficient to correct the growing tariff deficit, which, among other factors, led to the reform of the renewable energy support mechanism.

This reform was, therefore, essential. The recommendations prepared by the European Commission to guide the design of support mechanisms set out the appropriate lines for change (European Commission, 2013). The modification to the design of FIT mechanisms used up until that time would have been sufficient to adapt to these recommendations and resolve the problems of financial sustainability. Firstly, including transparent revision and updated procedures for the main parameters to adapt to advances in technology, avoiding discretionary revisions that can affect the legal security of investments. Secondly, introducing measures to contain the level of subsidies linked to the evolution of variables such as installed capacity, share of renewable output, or the amount of subsidies (degression mechanisms). Thirdly, establishing a carbon tax to finance the RES subsidies and at the same time penalise fossil fuels relative to renewables.

However, under pressure from a persistently high public deficit, the government focused on designing a support instrument that was financially sustainable. To that end, it introduced an excessive level of control over the relevant parameters of the mechanism (rate of return, output) and proposed discretionary mechanisms for revising returns,

which has led to considerable uncertainty among investors. Unless additional mechanisms are included offering greater regulatory security, there is a substantial risk that the renewable energy requirements established in Community Directive 2009/28/EC will not be met.

In order to enhance the new mechanism, it is first advisable to set a reasonable rate of return over the lifetime of the project, adequately reflecting the opportunity cost of the investment at the time it is made. To calculate this, a more appropriate measure of costs should be used, such as the present value of the total cost of building and operating a plant over its entire lifetime, using the concept of the weighted average cost of capital (WACC) as an approximation for the cost of capital. Second, it is essential that incentives to make full use of productive capacity be introduced, given that with the new mechanism, plants do not obtain more profit by generating more electricity than the reference output. Third, updating and review processes for the main parameters (operating costs, hours of operation, value of investment) need to be governed by transparent rather than discretionary principles. To avoid financial instability in the support system it is only necessary to impose limits on subsidies conditional on stated installed capacity targets, share of production, or volume of subsidies. In other words, the support mechanism needed to have a degree of flexibility to adapt to changing circumstances, but in a predictable way to avoid unnecessary uncertainty for potential investors. Fourth, the power distributed needs to be properly regulated to help meet European renewables targets, and create competition to offset the strong market power of the large, vertically integrated, electricity companies. Fifth, the wholesale market needs to be redesigned to take into account the growing importance of intermittent RES and to enable the fixed costs of conventional plants that supply the system's standby capacity to be recouped. Finally, a major effort needs to be made to restore legal security and reduce the regulatory risk resulting from the retroactive measures adopted with the change in support mechanism.

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The UK's EU referendum: Implications for the UK, EU & Spanish economies

Nick Greenwood[1]

Brexit is likely to have a negative impact on the UK economy. While some offsetting opportunities exist, the shockwaves from losing its second largest economy would be felt in the EU, as well as in Spain, where people flows and financial connections with the UK are especially significant.

The UK's referendum on whether to remain a member of the European Union has economic and political implications that extend beyond its borders. Polls suggest arguments related to the economy and immigration will play a key role in determining voter preferences. A vote in favour of leaving the EU ("Brexit") is likely to have a net negative impact on the UK economy, although the long-term implications will depend on the extent to which the UK´s trade relations with the EU are permanently altered and whether the UK is able to take compensatory action. Brexit could also create significant economic spillovers for the EU, as well as call into question the wider EU project. The Spanish economy is not immune and, unlike most other EU economies, runs both a goods and services surplus with the UK. People flows – both tourism and migration – as well as financial interlinkages are particularly strong between both countries.

Introduction

On June 23rd, the UK will hold a referendum to decide whether to remain a member of the European Union. As the EU's second largest economy, a decision by the UK to leave ("Brexit") could have far reaching economic implications both for the UK and the wider EU. In this article, we review the main factors likely to determine the outcome of the result and the potential economic implications both for the UK and wider EU economy. We conclude by focusing on the links between the UK and Spanish economies.

Factors influencing the outcome

The UK referendum on membership of the European Union looks set to be a close run affair.

Opinion polls point to a narrow difference in support for remaining and leaving, with around 15-20% of voters still undecided. This contrasts with financial markets, which hold a more sanguine view about the prospects of the UK staying in the EU.

The debate over the UK's EU membership is a proxy for a wider discussion around the costs and benefits of globalisation.

The debate over the UK's EU membership is a proxy for a wider discussion around the costs and benefits of globalisation. The UK is particularly exposed to globalisation with an open economy

[1] A.F.I. – Analistas Financieros Internacionales, S.A.

that has pursued a largely pro-market, liberal economic agenda.

Opinions polls suggest that four main groups of arguments will play a key role in determining how voters will cast their vote. These include **economic arguments** relating to whether the UK economy and individuals' personal economic situation will be better or worse off outside or within the EU. **Immigration arguments** as to whether the UK would have greater or lesser ability to control inward migration from inside or outside the EU. **Sovereignty arguments** concerning whether the UK will be able to have more or less control over policy affecting the country inside or outside the EU. And **influence arguments** regarding whether the UK's voice will be stronger inside or outside the EU.

Polls suggest that economic and immigration arguments are disproportionately more important to voters in determining how to cast their vote and therefore form the battleground for the current Brexit campaign. The exhibit below summarises the main arguments deployed by remain and leave campaigners.

The principal challenge for the remain campaign is to motivate voters to turnout in favour of supporting a status quo that many consider to be

The remain camp is focusing its attention on the economic risks associated with leaving the EU ("project fear"), while the leave campaign faces the challenge of spelling out a coherent alternative.

imperfect. Instead of exhalting the merits of the European Union, the remain camp is therefore focusing its attention on highlighting the economic risks associated with leaving the EU ("project fear").

By contrast, the leave campaign faces the challenge of spelling out a coherent alternative that would improve the UK's overall position relative to the status quo. Advocates of leaving the European Union focus on the (hypothetical)

Exhibit 1

Issues cited as being important to deciding vote in referendum
(Percentage)
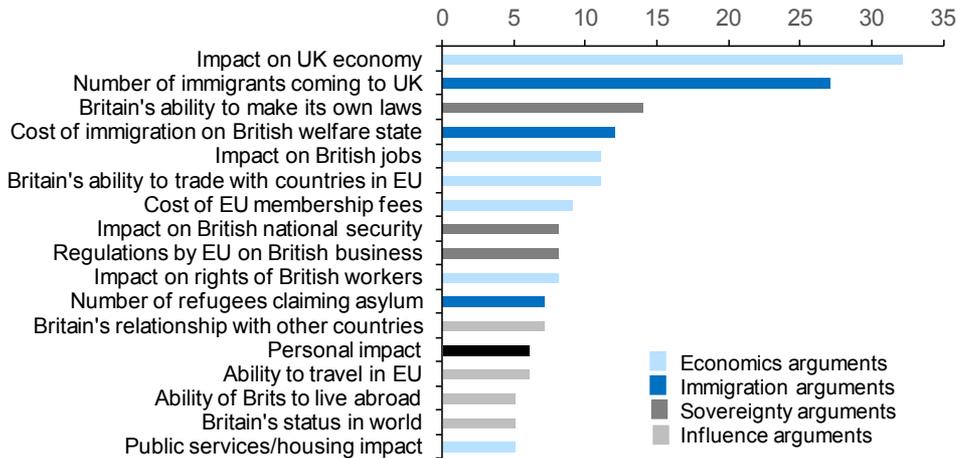
Source: Ipsos Mori, AFI.

Exhibit 2

Main arguments deployed in Brexit debate

← IMPORTANCE TO DEBATE			★ Event risk
Economy	**Immigration**	**Sovereignty**	**Influence**

LEAVE

Economy	Immigration	Sovereignty	Influence
Freedom to liberalise & deregulate	★ Increased control over borders	Freedom from rules imposed by EU	Freedom to self-represent (e.g. WTO)
Control of EU Budget funds	Ability to be more selective over immigration		Option to pivot geographically
No clarity over post-Brexit model	★ Increased control over national security threats	Risk of diminished influence over global rules	Diminishing weight of UK economy globally
EU market access limits freedom to deregulate	EU market access limits control over immigration		Loss of ability to influence largest global trade bloc
Uncertainty impact on trade and investment	EU immigration is only part of total migration		Threat to special relationship with US

REMAIN

Economy	Immigration	Sovereignty	Influence
Balance of economic studies favour remain	New controls agreed by European Council	EU protections for environment and social	Strength in numbers
Support of majority of policymakers & business	Immigration needed for economic competitiveness	EU coordination may enhance security	UK soft power a function of capacity to influence EU
UK growing within EU			
Inability to reform EU	Repeated failure to meet immigration targets	Lost EU legal battles	Lack of clarity over model for UK in ever closer EZ
★ Anaemic EU growth, ongoing Eurozone crisis			

Source: AFI.

increased freedom the UK would have to control immigration flows, as well as to eliminate unwanted EU regulation, agree free trade deals and repatriate UK contributions to the EU Budget.

Economic implications for the UK

The interaction of these arguments is captured in the large number of economic studies that have been published in recent months analysing the potential impact of Brexit on the UK economy.

These studies conclude that short-term uncertainty in the run up and immediate aftermath of Brexit will be negative for the British economy by undermining confidence, postponing investment decisions and creating significant financial volatility.

In the medium term, financial volatility could have increased real economy implications as tougher financing conditions and lower confidence feed through to activity and economic agents face heightened uncertainty *(e.g.* regarding trade rules).

However, the longer-term implications will depend on the extent to which the UK's trade relations with the EU are permanently altered and whether the UK is able to take compensatory action *(e.g.* via deregulating, repatriating EU Budget funds and agreeing free trade deals with other regions). This will ultimately determine the impact on long-term growth and competitiveness of the UK economy.

On balance, most economic analyses conclude that Brexit is likely to have a long-term negative

Exhibit 3

Factors affecting economic impact of Brexit on UK economy

Short Term

Capital **outflows**
Confidence effects

Uncertainty

Access to EU: sectors, tariffs/NTBs
Applicability of extra-EU deals

Trade

Offsetting global FTAs:
e.g. US, Japan

Fiscal

Repatriation of
EU Budget

Labour supply reduced
Loss of **skilled labour**

Migration

Regulation

Deregulation of UK
economy

Longer Term
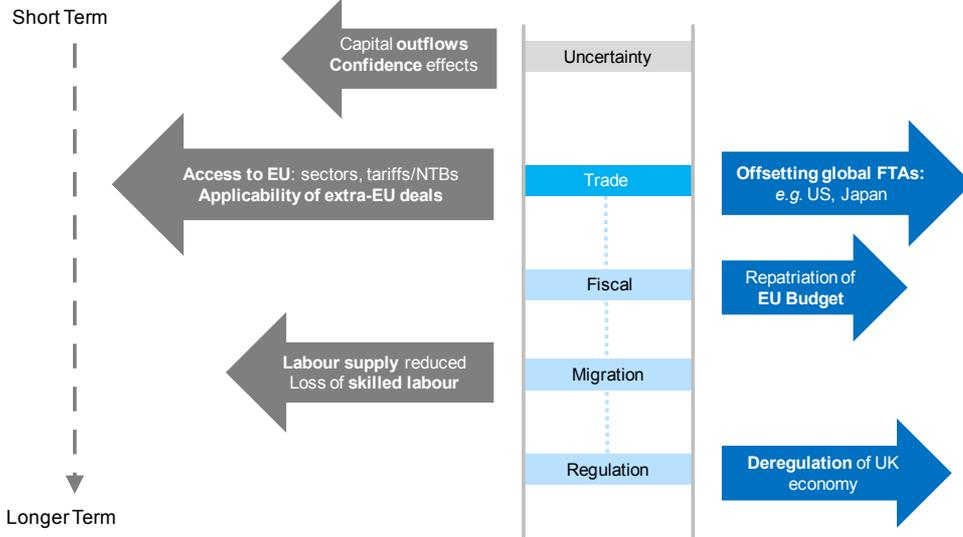
Source: AFI.

impact on the UK economy. Estimations vary but a broad consensus –assuming a reasonable resolution to negotiations between the UK and the EU – looks to have settled around an estimated long-term impact on GDP of between -1 and -3% of GDP relative to a baseline scenario.

Exhibit 4

Overview of principal economic impacts of Brexit

	Pre-vote (to 26 June)	Near term (until 2020)	Longer term (2020 on)
Financial markets	▪ Sterling depreciation ▪ Increase in CDS spreads ▪ Stock market underperformance	▪ Risk premium increase: UK & EU ▪ Current depreciation: GBP & EUR ▪ Capital flight: financing CA deficit ▪ UK & global stock downturn	▪ Stabilisation to new normal ▪ Re-evaluation of UK fundamentals
Real economy	▪ Confidence jitters ▪ Possible FDI delays	▪ Withdrawal uncertainty: WTO rules? ▪ Sharp decline in confidence ▪ Funding costs impact on economy ▪ Delays or relocation of inward FDI ▪ Slowing of migration flows ▪ Spillovers to EU (financial & real)	▪ Attractiveness as FDI destination ▪ Trade openness: EU-global ▪ Potential growth: productivity & migration implications ▪ Deregulation implications
Policy / Political	▪ Domestic policy freeze ▪ EU project slowdown *(e.g.* FTT)	▪ Regulatory uncertainty ▪ Possible UK leadership challenge ▪ Scottish referendum risk ▪ Copycat risk in rest of EU	▪ EU-UK level playing field risks ▪ EU internal policy orientation ▪ Eurozone integration implications

Source: OECD, AFI.

Table 1

Models of access to EU markets and corresponding obligations

	Access to single market in goods & services			Obligations		Influence
	Tariff-free trade	Customs union & external trade	Level playing field / NTBs	Other policy & regulation	Financial contributions	Vote on EU rules
EU / UK current status	Full	Full. No customs costs. Access to EU FTAs	Full	Full	Full	Full
UK current status	Full	Full. No customs costs. Access to EU FTAs	Full	Full but not a Eurozone member	Full but with UK rebate	Full
Bilateral agreements — EEA (Norway)	Some tariffs remain on agriculture & fisheries	None. Customs costs apply. No Access to EU FTAs	Agriculture & fisheries not substantively covered	Accepts most EU rules, including free movement of people	Partial contributor	None
Switzerland	Some tariffs on agriculture	None. Customs costs apply. No Access to EU FTAs	Minimises NTB in areas covered. Limited services coverage. No financial services passport.	EU rules in sectors covered. Participation in free movement of people	Partial contributor	None
Turkey	Only applies to manufactured & processed agricultural goods	No customs costs for manufactured goods. Obliged to align trade policy	Most barriers removed in goods. No access for services or financial services passport.	Adopts EU product standards, committed to equivalent rules on competition	Recipient of EU aid	None
Canada	Some tariffs on agriculture, transitional tariffs on manufactured goods	None. Customs costs apply. No Access to EU FTAs	Partial liberalisation of services. No financial services passport	Firms trading into EU conform to EU standards. International agreements apply	None	None
WTO membership	EU external tariffs apply	None. Customs costs apply. No Access to EU FTAs	International standards. No financial services passport	Firms trading into EU conform to EU standards. International agreements apply	None	None

Source: AFI from HM Treasury (2016).

Underpinning these conclusions is the trade-off that the UK would face between increasing its

> *The estimated long-term impact on GDP is between -1 and -3% of GDP relative to a baseline scenario. Underpinning these conclusions is the trade-off that the UK would face between increasing its freedom of action and retaining access to EU markets.*

freedom of action and retaining access to EU markets. The EU accounted for around 44% of total UK exports of goods and services in 2015.

As set out in the previous table, those countries that have the highest degree of access to EU markets, such as Norway, are required to abide by the majority of EU rules, including accepting freedom of movement of people and contributing to the EU Budget. At the same time, they have significantly less influence over the formulation of these rules.

Other countries with bilateral trade deals with the EU, such as Switzerland, Canada or Turkey, fall within a spectrum – with increased freedom of movement offset by reduced access to EU markets. At the extreme end is WTO membership where the UK would be largely free of EU rules but subject to EU tariffs and customs costs.

Overall, the balance of economic analysis would look to be supportive of the remain campaign, which has been further reinforced by economic warnings made by various international organisations, such as the IMF (2016) and the OECD (2016). By contrast, the leave campaign faces a challenge to spell out an alternative model which would minimise economic costs from reduced access to EU markets while also increasing the UK's freedom to act.

Implications for the EU

The economic and political implications of a UK exit from the EU extend beyond the loss of a member state representing 17.6% of the EU's

Exhibit 5a

EU trade balance with UK
(% of EU GDP)

Source: Eurostat, AFI.

Exhibit 5b

Distribution of main EU countries' trade balance with UK
(% of country GDP)
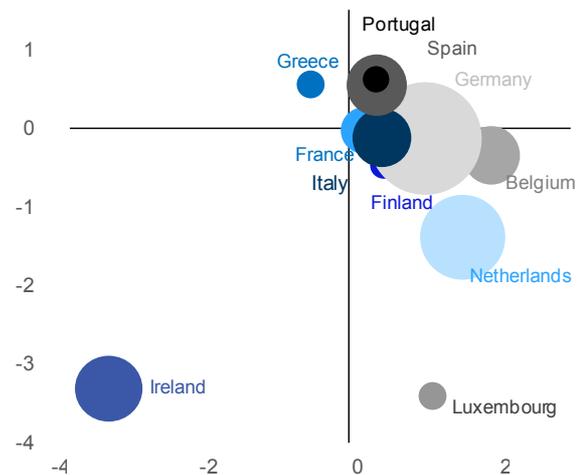
Source: Macrobond, AFI.

GDP. Several channels of impact can be identified, which would affect EU member states by varying degrees:

■ **Trade channel:** The EU runs a trade surplus with the UK of around 0.8% of EU GDP. The surplus is sustained by UK demand for goods, while the EU has a deficit with the UK on services, primarily due to the UK's strength in financial services.

In the short-run, Sterling depreciation and lower confidence of UK consumers could affect the UK's demand for imports from the EU. Longer term, any trade deal that introduces tariffs and non-tariff barriers would undermine trade flows between both economies with negative implication for both sides (albeit more pronounced for the UK given that the EU accounts for 44% of UK exports while the UK accounts for around 16% of EU goods exports). Over time, other EU economies may be able to substitute for UK exports, especially in the services industry – though potentially at a higher cost.

■ **FDI channel:** The UK is the number one destination for inward FDI from the EU with one half of all European headquarters of non-EU firms in the UK –according to the UK government (HM government, 2013). It is also one of the primary markets for outward FDI by EU member states, particularly in motor trade, utilities and mining and quarrying.

Sterling depreciation and lower confidence could undermine remittances from EU investments in the UK and could create contagion risks in the event of a contraction in UK GDP. Longer-term the UK's attractiveness as a FDI destination could be negatively affected. A recent CEP (See references) study estimated that leaving the EU could reduce FDI inflows by around 22%. However, the ability of other EU economies to attract inward FDI will also depend on the extent to which the UK attempts to compensate *(e.g.* via lower regulation and taxation). Brexit could also reduce the attractiveness of the EU market as a whole for foreign investors.

■ **Financial channel:** EU banks have over $1.3 trillion in claims against the UK banking sector

Exhibit 6a

Claims of EU banks against UK counterparties
($ tn)
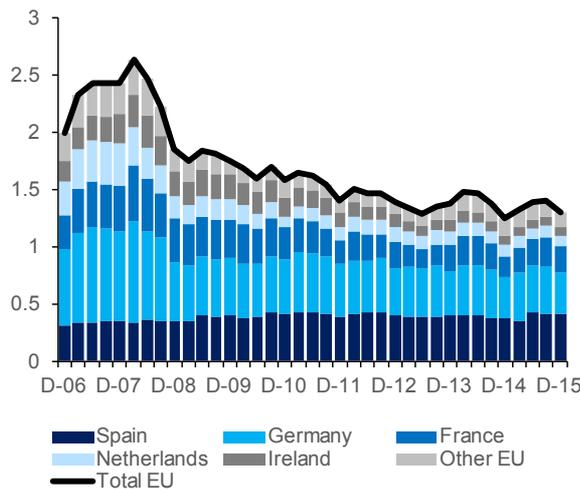
Source: Eurostat, AFI.

Exhibit 6b

Proportion of respondents that tend "not to trust" the EU
(Percentage)
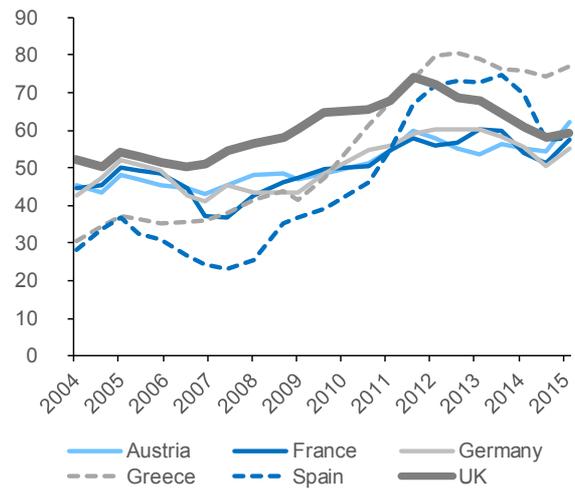
Source: Eurobarometer, AFI.

Nick Greenwood

Exhibit 7

Key EU elections during next two years

Date	Country	Polling Eurosceptic Party
June 26th, 2016	Spain (Parliamentary)	POD & IU: 20-25%
March 2017	Netherlands (Parliamentary)	PfF: 17-20%
April 2017	France (Presidential)	FN: 25-30%*
September 2017	Germany (Parliamentary)	AfD:10-14%
February 2018	Italy (Parliamentary)	5*M: 25-28% LN:14-15%

Source: AFI.

according to Bank of International Settlements data. The UK is also a key financial hub for wholesale and large cap financing of EU enterprises. 78% of EU foreign exchange trading takes place in the UK.

EU banks exposed to the UK could face contagion risks via an increase in the NPL ratio and lower contributions to their income statements from UK operations. In a scenario of an extreme GDP correction, downstreaming of capital to UK entities could also be required. Longer-term, other EU financial capitals such as Frankfurt and Paris may look to compete with London, especially if the UK is no longer able to offer a passport allowing third country financial institutions automatic access into the EU. However, replicating London's financial sector ecosystem (legal, IT, etc.) will not be straightforward and may result in a short-term increase in financing costs for EU firms. Cross border banks could be affected by diverging regulatory requirements.

■ **Strategic considerations:** The UK enjoys significant soft and hard power. According to Elcano (2015), the UK is the country that contributes most to the EU's global projection. It has the fifth largest defence budget after US, China, Saudi Arabia and Russia. The UK is also a net contributor to the EU Budget and

an important member of the liberal bloc within the EU. Brexit could reduce the ability of liberal minded economies to influence EU policy potentially resulting in a more interventionist approach.

■ **Political considerations:** Finally, with dissatisfaction levels with the EU rising in core and peripheral economies alike, Brexit could serve as an example for other countries to follow suit. In this regard, the rise of Eurosceptic parties in a number of EU countries could provide a vehicle through which other member states may seek to carve out their own arrangements with the EU or even pursue referenda. On the flipside, a UK exit could spur greater integration, especially in areas where the UK resistance has previously been a hurdle *e.g.* social policy.

UK-Spain links

Spain is not immune from the effect of Brexit with particularly strong links to the UK in terms of people flows (tourism and migration) and financial sector interlinkages.

The Spanish economy runs a trade surplus with the UK worth 1.3% of GDP. Unlike most other EU economies, Spain has both a goods and services surplus. The UK is the fourth most important market for Spanish goods exports,

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Exhibit 8a

Spanish trade balance with UK
(Percentage of GDP)

Source: Eurostat, AFI.

Exhibit 8b

Weight of sectors in Spanish exports and UK market share of Spanish exports
(Percentage)

■ Weight in total Spanish exports (LHS) ● Weight of UK market (RHS)
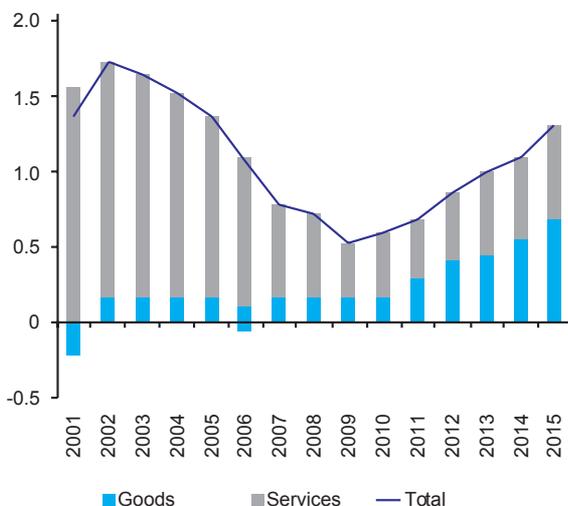
Sources: OECD, ITC, AFI.

accounting for 7.3% of the total. The UK is also a particularly important market for Spanish exports of transport goods (cars, trains, airplanes) as well as food (fruit and vegetables).
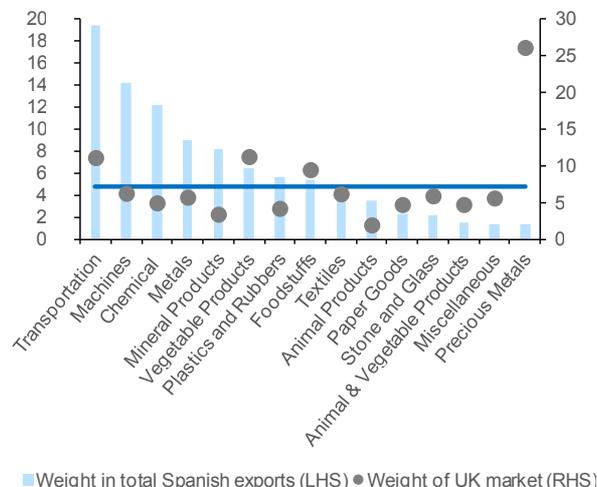
Spain's services surplus reflects the large inflows of British tourists to Spain. The UK is the number one market for Spanish tourism services, receiving 15.8 million individual visits last year, which

Exhibit 9a

Distribution of Spanish outward FDI stock by country
(Percentage)

Source: Datainvex, AFI.

Exhibit 9b

Sectoral distribution of Spanish FDI stock in UK
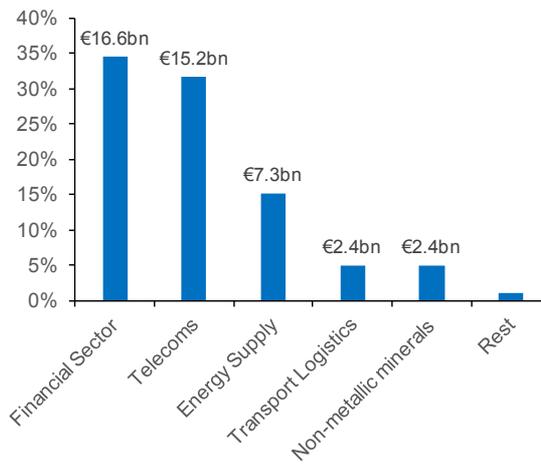
Source: ONS, AFI.

Exhibit 10

Distribution of foreign bank claims on the UK by country of counterparty
(Percentage)

- US
- Spain
- Germany
- France
- Japan
- Switzerland
- Rest

17.8
17.2
15.5
9.5
7.8
7.4
22.9

Source: BIS, AFI.

accounted for 21.1% of total tourism spending last year.

The Spanish economy runs a trade surplus with the UK worth 1.3% of GDP and, unlike other EU economies, has both a goods and services surplus.

Migration flows between the two countries are also significant, albeit with different profiles. An estimated 800,000 to 1 million British nationals live in Spain at least part of the year. This population is heavily skewed towards older age groups with an elevated dependence on the social security system. These groups could be vulnerable to a Brexit scenario which might limit the access of UK citizens to EU health systems. Meanwhile the UK is the primary destination for Spanish migrants, though these are mainly younger and focused on seeking employment opportunities.

The UK is the first destination for Spanish outward foreign direct investment accounting for 14% of total Spanish outward FDI. Spanish investments are particularly focused on the financial sector, telecommunications and energy supply. Meanwhile, the UK is the fifth largest investor in Spain with major investments in telecommunications and tobacco.

Spanish investment in the UK financial sector is particularly important. The Spanish banking sector holds the largest claims against the UK private sector of all European countries, second only to the US. The subsidiary models employed by the banks with the largest exposure should provide some degree of insulation against adverse shocks associated with a Brexit event.

Summary and conclusions

Arguments relating to economics and immigration will play a key role in determining whether UK voters decide to remain in the European Union. In this article we have focused on the economic implications of Brexit both for the UK and the EU. The balance of economic studies points to a negative impact of Brexit for both the UK and the EU.

Some offsetting opportunities exist for both sides, but for the UK these will be constrained by the need to retain a high degree of access to EU markets. The shockwaves of losing its second largest economy will be felt in the EU, as well as in Spain where people and financial connections with the UK are especially important.

References

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ELCANO (2015), *Global Presence Report 2015.*

HM Government (2013), *Review of the Balance of Competences between the UK and the EU: The Single Market,* July.

HM Treasury Analysis (2016), *The long-term economic impact of EU membership and the alternatives,* April.

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Recent key developments in the area of Spanish financial regulation

Prepared by the Regulation and Research Department of the Spanish Confederation of Savings Banks (CECA)

Bank of Spain Circular on information about cash withdrawal fees from ATMs (Circular 3/2016, published in the BOE on March 29th, 2016)

This Circular uses the regulatory powers conferred by Royal Decree-Law 11/2015 of October 2nd regulating cash withdrawal fees from ATMs, amending Law 16/2009 of November 13th, 2009, on payment services. The Circular entered into force the day after its publication in the State Official Gazette (BOE), *i.e.* on March 30th, 2016.

The Circular **determines the form, content and frequency with which entities are required to submit information** on the fees that ATM operators collect from card and other payment instrument issuers for cash withdrawals:

The Circular is applicable to the following entities:

- **Operators[1] of ATMs** (cash dispensers) allowing customers of other entities to withdraw cash.

- **Card and other payment instrument issuing institutions**, *i.e.* payment service providers registered in Spain and authorised

to issue cards or other payment instruments in Spain and branches in Spain of credit institutions authorised in an EU Member State or third country.

The above entities are to send **online information** to the Bank of Spain **on the fees they charge** issuing institutions for cash withdrawals (distinguishing whether agreements have been signed or not), and the **fees payable to ATM operators**, as applicable, using the forms defined in Annexes 1 and 2 of the Circular, at the following intervals.

- Within the first 10 working days of January of each year. This report is to include the information for the period to December 31st of the previous year.

- Within 10 working days of the first working day after which a new agreement comes into force, or an existing agreement is amended or terminated or the established fee is revised unilaterally.

- Within 20 working days of an entity's becoming subject to the regulation.

The following **obligations to provide information to the Bank of Spain** are also established:

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[1] These include: credit institutions, payment institutions, electronic money institutions, finance companies authorised to operate as hybrid payment institutions or hybrid electronic money institutions, and branches in Spain of any of the foregoing authorised in an EU Member State or third country.

- Within **10 working days** of the Circular's entry into force, ATM operators and card and other payment instruments issuers in Spain must give notice of this fact.

- Within **20 working days** of the Circular's entry into force, entities included within its scope of application are to send forms with the information referring to the last calendar day of the month immediately preceding its entry into force.

Draft CNMV Circular on warnings concerning financial instruments

On April 14th, the Draft Circular on warnings concerning financial instruments was published on the CNMV (National Securities Market Commission) website. The Circular's aim is to strengthen investor protection in the precontractual phase of the purchase of financial instruments considered particularly complex. The Circular will come into effect three months after its publication in the BOE.

The **scope** of the draft Circular includes: investment firms; credit institutions; foreign branches in Spain of investment firms, of collective investment institutions´ management companies and of credit institutions; EU investment firms and credit institutions operating under the freedom to provide services through agents; and non-EU investment firms, collective investment institutions management companies and credit institutions that provide services in Spain without branches.

The draft Circular defines (i) the warnings issued by entities and the handwritten statements to be obtained from customers in relation to financial instruments that, **in view of their complexity, are not generally appropriate** for non-professional investors; and (ii) the warnings in relation to **the estimation of the fair value** of certain financial instruments.

In both cases, the financial instruments affected will be listed and the cases in which a complex structure is deemed to exist will be specified.

Spanish economic forecasts panel: May 2016[1]

Funcas Economic Trends and Statistics Department

The forecast for 2016 remains unchanged at 2.7%

The provisional results for GDP growth in the first quarter of 2016 yielded a surprising 0.8%, which means the same rate of growth has been maintained as in the previous quarter, instead of the expected slowdown.

There has been no change in the expected composition of this growth. Although the forecasts for both exports and imports have been reduced, domestic demand is still expected to contribute 2.8 percentage points (pp), and net exports -0.1 pp.

The forecast for 2017 remains unchanged at 2.3%

There has been no change to the GDP growth forecast for 2017, which is still 2.3%. The slowdown from 2015 will come from domestic demand, which is expected to contribute 2.2 pp to growth, while the external sector is due to contribute -0.1 pp.

The rate of quarter-on-quarter growth from the second quarter of the year though to the end of the forecast period should remain stable in the 0.5% to 0.6% range, *i.e.,* almost unchanged since the last Panel.

The indicators for the manufacturing industry are contradictory

The industrial production index in the first quarter of 2016 slowed considerably, although the sector PMI reported a better result than in the preceding quarter. According to social security affiliation figures, employment in the sector continued to grow in the first four months of the year at the same rapid pace as throughout the previous year.

The consensus forecast for growth in IPI in 2016 has been cut one tenth of a percent to 2.9%, while the forecast for 2017 is unchanged at 2.7%.

Inflation is again surprisingly low

The inflation rate in April dropped to -1.1% as a result of lower electricity prices. The core rate remains positive, at around 1%, however.

The unexpected drop in the rate in April caused a downward revision of the consensus forecast for the average annual rate for 2016, which is now -0.2%. The forecast for 2017 remains unchanged

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[1] The Spanish Economic Forecasts Panel is a survey run by Funcas which consults the 17 analysis departments listed in Table 1. The survey, which has taken place since 1999, is published bi-monthly in the first half of January, March, May, July, September and November. The responses to the survey are used to produce a "consensus" forecast, which is calculated as the arithmetic mean of the 17 individual contributions. The forecasts of the Spanish Government, the Bank of Spain, and the main international organisations are also included for comparison, but do not form part of the consensus forecast.

at 1.3%. The year-on-year rate for December is forecast to be 0.7% this year and 1.3% the next (Table 3).

Employment continues to grow, although more slowly

According to social security affiliation figures, the rate of employment growth remained stable, although private-sector non-farm employment growth slowed in the last two months. According to these data, employment growth between January and April was more moderate than in the fourth quarter of 2015. Nevertheless, according to the LFS, employment in the first quarter of this year grew faster than in the previous quarter.

Employment is expected to grow by 2.5% in 2016 –a tenth of a percentage point higher than in the previous Panel– while the forecast for 2017 is 2.0% –a tenth of a percentage point lower. Using the consensus estimates for GDP, employment and wage growth to deduce the implicit productivity and unit labour cost growth estimates, productivity per worker is expected to grow by 0.3% in 2016 and 0.2% in 2017, while ULCs are expected to change by 0.7% in 2016 and 0.9% next year.

The current account surplus will grow in 2016

The current account of the balance of payments posted a deficit of 2.1 billion euros in the first two months of 2016, compared with a deficit of 2.4 billion euros in the same period of the previous year. This improvement came from the reduction in the deficit in the income and transfers balance, while the trade surplus in goods and services shrank.

In any event, this deficit is driven by the negative seasonality in the early months of the year. For the current year as a whole, a surplus of 1.6% of

GDP is forecast, which is two tenths higher than the balance registered in 2015. For 2017, the consensus forecast indicates a surplus of 1.4%.

The government deficit will overshoot the target by a few tenths of a percent

The consolidated deficit of the central government, the autonomous regions and the social security funds in the first two months of 2016 came to 12.9 billion euros, 3 billion euros more than the deficit in the year-earlier period. This deterioration was caused by a slowdown in tax collection combined with an increase in expenditure.

The consensus forecasts for the general government deficit for 2016 and 2017 have been revised up with respect to the previous Panel to 4% and 3.2% of GDP, respectively. In both cases these exceed the targets in the stability programme update (3.6% and 2.9%).

Slight improvement in the perception of the global economy

First quarter GDP growth in the United States was lower than expected, at an annualised 0.5%, while conversely there was a surprisingly strong quarter-on-quarter rise of 0.6% in the euro area. China's growth was also somewhat stronger than expected, although weakness persisted, and the uncertainties about its situation still linger.

The majority view of the current situation in the EU among panellists is that its impact on the Spanish economy is neutral, as in previous Panels, and this is not expected to change over the coming months. The majority also consider the situation outside the EU to be neutral, which is an improvement on the last Panel, when the view was negative. This is expected to remain unchanged over the coming months.

Long-term interest rates are very low

Short-term interest rates (three-month EURIBOR) remain in negative territory, and the average rate in April was -0.25%. As in previous Forecast Panels, interest rates are still felt to be too low for the state of the Spanish economy, but they are expected to remain stable over the coming months.

In recent weeks, long-term rates (Spanish ten-year debt) have been somewhat lower than those observed in the first two months of the year (averaging 1.53% in April). The majority opinion among panellists is that this level is very low, but that it will remain stable over the coming months.

The euro has risen again

The euro appreciated in recent weeks to levels around 1.13 dollars. Panellists' opinions are divided between those who consider the euro to be at an appropriate level, and those who feel it is still undervalued. It is expected to remain stable over the coming months.

Fiscal policy should be neutral

Fiscal policy is considered to be expansionary. The majority view is that the appropriate stance would be neutral. As regards monetary policy, there is still unanimity that it is expansionary, and that this is the appropriate stance.

Exhibit 1
Change in forecasts (Consensus values)
(Percentage annual change)
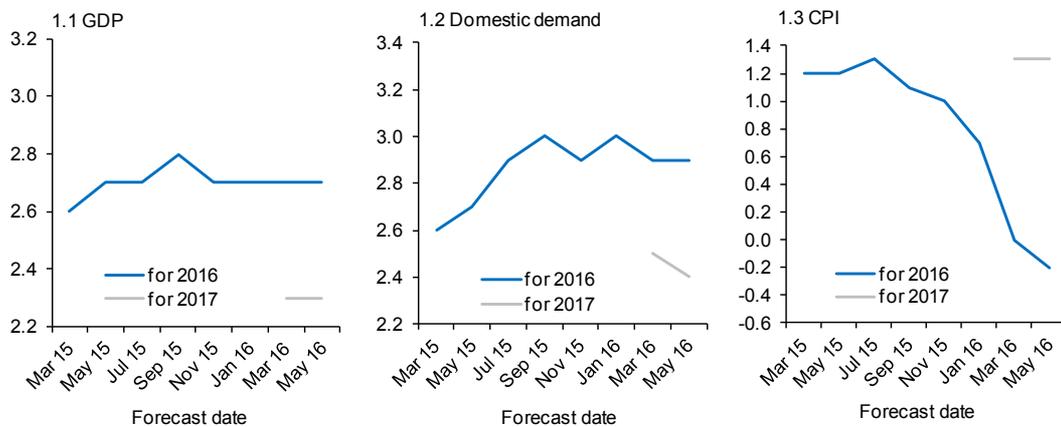
Source: Funcas Panel of forecasts.

Table 1
Economic Forecasts for Spain – May 2016
(Average year-on-year change, as a percentage, unless otherwise stated)

	GDP		Household consumption		Public consumption		Gross fixed capital formation		GFCF machinery and capital goods		GFCF Construction		Domestic demand	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Analistas Financieros Internacionales (AFI)	2.7	2.3	2.9	2.1	1.6	1.3	5.0	4.9	7.0	6.1	4.6	4.9	2.9	2.5
Axesor	2.7	1.8	2.9	1.6	1.4	-0.7	3.8	3.7	5.1	3.9	3.1	3.9	2.8	1.6
Banco Bilbao Vizcaya Argentaria (BBVA)	2.7	2.7	2.7	2.4	1.6	1.8	4.1	4.5	5.5	4.7	3.1	4.1	2.6	2.6
Bankia	2.8	2.3	3.0	2.2	2.0	1.3	4.8	4.3	8.2	6.8	3.2	3.0	3.2	2.5
CaixaBank	2.8	2.4	2.8	2.0	1.1	0.7	4.3	3.6	6.4	3.7	3.2	3.6	2.7	2.1
Cemex	2.8	2.3	3.1	2.3	1.4	1.2	5.1	4.6	6.1	4.8	4.9	5.2	3.1	2.6
Centro de Estudios Economía de Madrid (CEEM-URJC)	2.6	2.4	2.9	2.6	1.5	1.1	4.4	3.8	5.3	4.2	4.2	4.0	2.8	2.5
Centro de Predicción Económica (CEPREDE-UAM)	2.5	2.0	2.8	1.7	1.7	1.4	4.5	5.1	5.9	4.4	3.5	4.8	3.0	2.4
CEOE	2.7	2.5	2.9	2.3	1.2	1.5	5.1	4.1	7.2	5.1	4.3	3.8	2.8	2.4
Funcas	2.7	2.3	3.3	2.6	2.0	1.3	4.3	3.9	6.2	4.8	3.6	3.8	3.2	2.5
Instituto Complutense de Análisis Económico (ICAE-UCM)	2.8	2.4	2.9	2.5	1.0	1.2	4.9	4.0	6.7	5.0	3.0	2.7	3.0	2.5
Instituto de Estudios Económicos (IEE)	2.8	2.3	2.9	2.2	1.8	1.6	4.2	3.0	6.6	3.8	3.1	2.6	2.7	2.3
Instituto Flores de Lemus (IFL-UC3M)	2.8	2.0	2.9	2.7	1.0	-1.0	4.8	4.6	8.1	7.8	3.1	3.0	2.8	2.3
Intermoney	2.6	2.1	2.9	2.1	1.1	1.4	4.3	2.9	5.1	3.9	3.5	2.0	--	--
Repsol	2.8	2.5	3.0	2.4	1.1	2.4	5.1	4.9	7.7	5.6	3.6	4.6	3.1	2.8
Santander	2.9	2.3	3.0	2.1	1.7	1.2	5.7	4.5	6.2	3.0	5.7	5.7	3.2	2.4
Solchaga Recio & asociados	2.6	2.3	3.1	2.5	1.3	1.0	4.8	4.7	7.3	6.9	3.7	4.0	3.1	2.7
CONSENSUS (AVERAGE)	2.7	2.3	2.9	2.2	1.4	1.1	4.7	4.2	6.5	5.0	3.7	3.9	2.9	2.4
Maximum	2.9	2.7	3.3	2.7	2.0	2.4	5.7	5.1	8.2	7.8	5.7	5.7	3.2	2.8
Minimum	2.5	1.8	2.7	1.6	1.0	-1.0	3.8	2.9	5.1	3.0	3.0	2.0	2.6	1.6
Change on 2 months earlier[1]	0.0	0.0	0.0	-0.2	0.1	0.0	-0.1	0.0	-0.1	-0.2	-0.2	0.1	0.0	-0.1
- Rise[2]	1.0	1.0	3.0	1.0	3.0	3.0	3.0	3.0	4.0	2.0	2.0	2.0	3.0	2.0
- Drop[2]	0.0	4.0	3.0	5.0	0.0	2.0	3.0	2.0	4.0	2.0	4.0	2.0	2.0	4.0
Change on 6 months earlier[1]	0.0	--	0.1	--	0.7	--	-0.7	--	-0.5	--	-1.2	--	0.0	--
Memorandum ítems:														
Government (April 2016)	2.7	2.4	3.2	2.6	1.0	0.9	5.6	4.6	8.2	5.4	4.5	4.7	3.2	2.7
Bank of Spain (April 2016)	2.7	2.3	2.9	2.0	1.0	0.5	5.0	5.4	8.3 [3]	7.3 [3]	3.5	4.9	--	--
EC (May 2016)	2.6	2.5	3.0	2.3	1.0	1.0	4.7	5.0	7.7 [3]	6.5 [3]	3.5	5.1	3.0	2.6
IMF (April 2016)	2.6	2.3	3.0	2.3	0.6	0.3	4.5	2.9	--	--	--	--	2.8	2.1
OECD (November 2015)	2.7	2.5	3.0	2.4	0.3	1.1	5.1	4.1	--	--	--	--	2.9	2.5

[1] Difference in percentage points between the current month's average and that of two months earlier (or six months earlier).
[2] Number of panellists revising their forecast upwards (or downwards) since two months earlier.
[3] Investment in capital goods.

Table 1 (Continued)

Economic Forecasts for Spain – May 2016
(Average year-on-year change, as a percentage, unless otherwise stated)

	Exports of goods & services		Imports of goods & services		Industrial output		CPI (annual av.)		Labour costs[3]		Jobs[4]		Unempl. (% labour force)		C/A bal. of payments (% of GDP)[5]		Gen. gov. bal. (% of GDP)[7]	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Analistas Financieros Internacionales (AFI)	5.5	4.7	6.8	6.1	--	--	-0.2	1.1	--	--	2.5	2.0	20.1	18.9	--	--	-4.2	-3.2
Axesor	4.4	4.6	4.7	4.4	--	--	0.7	0.9	0.3	1.0	2.4	1.6	20.1	19.4	1.6	1.3	-4.6	-3.9
Banco Bilbao Vizcaya Argentaria (BBVA)	4.4	5.6	4.4	6.0	--	--	-0.3	1.7	1.8	1.1	2.8	2.5	19.8	18.5	2.1	2.5	-3.9	-2.7
Bankia	5.0	4.6	6.4	5.5	2.1	--	-0.3	1.4	0.8	1.1	2.4	2.0	20.0	18.5	2.0	1.8	--	--
CaixaBank	5.6	4.9	5.4	4.4	3.9	2.4	0.0	2.2	0.8	1.1	2.5	2.1	19.9	18.5	1.6	1.4	-3.9	-3.1
Cemex	5.4	5.0	6.8	6.2	--	--	-0.2	1.5	--	--	2.7	2.5	20.0	19.0	2.0	1.5	-4.1	-3.5
Centro de Estudios Economía de Madrid (CEEM-URJC)	4.7	5.2	5.6	5.9	--	--	-0.1	1.2	--	--	2.1	1.9	20.2	18.4	1.6	1.4	-4.2	-3.2
Centro de Predicción Económica (CEPREDE-UAM)	5.1	4.6	6.7	6.3	2.9	2.5	-0.2	1.2	1.2	1.3	1.8	1.1	20.6	20.3	0.9	-0.4	-4.2	-3.7
CEOE	5.3	5.4	5.9	5.6	--	--	-0.4	1.5	1.0	1.0	2.5	2.2	20.0	18.1	2.2	1.8	-4.1	-3.3
Funcas	3.8	4.8	5.7	6.0	2.3	2.4	-0.4	1.6	0.8	1.3	2.4	2.0	19.9	18.2	2.0	1.6	-4.0	-2.9
Instituto Complutense de Análisis Económico (ICAE-UCM)	5.6	5.5	6.0	6.0	2.9	--	0.5	1.3	--	--	2.5	2.1	20.4	19.0	1.7	1.5	-2.7	-1.9
Instituto de Estudios Económicos (IEE)	5.3	5.3	5.4	5.6	2.5	2.1	0.0	1.1	0.6	--	2.1	1.8	20.3	19.2	1.1	--	-3.4	--
Instituto Flores de Lemus (IFL-UC3M)	4.1	3.7	4.7	5.1	2.6	3.3	-0.8	0.9	--	--	2.9	2.4	19.6	18.0	--	--	--	--
Intermoney	4.9	3.7	5.9	4.4	2.8	3.0	-0.4	1.3	--	--	2.3	1.9	20.6	18.9	0.8	--	-4.0	-3.3
Repsol	4.0	5.0	5.6	6.6	4.0	3.5	-0.1	1.3	0.8	1.0	2.9	2.5	20.4	18.5	1.5	1.4	-3.8	-3.0
Santander	4.8	3.9	6.0	4.6	--	--	-0.5	0.9	1.0	1.5	2.6	1.9	19.6	18.0	1.0	0.8	-4.0	-3.2
Solchaga Recio & asociados	4.2	4.4	6.1	6.0	--	--	-0.5	0.9	--	--	2.6	2.2	20.1	18.2	1.4	1.4	-4.2	-3.5
CONSENSUS (AVERAGE)	4.8	4.8	5.8	5.6	2.9	2.7	-0.2	1.3	0.9	1.1	2.5	2.0	20.1	18.7	1.6	1.4	-4.0	-3.2
Maximum	5.6	5.6	6.8	6.6	4.0	3.5	0.7	2.2	1.8	1.5	2.9	2.5	20.6	20.3	2.2	2.5	-2.7	-1.9
Minimum	3.8	3.7	4.4	4.4	2.1	2.1	-0.8	0.9	0.3	1.0	1.8	1.1	19.6	18.0	0.8	-0.4	-4.6	-3.9
Change on 2 months earlier[1]	-0.2	0.0	-0.1	-0.1	-0.1	0.0	-0.2	0.0	-0.1	0.0	0.1	-0.1	-0.1	0.0	0.2	0.2	-0.5	-0.5
- Rise[2]	1.0	0.0	3.0	1.0	1.0	1.0	1.0	3.0	1.0	1.0	6.0	2.0	0.0	1.0	4.0	2.0	0.0	0.0
- Drop[2]	4.0	3.0	3.0	4.0	2.0	1.0	8.0	4.0	0.0	1.0	0.0	2.0	7.0	4.0	1.0	2.0	9.0	7.0
Change on 6 months earlier[1]	-0.5	--	-0.4	--	-0.4	--	-1.2	--	0.0	--	0.0	--	-0.3	--	0.5	--	-0.7	--
Memorandum items:																		
Government (April 2016)	5.3	5.7	7.0	6.7	--	--	--	--	--	--	2.5	2.2	19.9	17.9	1.7	1.5	-3.6	-2.9
Bank of Spain (April 2016)	4.4	5.2	5.3	5.9	--	--	-0.1	1.6	--	--	2.3	1.9	20.3	18.9	1.9[6]	1.5[6]	--	--
EC (May 2016)	4.5	5.2	5.8	5.8	--	--	-0.1	1.4	0.8	1.0	3.0	2.5	20.0	18.1	1.5	1.3	-3.9	-3.1
IMF (April 2016)	4.5	4.4	5.1	4.1	--	--	-0.4	1.0	--	--	2.5	1.8	19.7	18.3	1.9	2.0	-3.4	-2.5
OECD (November 2015)	5.1	5.4	5.8	5.8	--	--	0.3	0.9	0.6	1.2	2.7	2.4	19.8	18.2	1.3	1.2	-2.9	-1.8

[1] Difference in percentage points between the current month's average and that of two months earlier (or six months earlier).

[2] Number of panellists revising their forecast upwards (or downwards) since two months earlier.

[3] Average earnings per full-time equivalent job.

[4] In National Accounts terms: full-time equivalent jobs.

[5] Current account balance, according to Bank of Spain estimates.

[6] Net lending position vis-à-vis rest of world.

[7] Excluding financial entities bail-out expenditures.

Table 2
Quarterly Forecasts - May 2016[1]

	Quarter-on-quarter change (percentage)							
	16-1Q	16-2Q	16-3Q	16-4Q	17-1Q	17-2Q	17-3Q	17-4Q
GDP[2]	0.8	0.5	0.5	0.5	0.6	0.6	0.6	0.6
Household consumption[2]	0.8	0.6	0.5	0.5	0.6	0.6	0.5	0.5

[1] *Average of forecasts by private institutions listed in Table 1.*
[2] *According to series corrected for seasonality and labour calendar.*

Table 3
CPI Forecasts – May 2016[1]

Monthly change (%)				Year-on-year change (%)	
Apr-16	May-16	Jun-16	Jul-16	Dec-16	Dec-17
0.2	0.0	0.0	-0.6	0.7	1.3

[1] *Average of forecasts by private institutions listed in Table 1.*

Table 4
Opinions – May 2016
(Number of responses)

	Currently			Trend for next six months		
	Favourable	Neutral	Unfavourable	Improving	Unchanged	Worsening
International context: EU	6	9	2	4	11	2
International context: Non-EU	0	9	8	3	13	1
	Low[1]	Normal[1]	High[1]	Increasing	Stable	Decreasing
Short-term interest rate[2]	15	2	0	0	15	2
Long-term interest rate[3]	13	4	0	2	14	1
	Overvalued[4]	Normal[4]	Undervalued[4]	Appreciation	Stable	Depreciation
Euro/dollar exchange rate	5	6	6	1	10	6
	Is being			Should be		
	Restrictive	Neutral	Expansionary	Restrictive	Neutral	Expansionary
Fiscal policy assessment[1]	0	8	9	4	9	4
Monetary policy assessment[1]	0	0	17	0	0	17

[1] *In relation to the current state of the Spanish economy.*   [3] *Yield on Spanish 10-year public debt.*
[2] *Three-month Euribor.*   [4] *Relative to theoretical equilibrium rate.*

KEY FACTS:

Table 1

National accounts: GDP and main expenditure components SWDA* (ESA 2010, Base 2010)

Forecasts in blue

		GDP	Private consumption	Public consumption	Gross fixed capital formation					Exports	Imports	Domestic Demand (a)	Net exports (a)
					Total	Construction			Equipment & other products				
						Total	Housing	Other construction					
					Chain-linked volumes, annual percentage changes								
2009		-3.6	-3.6	4.1	-16.9	-16.1	-20.3	-11.4	-18.3	-11.0	-18.3	-6.4	2.8
2010		0.0	0.3	1.5	-4.9	-10.1	-11.6	-8.5	5.4	9.4	6.9	-0.5	0.5
2011		-1.0	-2.4	-0.3	-6.9	-11.7	-13.3	-10.2	0.9	7.4	-0.8	-3.1	2.1
2012		-2.6	-3.5	-4.5	-7.1	-8.3	-5.4	-10.7	-5.3	1.1	-6.2	-4.7	2.1
2013		-1.7	-3.1	-2.8	-2.5	-7.1	-7.2	-7.1	3.5	4.3	-0.3	-3.1	1.4
2014		1.4	1.2	0.0	3.5	-0.2	-1.4	0.8	7.7	5.1	6.4	1.6	-0.2
2015		3.2	3.1	2.7	6.4	5.3	2.4	7.5	7.5	5.4	7.5	3.7	-0.5
2016		2.7	3.3	2.0	4.3	3.6	3.6	3.7	5.1	3.8	5.7	3.2	-0.5
2017		2.3	2.6	1.3	3.9	3.8	5.5	2.4	4.0	4.8	6.0	2.6	-0.3
2014	I	0.4	0.3	0.0	1.4	-6.5	-6.9	-6.2	11.5	4.6	6.2	0.7	-0.3
	II	1.2	1.1	0.2	4.3	0.8	-1.5	2.7	8.3	2.8	5.2	1.8	-0.6
	III	1.7	1.4	0.2	3.4	1.3	0.6	1.8	5.7	6.4	7.3	1.8	-0.1
	IV	2.1	1.8	-0.5	4.9	4.1	2.5	5.2	5.7	6.5	6.8	2.0	0.1
2015	I	2.7	2.5	1.5	6.1	6.2	2.9	8.8	6.0	5.8	7.6	3.1	-0.4
	II	3.2	2.9	2.5	6.3	5.2	2.6	7.3	7.5	6.0	7.4	3.4	-0.2
	III	3.4	3.5	3.0	6.7	5.2	2.1	7.6	8.2	4.5	7.2	4.1	-0.7
	IV	3.5	3.5	3.7	6.4	4.6	2.2	6.4	8.4	5.3	7.7	4.1	-0.6
2016	I	3.3	3.5	2.4	5.5	4.2	3.0	5.1	6.9	4.8	6.2	3.6	-0.3
	II	2.8	3.5	2.1	4.2	3.2	3.0	3.3	5.2	3.8	6.2	3.5	-0.7
	III	2.5	3.1	1.9	4.0	3.4	3.8	3.1	4.6	3.1	4.5	2.8	-0.3
	IV	2.2	3.0	1.7	3.8	3.7	4.5	3.1	3.8	3.5	5.8	2.8	-0.6
					Chain-linked volumes, quarter-on-quarter percentage changes, at annual rate								
2014	I	1.5	0.0	-0.2	1.5	-3.1	-1.0	-4.8	6.4	6.6	7.3	1.4	0.0
	II	2.0	1.9	-0.8	8.6	11.9	5.7	16.9	5.3	4.8	7.2	2.5	-0.5
	III	2.4	1.9	0.1	3.7	2.8	3.3	2.4	4.7	14.0	13.7	1.9	0.5
	IV	2.7	3.1	-1.0	5.7	5.2	2.3	7.5	6.2	0.8	-0.6	2.3	0.5
2015	I	3.7	3.2	8.0	6.4	5.2	0.5	8.9	7.6	4.1	10.7	5.6	-1.9
	II	3.9	3.2	3.0	9.5	7.7	4.2	10.4	11.4	5.8	6.3	3.9	0.0
	III	3.3	4.6	2.2	5.2	2.9	1.7	3.9	7.6	7.6	13.1	4.7	-1.4
	IV	3.2	3.0	1.7	4.7	2.5	2.4	2.7	6.8	3.8	1.1	2.3	0.9
2016	I	2.6	3.4	2.6	2.7	3.6	3.8	3.5	1.9	2.1	4.8	3.2	-0.5
	II	2.2	3.2	1.8	4.1	3.7	4.3	3.3	4.4	1.7	6.3	3.3	-1.2
	III	1.8	3.0	1.6	4.5	3.7	4.7	3.0	5.2	4.9	5.7	2.8	-1.0
	IV	2.1	2.6	1.0	3.9	3.8	5.2	2.8	3.9	5.2	6.2	2.5	-0.4
	Current prices (EUR billions)		**Percentage of GDP at current prices**										
2009	1,079.0	56.1	20.5	24.3	16.2	8.1	8.1	8.2	22.7	23.8	101.2	-1.2	
2010	1,080.9	57.2	20.5	23.0	14.3	6.9	7.4	8.7	25.5	26.8	101.3	-1.3	
2011	1,070.4	57.8	20.5	21.5	12.5	5.7	6.8	9.0	28.9	29.2	100.2	-0.2	
2012	1,042.9	58.6	19.7	20.1	11.3	5.2	6.2	8.7	30.6	29.1	98.5	1.5	
2013	1,031.3	58.0	19.6	19.2	10.3	4.5	5.7	9.0	32.0	28.7	96.8	2.1	
2014	1,041.2	58.3	19.4	19.6	10.1	4.4	5.7	9.5	32.5	30.1	97.5	2.5	
2015	1,081.2	57.6	19.3	20.4	10.4	4.5	5.9	10.0	33.1	30.7	97.5	2.5	
2016	1,118.0	57.3	19.1	20.9	10.6	4.6	6.0	10.3	33.5	31.1	97.6	2.4	
2017	1,155.8	57.7	18.9	21.4	10.9	4.8	6.0	10.5	34.4	32.7	98.4	1.6	

*Seasonally and Working Day Adjusted.
(a) Contribution to GDP growth.

Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 1.1.- GDP
Percentage change

Legend: Quarterly change at annual rate — Annual change
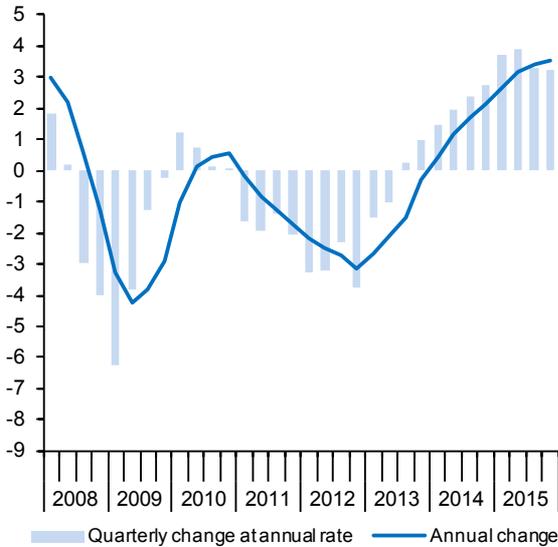
Chart 1.2.- Contribution to GDP annual growth
Per cent points

Legend: GDP — Domestic demand — Net exports
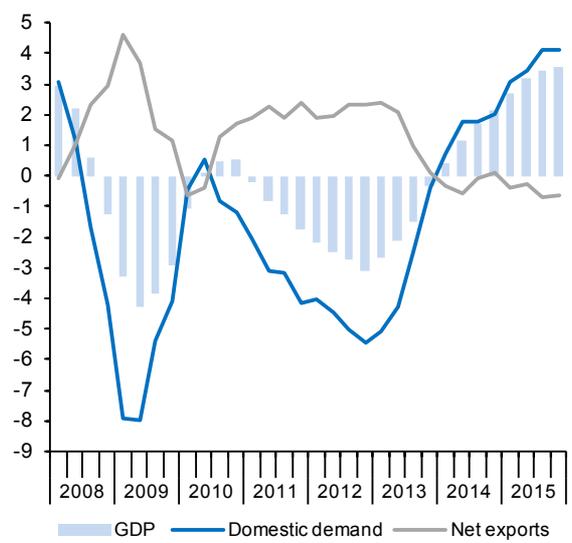
Chart 1.3.- Final consumption
Annual percentage change

Legend: National consumption — Private consumption — Public consumption
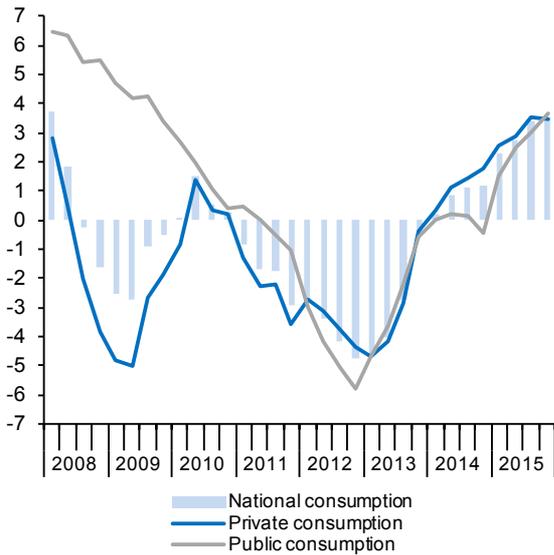
Chart 1.4.- Gross fixed capital formation
Annual percentage change

Legend: Total — Construction — Equipment & other products
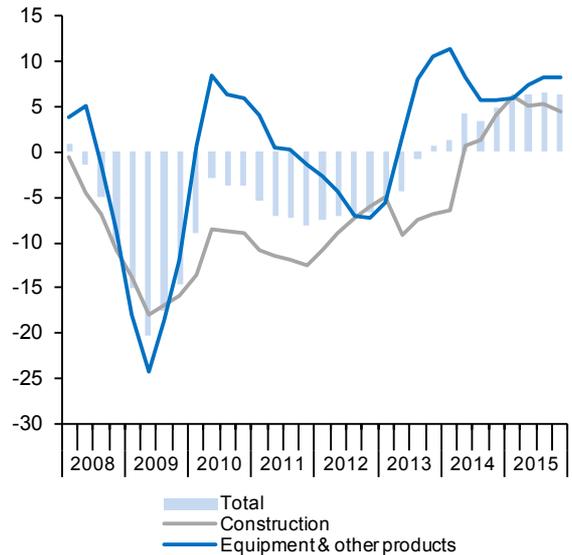
Table 2
National accounts: Gross value added by economic activity SWDA* (ESA 2010, Base 2010)
Forecasts in blue

	Total	Agriculture, forestry and fishing	Manufacturing, energy and utilities	Construction	Services Total	Trade, transport, accommodation and food services	Information and communication	Finance and insurance	Real estate	Professional, business and support services	Public administration, education, health and social work	Arts, entertainment and other services	Taxes less subsidies on products
Chain-linked volumes, annual percentage changes													
2009	-3.4	-3.6	-10.0	-7.6	-1.0	-3.7	0.6	-6.1	3.4	-3.7	2.3	0.7	-5.9
2010	0.0	2.1	3.6	-14.5	1.3	1.5	3.9	-3.3	2.0	-1.4	2.4	1.4	0.1
2011	-0.6	4.4	-0.2	-12.8	0.7	-0.1	-0.2	-2.4	2.8	2.3	0.9	-0.2	-5.6
2012	-2.5	-11.0	-4.9	-14.3	-0.4	-0.6	2.2	-3.6	2.0	-1.3	-0.8	-1.4	-4.4
2013	-1.6	16.5	-5.2	-9.8	-0.6	0.1	0.7	-7.8	1.6	-1.9	-1.1	-0.7	-2.9
2014	1.4	-3.7	1.2	-2.1	1.9	3.2	4.7	-1.0	1.2	3.4	-0.4	4.4	0.8
2015	3.3	1.9	3.4	5.2	3.1	4.8	4.7	-0.9	0.8	5.8	1.7	4.2	2.8
2016	2.7	2.8	2.4	4.4	2.6	3.0	3.3	1.1	1.5	4.5	1.7	3.8	3.0
2017	2.2	2.0	2.4	4.3	2.1	2.0	2.7	1.4	1.7	4.2	1.3	3.0	2.6
2014 I	0.5	3.2	-0.8	-7.3	1.3	2.5	4.4	-1.8	1.1	1.1	-0.5	3.4	-0.4
II	1.2	-6.0	1.5	-3.9	1.8	3.1	4.3	-1.2	1.2	3.1	-0.5	4.4	0.8
III	1.7	-2.9	1.5	0.2	2.1	3.3	5.0	-0.6	1.3	4.1	-0.5	4.9	1.3
IV	2.2	-8.7	2.5	3.1	2.5	4.0	5.0	-0.2	1.1	5.3	-0.2	5.0	1.7
2015 I	2.7	-4.0	3.0	5.9	2.7	4.1	4.4	-2.3	1.0	6.2	0.9	4.5	2.3
II	3.2	2.0	3.6	5.8	3.0	4.6	5.0	-0.4	0.9	6.5	1.1	3.9	2.6
III	3.5	3.7	3.8	5.1	3.3	5.1	5.0	-1.1	0.7	5.7	2.2	4.0	2.7
IV	3.5	6.2	3.4	4.0	3.4	5.3	4.6	0.2	0.8	4.9	2.4	4.5	3.6
2016 I	3.3	4.9	2.7	3.8	3.3	4.9	4.4	0.7	1.3	4.8	2.0	4.3	3.4
II	2.8	4.4	2.2	5.0	2.7	3.4	3.5	0.4	1.4	4.0	2.1	4.3	3.4
III	2.4	2.1	2.3	4.7	2.2	2.0	2.9	1.7	1.5	4.9	1.6	3.5	3.5
IV	2.2	-0.1	2.6	4.2	2.1	1.9	2.4	1.4	1.8	4.3	1.3	3.1	1.8
Chain-linked volumes, quarter-on-quarter percentage changes, at annual rate													
2014 I	1.5	-19.4	3.7	-5.6	2.4	5.2	5.3	8.3	-0.9	1.7	-1.0	5.5	1.4
II	2.1	-18.2	2.7	-0.2	3.0	5.2	3.3	-5.3	2.8	6.7	0.1	5.3	0.3
III	2.6	4.2	1.0	8.5	2.4	3.7	5.4	-1.0	3.1	3.8	-1.0	6.3	0.5
IV	2.6	0.9	2.5	10.5	2.1	1.8	5.8	-2.4	-0.7	9.4	1.2	2.8	4.7
2015 I	3.7	-1.3	5.9	4.9	3.3	5.8	3.0	-0.6	-1.0	5.2	3.3	3.7	3.7
II	4.1	4.1	4.8	-0.4	4.3	7.2	5.8	2.4	2.3	7.6	1.0	2.7	1.5
III	3.5	11.4	1.8	5.5	3.5	5.7	5.2	-3.8	2.1	0.7	3.3	6.9	1.0
IV	2.7	11.3	1.0	6.2	2.6	2.5	4.5	2.8	-0.2	6.3	2.1	4.8	8.3
2016 I	2.6	-6.0	3.0	4.1	2.7	4.1	2.1	1.4	1.0	4.8	1.5	2.8	2.8
II	2.2	2.0	2.8	4.2	1.9	1.2	2.4	1.4	2.7	4.4	1.3	2.8	1.7
III	1.9	2.0	2.3	4.2	1.6	0.2	2.5	1.4	2.5	4.0	1.3	3.6	1.2
IV	2.2	2.0	2.3	4.3	2.0	2.1	2.6	1.4	1.0	4.0	1.3	3.2	1.5
Current prices (EUR billions) / **Percentage of value added at basic prices**													
2009	1,006.1	2.3	16.6	10.6	70.4	22.0	4.4	5.7	8.9	7.3	18.2	4.0	7.2
2010	989.9	2.6	17.2	8.8	71.4	22.5	4.4	4.4	10.2	7.2	18.7	4.1	9.2
2011	983.7	2.5	17.4	7.5	72.6	22.9	4.3	4.2	10.9	7.4	18.7	4.2	8.8
2012	957.1	2.5	17.2	6.3	74.0	23.6	4.4	4.3	11.6	7.4	18.6	4.2	9.0
2013	941.3	2.8	17.1	5.6	74.5	23.8	4.3	3.8	12.0	7.3	19.0	4.2	9.6
2014	948.3	2.5	17.0	5.4	75.1	24.1	4.3	4.1	12.0	7.4	18.8	4.3	9.8
2015	981.8	2.5	17.0	5.5	74.9	24.5	4.2	3.9	11.7	7.6	18.7	4.4	10.1
2016	1,013.4	2.6	16.9	5.6	74.9	24.5	4.2	3.6	11.5	7.8	18.8	4.4	10.3
2017	1,045.9	2.7	17.0	5.7	74.6	23.7	4.2	4.0	11.4	8.1	18.9	4.3	10.5

*Seasonally and Working Day Adjusted.
Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 2.1.- GVA by sectors
Annual percentage change

Total
Construction
Industry
Services
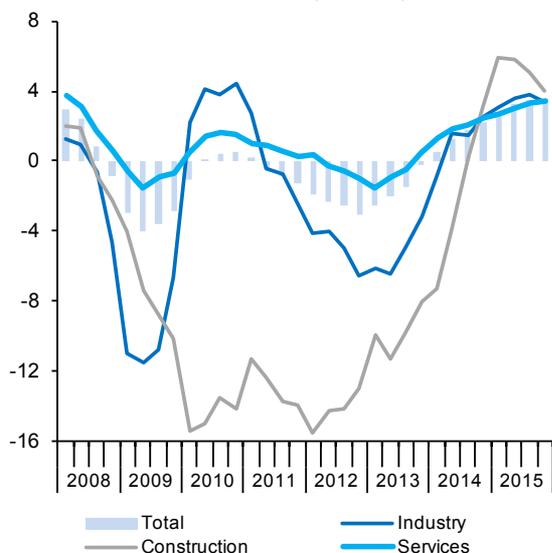
Chart 2.2.- GVA, services (I)
Annual percentage change

Total
Public administration, education, health and social work
Rest of services
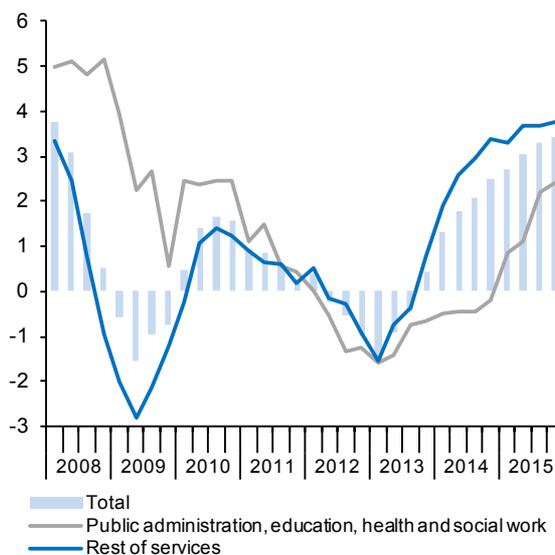
Chart 2.3.- GVA, services (II)
Annual percentage change

Trade, transport, accommodation and food services
Information and communication
Finance and insurance
Professional, business and support services
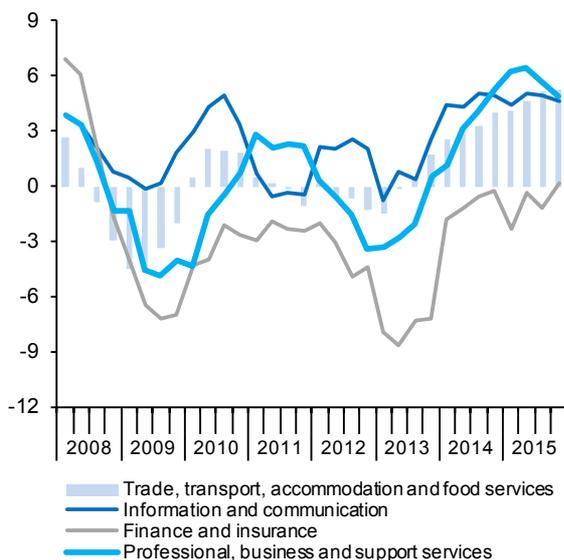
Chart 2.4.- GVA, structure by sectors
Percentage of value added at basic prices

Services
Construction
Industry
Agriculture, forestry and fishing
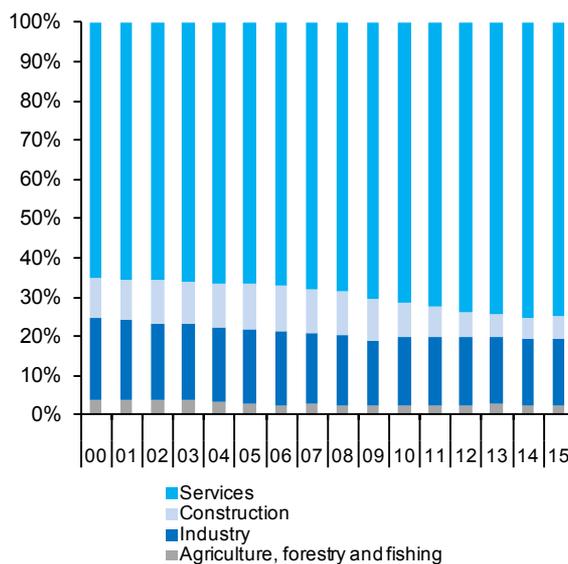
Table 3a
National accounts: Productivity and labour costs (I) (ESA 2010, Base 2010)
Forecasts in blue

		Total economy						Manufacturing industry					
		GDP, constant prices	Employment (jobs, full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)	Gross value added, constant prices	Employment (jobs, full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)
		1	2	3=1/2	4	5=4/3	6	7	8	9=7/8	10	11=10/9	12
Indexes, 2000 = 100, SWDA													
2009		124.5	117.1	106.4	144.4	135.7	101.2	100.1	82.2	121.8	152.6	125.3	99.0
2010		124.5	114.0	109.3	145.9	133.5	99.4	100.1	78.9	126.9	155.6	122.6	97.7
2011		123.3	110.8	111.3	147.1	132.2	98.4	98.8	75.9	130.1	159.0	122.1	95.3
2012		120.1	105.4	113.9	146.2	128.4	95.5	93.5	70.8	132.1	161.4	122.1	95.6
2013		118.1	101.7	116.1	148.7	128.1	94.8	92.3	67.8	136.2	163.7	120.2	94.2
2014		119.7	102.8	116.4	147.9	127.0	94.3	94.3	67.8	139.1	166.3	119.5	93.9
2015		123.5	105.8	116.7	148.7	127.4	94.0	97.8	69.8	140.2	166.0	118.4	92.7
2016		126.8	108.4	117.0	149.9	128.1	93.9	100.9	--	--	--	--	--
2017		129.7	111.0	116.9	151.8	129.9	94.2	103.4	--	--	--	--	--
2014	I	118.7	101.6	116.8	147.8	126.6	94.1	93.6	67.2	139.3	164.8	118.3	93.1
	II	119.3	102.5	116.3	147.9	127.2	94.5	93.9	67.8	138.6	166.3	120.0	93.8
	III	120.0	103.1	116.4	148.0	127.2	94.4	94.4	68.0	138.8	166.7	120.1	94.6
	IV	120.8	103.8	116.3	147.9	127.1	94.3	95.3	68.3	139.6	167.2	119.8	94.2
2015	I	121.9	104.6	116.6	148.8	127.7	94.4	96.2	68.9	139.5	166.2	119.1	93.2
	II	123.1	105.5	116.6	148.4	127.3	94.1	97.5	70.0	139.4	166.5	119.5	93.1
	III	124.1	106.3	116.7	148.2	127.0	93.6	98.5	70.1	140.4	166.0	118.2	92.7
	IV	125.0	106.9	116.9	149.2	127.6	94.0	99.2	70.0	141.7	165.5	116.8	91.6
Annual percentage changes													
2009		-3.6	-6.1	2.7	4.4	1.6	1.4	-10.9	-12.4	1.8	2.2	0.5	0.5
2010		0.0	-2.7	2.7	1.1	-1.6	-1.8	0.0	-4.0	4.2	1.9	-2.1	-1.3
2011		-1.0	-2.8	1.8	0.9	-0.9	-1.0	-1.3	-3.8	2.6	2.2	-0.4	-2.4
2012		-2.6	-4.9	2.4	-0.6	-2.9	-3.0	-5.3	-6.8	1.5	1.5	0.0	0.3
2013		-1.7	-3.5	1.9	1.7	-0.2	-0.8	-1.4	-4.3	3.1	1.5	-1.5	-1.4
2014		1.4	1.1	0.3	-0.6	-0.8	-0.4	2.2	0.1	2.1	1.5	-0.6	-0.3
2015		3.2	3.0	0.2	0.5	0.3	-0.3	3.7	2.9	0.8	-0.1	-1.0	-1.3
2016		2.4	2.4	0.3	0.8	0.6	-0.1	3.1	--	--	--	--	--
2017		2.4	2.4	-0.1	1.3	1.4	0.3	2.5	--	--	--	--	--
2014	I	0.4	-0.7	1.2	-0.6	-1.7	-1.2	1.6	-2.8	4.6	1.7	-2.8	-1.7
	II	1.2	1.0	0.2	-0.5	-0.7	-0.2	2.4	-0.1	2.4	1.5	-1.0	-0.7
	III	1.7	1.7	0.0	-0.7	-0.7	-0.5	2.2	1.5	0.7	1.3	0.6	0.5
	IV	2.1	2.4	-0.3	-0.5	-0.2	0.1	2.6	1.8	0.7	1.7	0.9	0.8
2015	I	2.7	2.9	-0.2	0.7	0.9	0.3	2.8	2.6	0.2	0.8	0.7	0.1
	II	3.2	2.9	0.3	0.3	0.1	-0.5	3.8	3.2	0.6	0.1	-0.5	-0.8
	III	3.4	3.1	0.3	0.1	-0.2	-0.8	4.3	3.1	1.1	-0.4	-1.5	-2.0
	IV	3.5	3.0	0.5	0.9	0.4	-0.3	4.1	2.5	1.5	-1.0	-2.4	-2.7

(a) Nominal ULC deflated by GDP/GVA deflator.
Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 3a.1.- Nominal ULC, total economy
Index, 2000=100

- Compensation per job
- Employment productivity
- Nominal unit labour cost
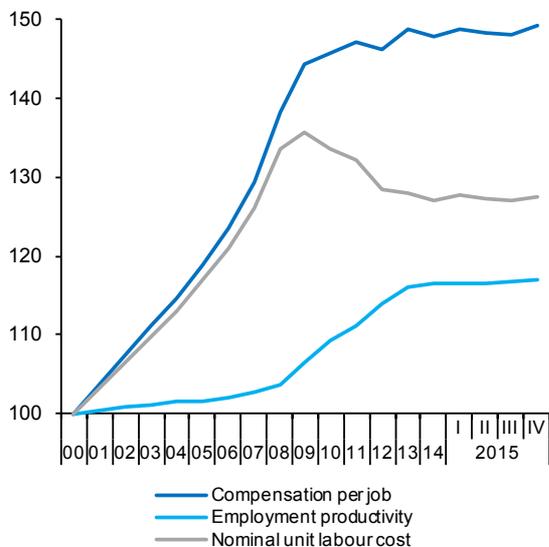
Chart 3a.2.- Real ULC, total economy
Index, 2000=100

- Nominal unit labour cost
- GDP deflator
- Real unit labour cost (1)
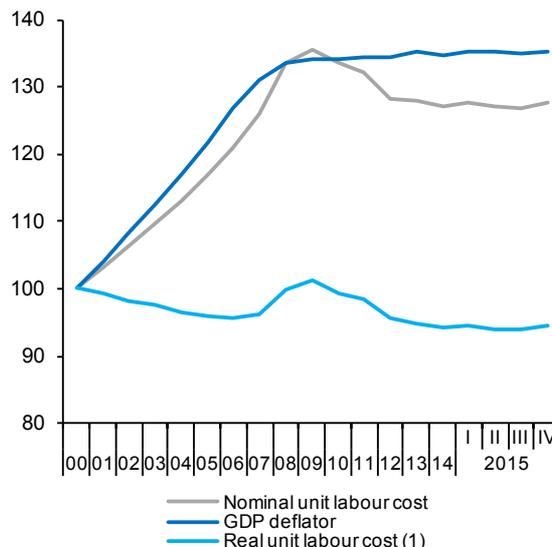
(1) Nominal ULC deflated by GDP deflator.

Chart 3a.3.- Nominal ULC, manufacturing industry
Index, 2000=100

- Compensation per job
- Employment productivity
- Nominal unit labour cost
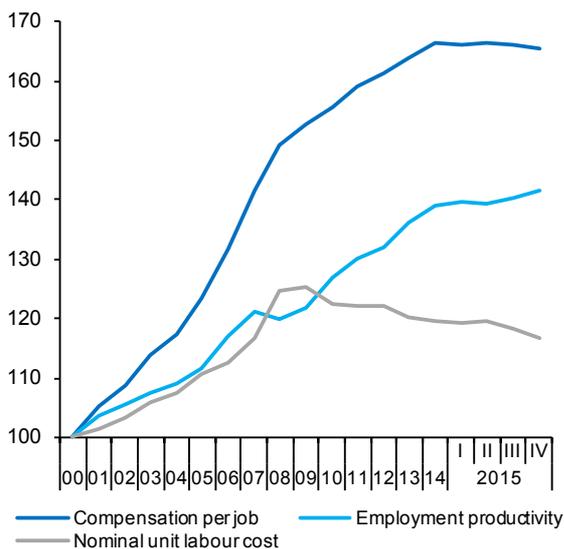
Chart 3a.4.- Real ULC, manufacturing industry
Index, 2000=100

- Nominal unit labour cost
- GVA deflator
- Real unit labour cost (1)

(1) Nominal ULC deflated by GVA deflator.

FUNCAS Economic Trends and Statistics Department
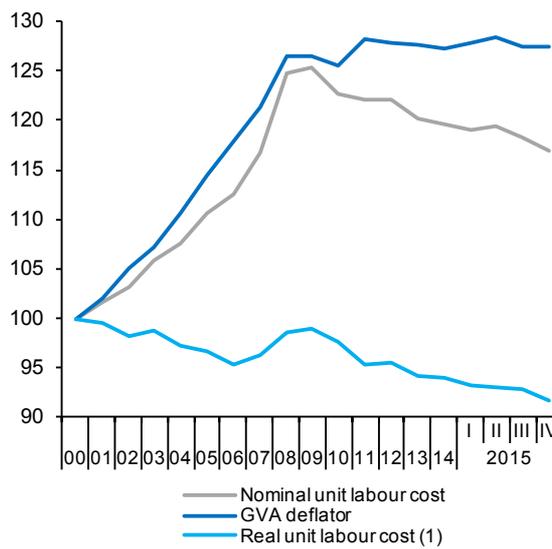
Table 3b
National accounts: Productivity and labour costs (II) (ESA 2010, Base 2010)
Forecasts in blue

		Construction						Services				
		Gross value added, constant prices	Employment (jobs, full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)	Gross value added, constant prices	Employment (jobs, full time equivalent)	Employment productivity	Compensation per job	Nominal unit labour cost	Real unit labour cost (a)
		1	2	3=1/2	4	5=4/3	6	7	8	9=7/8	10	11=10/9	12
Indexes, 2000 = 100, SWDA													
2009		109.4	99.1	110.4	170.0	154.0	93.6	135.8	133.6	101.6	137.7	135.5	96.9
2010		93.5	85.2	109.7	172.1	156.9	99.2	137.5	132.0	104.2	139.1	133.4	96.7
2011		81.5	72.2	112.8	169.6	150.3	98.0	138.5	130.5	106.1	140.2	132.2	97.2
2012		69.9	58.7	119.1	170.6	143.2	97.9	138.0	126.1	109.4	138.6	126.7	95.6
2013		63.0	50.4	124.9	172.1	137.8	97.9	137.1	122.8	111.7	141.1	126.4	93.9
2014		61.7	48.9	126.3	172.5	136.6	97.1	139.7	124.8	112.0	139.9	124.9	92.7
2015		64.9	51.8	125.3	171.6	137.0	96.8	144.1	128.4	112.2	140.9	125.6	91.8
2016		67.8	53.6	126.5	--	--	--	147.8	131.6	112.3	--	--	--
2017		70.7	55.5	127.3	--	--	--	150.8	134.2	112.4	--	--	--
2014	I	60.7	47.5	127.8	172.6	135.1	94.8	138.4	123.2	112.3	140.2	124.9	92.8
	II	60.7	48.1	126.1	172.3	136.7	97.1	139.4	124.6	111.9	139.9	125.0	92.9
	III	61.9	49.3	125.7	172.4	137.2	98.3	140.2	125.2	112.0	139.9	125.0	92.3
	IV	63.5	50.6	125.6	172.6	137.4	98.3	141.0	126.2	111.7	139.6	124.9	92.8
2015	I	64.3	51.4	125.1	171.4	137.0	95.6	142.1	126.9	112.0	141.1	126.0	91.8
	II	64.2	52.0	123.6	171.3	138.6	97.7	143.6	127.9	112.3	140.6	125.2	92.3
	III	65.1	51.8	125.7	173.2	137.8	97.9	144.9	129.0	112.3	140.4	124.9	91.8
	IV	66.1	52.2	126.7	170.4	134.5	96.0	145.8	129.9	112.2	141.8	126.3	91.5
Annual percentage changes													
2009		-7.6	-21.7	18.0	9.8	-6.9	-8.6	-1.0	-2.4	1.5	4.0	2.5	0.7
2010		-14.5	-14.0	-0.6	1.3	1.9	6.0	1.3	-1.2	2.5	1.0	-1.5	-0.2
2011		-12.8	-15.3	2.9	-1.4	-4.2	-1.2	0.7	-1.1	1.8	0.8	-0.9	0.5
2012		-14.3	-18.8	5.5	0.6	-4.7	-0.1	-0.4	-3.4	3.1	-1.2	-4.2	-1.6
2013		-9.8	-14.0	4.9	0.9	-3.8	0.0	-0.6	-2.7	2.1	1.9	-0.2	-1.7
2014		-2.1	-3.1	1.1	0.2	-0.8	-0.8	1.9	1.7	0.2	-0.9	-1.1	-1.3
2015		5.2	6.0	-0.8	-0.5	0.3	-0.3	3.1	2.9	0.2	0.8	0.5	-0.9
2016		4.4	3.4	1.0	--	--	--	2.6	2.5	0.1	--	--	--
2017		4.3	3.6	0.6	--	--	--	2.1	2.0	0.1	--	--	--
2014	I	-7.3	-10.5	3.6	0.4	-3.1	-2.3	1.3	0.0	1.3	-0.6	-2.0	-1.6
	II	-3.9	-4.7	0.9	0.0	-0.9	-1.2	1.8	1.8	0.0	-0.8	-0.9	-1.3
	III	0.2	-0.2	0.4	0.7	0.3	0.1	2.1	2.1	0.0	-1.1	-1.0	-1.2
	IV	3.1	3.7	-0.5	-0.1	0.4	0.1	2.5	2.8	-0.3	-1.0	-0.7	-1.2
2015	I	5.9	8.1	-2.1	-0.7	1.4	0.8	2.7	3.0	-0.3	0.6	0.9	-1.1
	II	5.8	7.9	-2.0	-0.6	1.4	0.6	3.0	2.6	0.4	0.5	0.1	-0.6
	III	5.1	5.1	0.0	0.4	0.4	-0.3	3.3	3.0	0.3	0.3	0.0	-0.5
	IV	4.0	3.1	0.8	-1.2	-2.1	-2.3	3.4	3.0	0.4	1.6	1.1	-1.5

(a) Nominal ULC deflated by GVA deflator.
Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 3b.1.- Nominal ULC, construction
Index, 2000=100

- Compensation per job
- Employment productivity
- Nominal unit labour cost
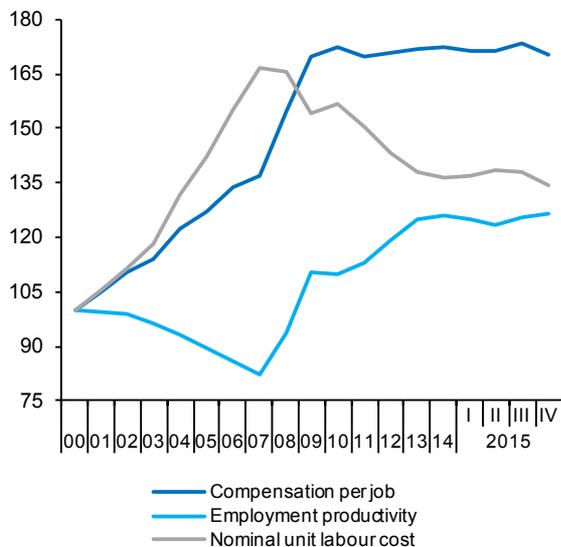
Chart 3b.2.- Real ULC, construction
Index, 2000=100

- Nominal unit labour cost
- GVA deflator
- Real unit labour cost (1)
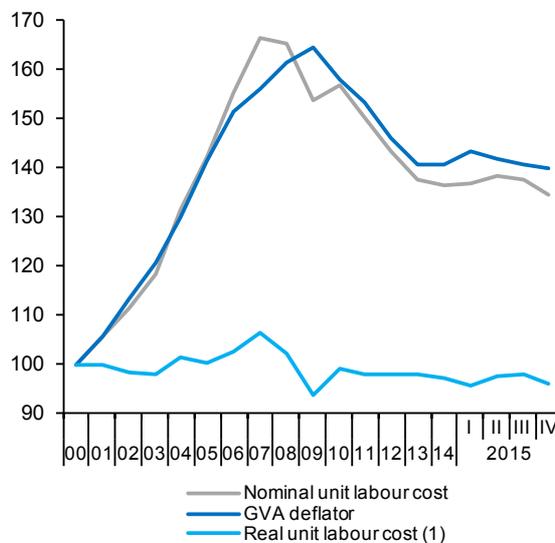
(1) Nominal ULC deflated by GVA deflator.

Chart 3b.3.- Nominal ULC, services
Index, 2000=100

- Compensation per job
- Employment productivity
- Nominal unit labour cost
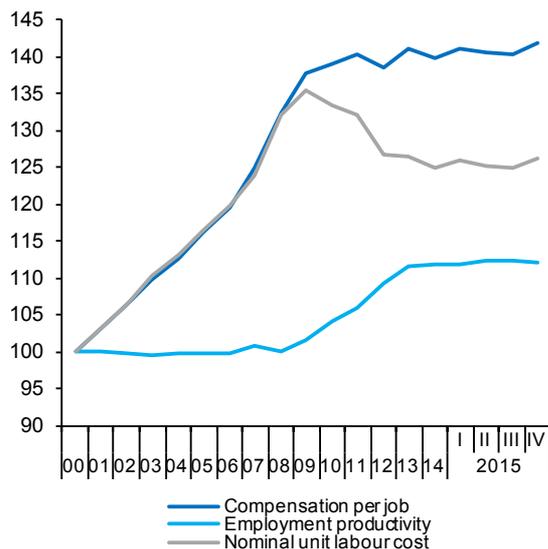
Chart 3b.4.- Real ULC, services
Index, 2000=100

- Nominal unit labour cost
- GVA deflator
- Real unit labour cost (1)
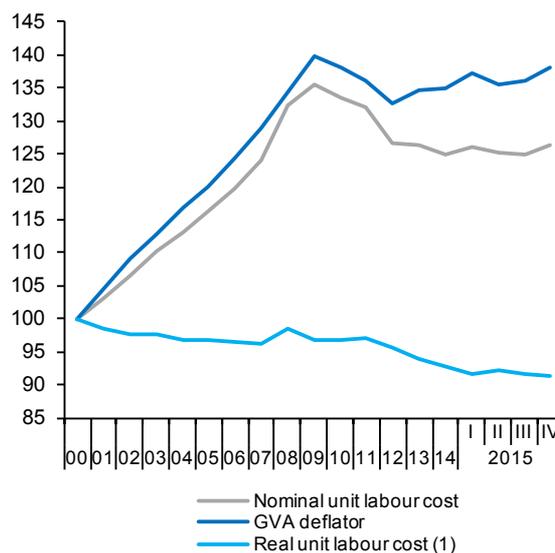
(1) Nominal ULC deflated by GVA deflator.

Table 4
National accounts: National income, distribution and disposition (ESA 2010, Base 2010)
Forecasts in blue

	Gross domestic product	Compensation of employees	Gross operating surplus	Taxes on production and imports less subsidies	Income payments to the rest of the world, net	Gross national product	Current transfers to the rest of the world, net	Gross national income	Final national consumption	Gross national saving (a)	Compensation of employees	Gross operating surplus	Taxes on production and imports less subsidies
	1=2+3+4	2	3	4	5	6=1+5	7	8=6+7	9	10=8-9	11	12	13
	EUR Billions, 4-quarter cumulated transactions										**Percentage of GDP**		
2009	1,079.0	549.2	455.2	74.7	-19.8	1,059.2	-14.3	1,045.0	826.4	218.6	50.9	42.2	6.9
2010	1,080.9	541.5	445.9	93.6	-15.2	1,065.8	-12.7	1,053.0	840.5	212.6	50.1	41.3	8.7
2011	1,070.4	531.0	449.4	90.0	-18.6	1,051.9	-14.1	1,037.7	838.5	199.2	49.6	42.0	8.4
2012	1,042.9	498.6	450.0	94.2	-7.3	1,035.5	-12.6	1,023.0	816.6	206.3	47.8	43.2	9.0
2013	1,031.3	486.6	444.7	99.9	-4.8	1,026.5	-13.1	1,013.4	800.8	212.6	47.2	43.1	9.7
2014	1,041.2	490.8	446.4	103.9	-4.2	1,036.9	-11.5	1,025.5	809.3	216.2	47.1	42.9	10.0
2015	1,081.2	509.9	460.2	111.1	-0.9	1,080.3	-10.9	1,069.4	830.9	238.5	47.2	42.6	10.3
2016	1,118.0	527.7	473.1	117.3	7.0	1,125.0	-11.6	1,113.4	854.6	258.8	47.2	42.3	10.5
2017	1,155.8	545.6	486.3	124.0	10.9	1,166.8	-11.8	1,155.0	886.3	268.7	47.2	42.1	10.7
2014 I	1,031.0	484.9	445.0	101.1	-3.4	1,027.6	-13.5	1,014.1	801.4	212.7	47.0	43.2	9.8
II	1,033.1	486.2	445.6	101.3	-5.9	1,027.2	-13.0	1,014.2	804.8	209.3	47.1	43.1	9.8
III	1,036.6	488.1	446.0	102.5	-6.3	1,030.2	-11.7	1,018.5	808.2	210.4	47.1	43.0	9.9
IV	1,041.2	490.8	446.4	103.9	-4.2	1,036.9	-11.5	1,025.5	809.3	216.2	47.1	42.9	10.0
2015 I	1,049.2	495.1	450.1	104.0	-3.6	1,045.7	-11.5	1,034.2	813.0	221.2	47.2	42.9	9.9
II	1,059.7	499.5	452.9	107.2	-1.6	1,058.1	-11.3	1,046.8	818.9	227.9	47.1	42.7	10.1
III	1,070.5	504.3	457.6	108.6	-1.0	1,069.5	-10.9	1,058.6	824.9	233.7	47.1	42.7	10.1
IV	1,081.2	509.9	460.2	111.1	-0.9	1,080.3	-10.9	1,069.4	830.9	238.5	47.2	42.6	10.3
	Annual percentage changes										**Difference from one year ago**		
2009	-3.3	-1.9	-2.2	-18.1	-33.9	-2.5	-9.1	-2.4	-2.0	-3.9	0.7	0.5	-1.3
2010	0.2	-1.4	-2.0	25.3	-23.4	0.6	-10.9	0.8	1.7	-2.8	-0.8	-0.9	1.7
2011	-1.0	-1.9	0.8	-3.8	22.5	-1.3	11.2	-1.5	-0.2	-6.3	-0.5	0.7	-0.2
2012	-2.6	-6.1	0.1	4.7	-60.5	-1.6	-11.0	-1.4	-2.6	3.6	-1.8	1.2	0.6
2013	-1.1	-2.4	-1.2	6.0	-34.7	-0.9	4.3	-0.9	-1.9	3.0	-0.6	0.0	0.7
2014	1.0	0.9	0.4	4.0	-11.7	1.0	-12.7	1.2	1.1	1.7	0.0	-0.2	0.3
2015	3.8	3.9	3.1	6.9	-79.6	4.2	-4.5	4.3	2.7	10.3	0.0	-0.3	0.3
2016	3.4	3.5	2.8	5.5	-915.9	4.1	6.3	4.1	2.9	8.5	0.0	-0.2	0.2
2017	3.4	3.4	2.8	5.7	55.8	3.7	1.5	3.7	3.7	3.8	0.0	-0.2	0.2
2014 I	-0.6	-1.6	-0.9	6.4	-43.4	-0.3	14.6	-0.5	-0.9	1.1	-0.5	-0.1	0.6
II	-0.1	-0.3	-0.6	3.5	46.9	-0.2	3.9	-0.3	0.2	-2.2	-0.1	-0.2	0.3
III	0.6	0.6	-0.3	3.9	51.7	0.3	-11.1	0.5	1.1	-1.9	0.0	-0.4	0.3
IV	1.0	0.9	0.4	4.0	-11.7	1.0	-12.7	1.2	1.1	1.7	0.0	-0.2	0.3
2015 I	1.8	2.1	1.2	2.9	5.7	1.8	-15.1	2.0	1.4	4.0	0.2	-0.3	0.1
II	2.6	2.8	1.6	5.8	-73.0	3.0	-13.5	3.2	1.7	8.9	0.1	-0.4	0.3
III	3.3	3.3	2.6	6.0	-84.1	3.8	-7.1	3.9	2.1	11.1	0.0	-0.3	0.3
IV	3.8	3.9	3.1	6.9	-79.6	4.2	-4.5	4.3	2.7	10.3	0.0	-0.3	0.3

(a) Including change in net equity in pension funds reserves.
Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 4.1.- National income, consumption and saving
EUR Billions, 4-quarter cumulated

Gross national income ■ National consumption
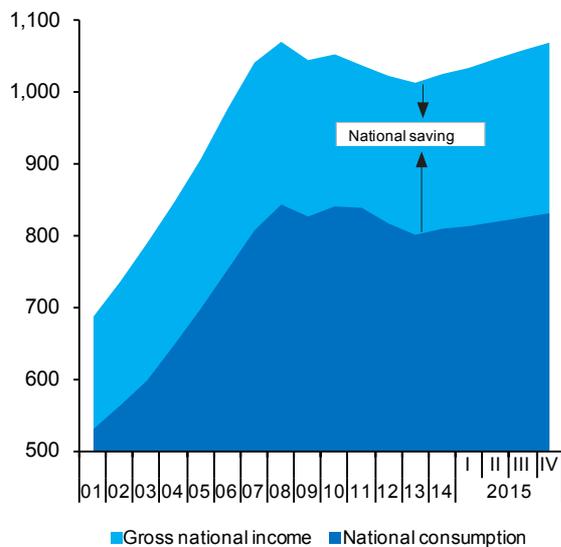
Chart 4.2.- National income, consumption and saving rate
Annual percentage change and percentage of GDP, 4-quarter moving averages

Saving rate (right) — GNI (left) — Consumption (left)
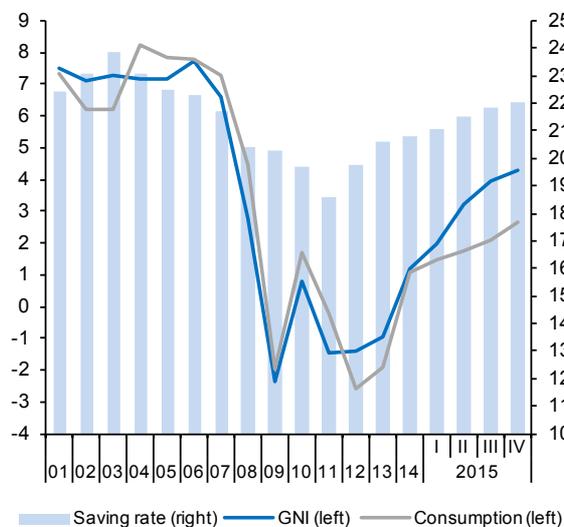
Chart 4.3.- Components of National income
Annual percentage change

Compensation of employees
Gross operating surplus
Taxes on production and imports less subsidies
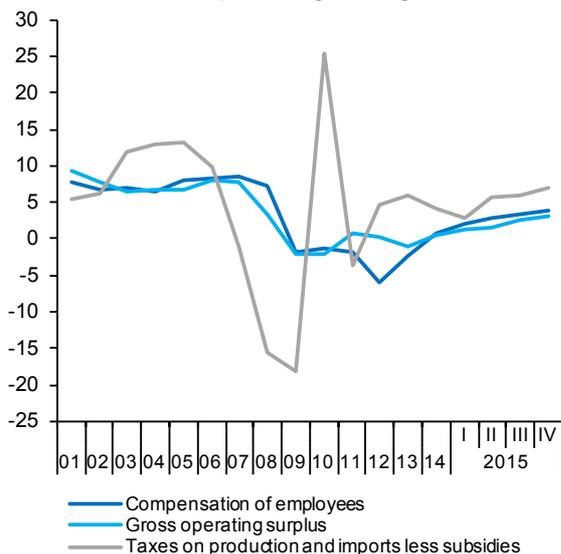
Chart 4.4.- Functional distribution of income
Percentage of GDP, 4-quarter moving averages

Compensation of employees (left)
Gross operating surplus (left)
Taxes on production and imports less subsidies (right)
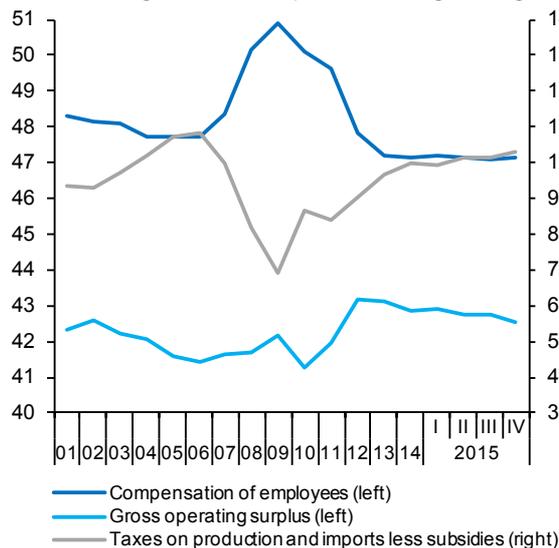
Table 5
National accounts: Net transactions with the rest of the world (ESA 2010, Base 2010)
Forecasts in blue

		Goods and services			Income	Current transfers	Current account	Capital transfers	Net lending/ borrowing with rest of the world	Saving-Investment-Deficit		
		Total	Goods	Tourist services	Non-tourist services						Gross national saving	Gross capital formation	Current account deficit
		1=2+3+4	2	3	4	5	6	7=1+5+6	8	9=7+8	10	11	12=7=10-11
EUR Billions, 4-quarter cumulated transactions													
2009		-12.4	-41.5	22.4	6.6	-19.8	-14.3	-46.5	4.5	-42.0	218.6	265.1	-46.5
2010		-14.1	-47.8	23.0	10.7	-15.2	-12.7	-42.0	5.9	-36.1	212.6	254.5	-42.0
2011		-2.6	-44.5	26.2	15.6	-18.6	-14.1	-35.3	4.4	-30.9	199.2	234.5	-35.3
2012		15.3	-29.3	27.1	17.5	-7.3	-12.6	-4.6	5.4	0.8	206.3	211.0	-4.6
2013		33.1	-14.2	28.3	18.9	-4.8	-13.1	15.2	7.8	22.9	212.6	197.4	15.2
2014		26.0	-22.5	28.8	19.7	-4.2	-11.5	10.3	6.1	16.4	216.2	205.9	10.3
2015		26.9	-21.6	28.6	20.0	-0.9	-10.9	15.1	7.9	23.1	238.5	223.4	15.1
2016		26.8	-22.8	28.9	20.7	7.0	-11.6	22.2	7.5	29.6	258.8	236.6	22.2
2017		18.8	-32.6	29.8	21.6	10.9	-11.8	18.0	7.6	25.6	268.7	250.7	18.0
2014	I	30.6	-17.2	28.5	19.3	-3.4	-13.5	13.7	8.2	21.8	212.7	199.0	13.7
	II	26.7	-20.7	28.7	18.8	-5.9	-13.0	7.8	7.5	15.3	209.3	201.5	7.8
	III	25.5	-22.2	28.7	19.0	-6.3	-11.7	7.5	7.1	14.5	210.4	202.9	7.5
	IV	26.0	-22.5	28.8	19.7	-4.2	-11.5	10.3	6.1	16.4	216.2	205.9	10.3
2015	I	27.4	-21.1	28.7	19.8	-3.6	-11.5	12.3	5.3	17.6	221.2	208.8	12.3
	II	27.5	-21.2	28.6	20.2	-1.6	-11.3	14.7	5.8	20.5	227.9	213.2	14.7
	III	27.2	-21.7	28.4	20.5	-1.0	-10.9	15.3	7.2	22.5	233.7	218.4	15.3
	IV	26.9	-21.6	28.6	20.0	-0.9	-10.9	15.1	7.9	23.1	238.5	223.4	15.1
Percentage of GDP, 4-quarter cumulated transactions													
2009		-1.2	-3.8	2.1	0.6	-1.8	-1.3	-4.3	0.4	-3.9	20.3	24.6	-4.3
2010		-1.3	-4.4	2.1	1.0	-1.4	-1.2	-3.9	0.5	-3.3	19.7	23.5	-3.9
2011		-0.2	-4.2	2.4	1.5	-1.7	-1.3	-3.3	0.4	-2.9	18.6	21.9	-3.3
2012		1.5	-2.8	2.6	1.7	-0.7	-1.2	-0.4	0.5	0.1	19.8	20.2	-0.4
2013		3.2	-1.4	2.7	1.8	-0.5	-1.3	1.5	0.8	2.2	20.6	19.1	1.5
2014		2.5	-2.2	2.8	1.9	-0.4	-1.1	1.0	0.6	1.6	20.8	19.8	1.0
2015		2.5	-2.0	2.6	1.8	-0.1	-1.0	1.4	0.7	2.1	22.1	20.7	1.4
2016		2.4	-2.0	2.6	1.8	0.6	-1.0	2.0	0.7	2.7	23.1	21.2	2.0
2017		1.6	-2.8	2.6	1.9	0.9	-1.0	1.6	0.7	2.2	23.2	21.7	1.6
2014	I	3.0	-1.7	2.8	1.9	-0.3	-1.3	1.3	0.8	2.1	20.6	19.3	1.3
	II	2.6	-2.0	2.8	1.8	-0.6	-1.3	0.8	0.7	1.5	20.3	19.5	0.8
	III	2.5	-2.1	2.8	1.8	-0.6	-1.1	0.7	0.7	1.4	20.3	19.6	0.7
	IV	2.5	-2.2	2.8	1.9	-0.4	-1.1	1.0	0.6	1.6	20.8	19.8	1.0
2015	I	2.6	-2.0	2.7	1.9	-0.3	-1.1	1.2	0.5	1.7	21.1	19.9	1.2
	II	2.6	-2.0	2.7	1.9	-0.1	-1.1	1.4	0.5	1.9	21.5	20.1	1.4
	III	2.5	-2.0	2.7	1.9	-0.1	-1.0	1.4	0.7	2.1	21.8	20.4	1.4
	IV	2.5	-2.0	2.6	1.8	-0.1	-1.0	1.4	0.7	2.1	22.1	20.7	1.4

Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 5.1.- Balance of goods and services
Percentage of GDP, 4-quarter moving averages

Legend:
- Goods balance
- Services balance
- Total balance
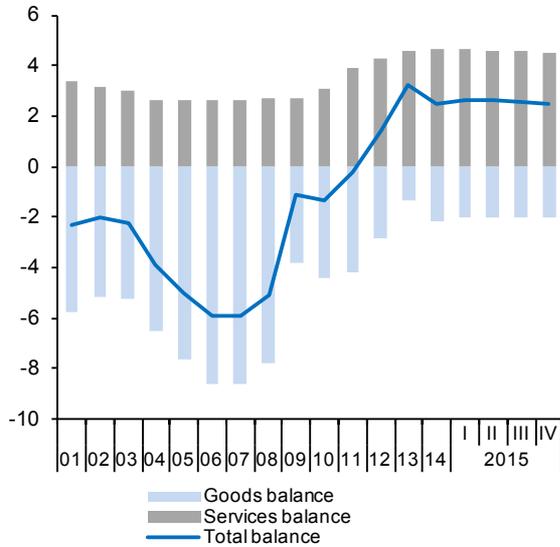
Chart 5.2.- Services balance
Percentage of GDP, 4-quarter moving averages

Legend:
- Tourist services balance
- Non-tourist services balance
- Total services balance
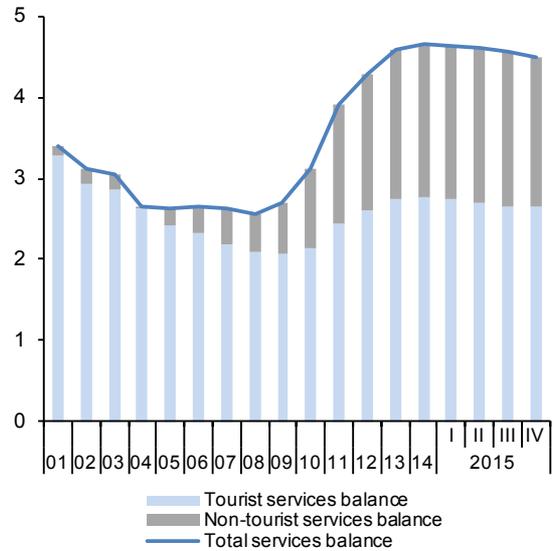
Chart 5.3.- Net lending or borrowing
Percentage of GDP, 4-quarter moving averages

Legend:
- Goods and services
- Income and transfers (current and capital)
- Net lending/ borrowing with the rest of the world
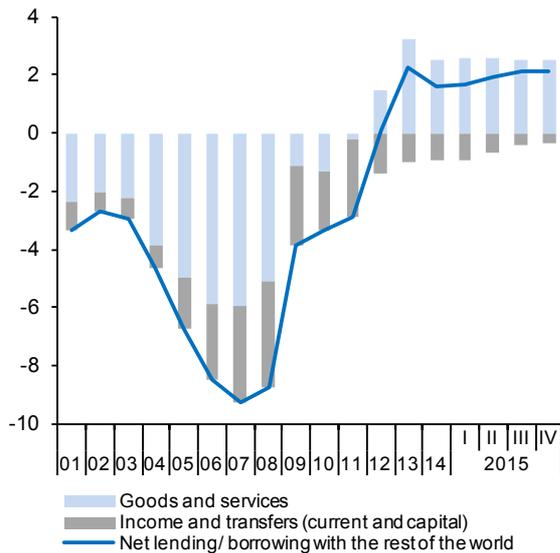
Chart 5.4.- Saving, investment and current account balance
Percentage of GDP, 4-quarter moving averages

Legend:
- Current Account balance (right)
- Investment rate (left)
- Saving rate (left)
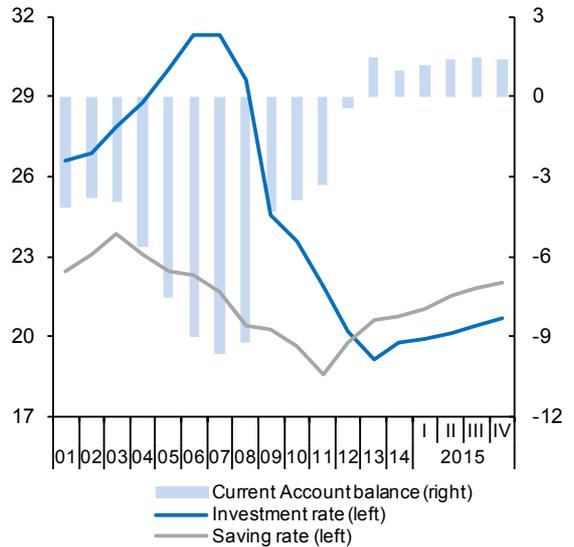
Table 6

National accounts: Household income and its disposition (ESA 2010, Base 2010)
Forecasts in blue

	Gross disposable income (GDI)						Final con-sumption expen-diture	Gross saving (a)	Saving rate (gross saving as a percentage of GDI)	Net capital transfers	Gross capital formation	Net lending (+) or borro-wing (-)	Net lending or borrowing as a per-centage of GDP
	Total	Compen-sation of employees (received)	Mixed income and net property income	Social benefits and other current transfers (received)	Social contri-butions and other current transfers (paid)	Per-sonal income taxes							
	1=2+3+4-5-6	2	3	4	5	6	7	8=1-7	9=8/1	10	11	12=8+10-11	13
	EUR Billions, 4-quarter cumulated operations												
2009	698.9	549.9	199.1	235.9	209.8	76.2	605.3	93.6	13.4	6.7	69.0	31.3	2.9
2010	688.4	542.3	196.3	239.3	209.7	79.9	618.8	69.5	10.1	7.6	63.0	14.2	1.3
2011	694.2	531.9	212.1	242.9	210.3	82.4	618.9	74.7	10.8	5.2	53.8	26.1	2.4
2012	672.1	499.9	210.9	247.3	202.4	83.6	611.4	58.8	8.7	5.0	38.4	25.4	2.4
2013	666.6	488.7	211.0	249.5	199.2	83.4	598.4	66.2	9.9	3.7	26.6	43.0	4.2
2014	672.5	492.9	218.5	240.4	195.3	83.9	606.8	64.6	9.6	4.5	29.3	39.9	3.8
2015	685.3	512.1	215.9	240.1	198.7	84.1	622.2	61.9	9.0	3.9	29.1	36.7	3.4
2016	708.0	529.9	225.8	242.3	203.4	86.6	640.9	66.0	9.3	3.4	30.9	38.6	3.4
2017	733.5	547.9	238.7	246.1	209.6	89.7	667.3	65.1	8.9	3.2	32.8	35.5	3.1
2014 I	664.2	487.1	212.4	246.5	198.3	83.6	598.9	63.8	9.6	3.3	27.3	39.7	3.9
II	665.1	488.3	212.3	244.6	196.8	83.3	602.4	61.4	9.2	3.4	27.6	37.1	3.6
III	667.8	490.2	216.0	240.8	195.2	83.9	605.2	61.3	9.2	3.3	27.9	36.7	3.5
IV	672.5	492.9	218.5	240.4	195.3	83.9	606.8	64.6	9.6	4.5	29.3	39.9	3.8
2015 I	676.0	497.1	217.4	241.1	195.9	83.7	609.3	65.2	9.6	4.2	28.3	41.0	3.9
II	680.4	501.6	219.4	241.2	197.8	84.0	613.3	65.8	9.7	3.2	27.7	41.3	3.9
III	682.8	506.4	217.8	241.7	198.8	84.3	618.4	62.9	9.2	3.2	28.2	37.9	3.5
IV	688.3	512.0	218.0	241.5	199.8	83.4	622.2	64.4	9.4	1.4	29.1	36.7	3.4

	Annual percentage changes, 4-quarter cumulated operations							Differen-ce from one year ago	Annual percentage changes, 4-quarter cumulated operations			Difference from one year ago
2009	1.9	-1.9	-6.6	8.7	-4.6	-10.1	-4.5	64.4	5.1	8.3	-23.5	--	5.3
2010	-1.5	-1.4	-1.4	1.4	-0.1	4.8	2.2	-25.8	-3.3	13.8	-8.7	--	-1.6
2011	0.8	-1.9	8.0	1.5	0.3	3.2	0.0	7.5	0.7	-32.3	-14.6	--	1.1
2012	-3.2	-6.0	-0.5	1.8	-3.7	1.5	-1.2	-21.3	-2.0	-3.1	-28.6	--	0.0
2013	-0.8	-2.3	0.0	0.9	-1.6	-0.3	-2.1	12.7	1.2	-26.5	-29.9	--	1.7
2014	0.9	0.9	3.6	-3.7	-1.9	0.7	1.4	-2.4	-0.3	23.2	8.6	--	-0.3
2015	1.9	3.9	-1.2	-0.1	1.7	0.3	2.5	-4.2	-0.6	-15.0	-0.5	--	-0.4
2016	3.3	3.5	4.6	0.9	2.3	2.9	3.0	6.6	0.3	-11.0	6.2	--	0.1
2017	3.6	3.4	5.7	1.6	3.0	3.6	4.1	-1.4	-0.5	-8.0	6.0	--	-0.4
2014 I	-0.8	-1.5	0.5	-0.9	-1.7	0.5	-1.2	3.0	0.4	-28.7	-23.8	--	0.9
II	-0.6	-0.2	0.1	-2.2	-1.6	1.4	0.0	-5.4	-0.5	-17.5	-16.9	--	0.1
III	0.4	0.7	2.4	-3.6	-1.9	1.0	0.9	-4.1	-0.4	-10.8	-9.3	--	0.0
IV	0.9	0.9	3.6	-3.7	-1.9	0.7	1.4	-2.4	-0.3	23.2	8.6	--	-0.3
2015 I	1.8	2.1	2.3	-2.2	-1.2	0.1	1.7	2.2	0.0	26.3	3.6	--	0.1
II	2.3	2.7	3.3	-1.4	0.5	0.8	1.8	7.3	0.4	-7.0	0.2	--	0.3
III	2.2	3.3	0.9	0.4	1.8	0.5	2.2	2.6	0.0	-2.6	1.1	--	0.0
IV	2.3	3.9	-0.2	0.5	2.3	-0.6	2.5	-0.3	-0.2	-70.2	-0.6	--	-0.4

(a) Including change in net equity of households in pension funds reserves.

Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 6.1.- Households: Gross disposable income
EUR Billions, 4-quarter cummulated

- Total revenue
- Social contributions and personal income taxes
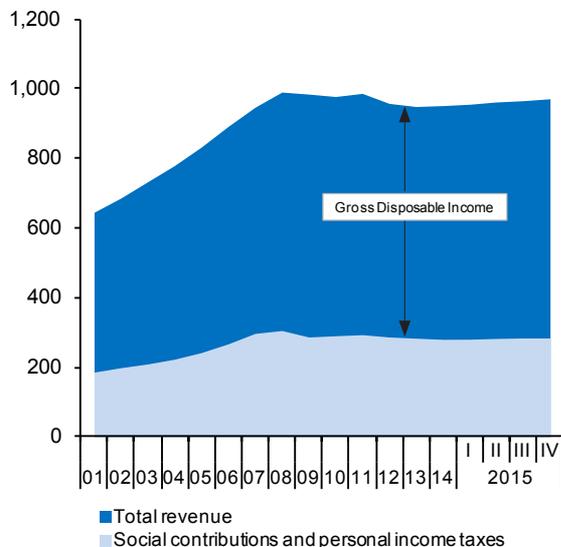
Chart 6.2.- Households: Gross saving
EUR Billions, 4-quarter cummulated

- Gross disposable income (a)   Consumption

(a) Including change in net equity of households in pension funds reserves.
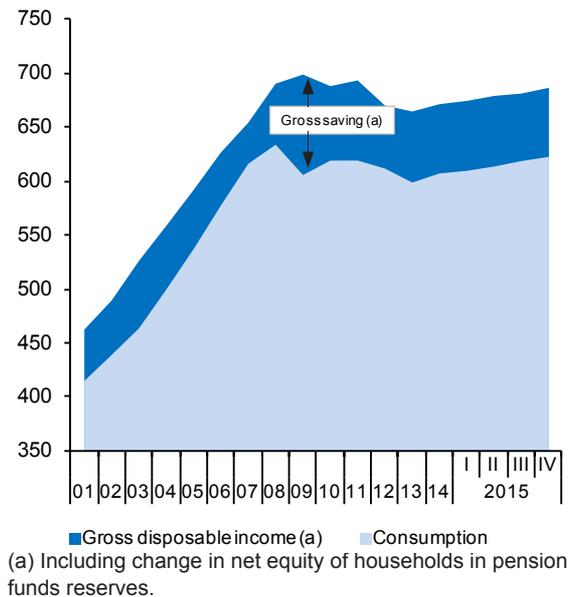
Chart 6.3.- Households: Income, consumption and saving
Annual percentage change and percentage of GDI, 4-quarter moving averages

- Saving rate (right)
- GDI (left)
- Consumption (left)
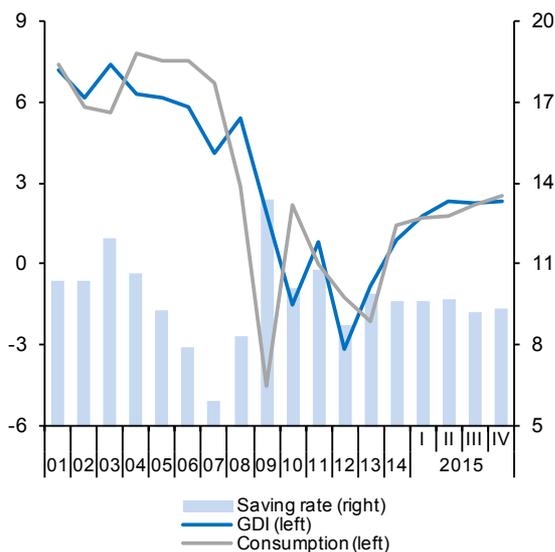
Chart 6.4.- Households: Saving, investment and deficit
Percentage of GDP, 4-quarter moving averages

- Net lending (+) / borrowing (-) (right)
- Saving rate (b) (left)
- Investment rate (left)

(b) Including net capital transfers.
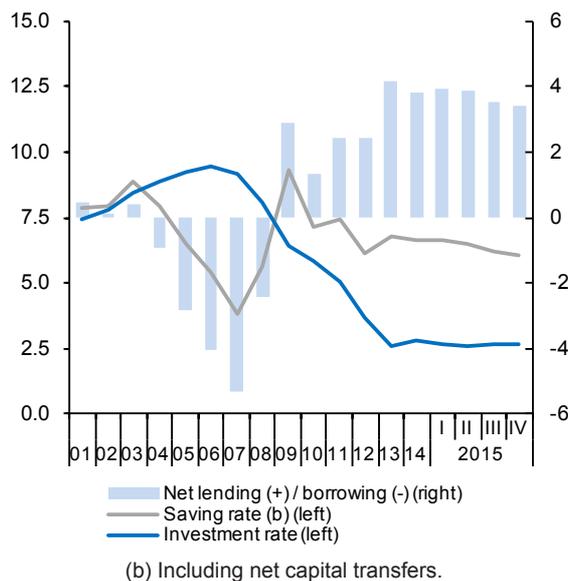
Table 7

National accounts: Non-financial corporations income and its disposition (ESA 2010, Base 2010)
Forecasts in blue

	Gross value added	Compensation of employees and net taxes on production (paid)	Gross operating surplus	Net property income	Net current transfers	Income taxes	Gross saving	Net capital transfers	Gross capital formation	Net lending (+) or borrowing (-)	Net lending or borrowing as a percentage of GDP	Profit share (percentage)	Investment rate (percentage)
	1	2	3=1-2	4	5	6	7=3+4+5-6	8	9	10=7+8-9	11	12=3/1	13=9/1
EUR Billions, 4-quarter cumulated operations													
2009	590.7	354.4	236.3	-59.9	-13.3	19.0	144.2	11.4	130.1	25.4	2.4	40.0	22.0
2010	581.8	346.0	235.8	-49.2	-8.6	16.2	161.8	10.2	132.0	40.0	3.7	40.5	22.7
2011	573.0	340.2	232.8	-63.4	-8.8	15.8	144.9	8.9	131.8	22.0	2.1	40.6	23.0
2012	557.4	320.9	236.5	-60.7	-9.7	19.8	146.4	6.4	139.9	12.9	1.2	42.4	25.1
2013	546.0	309.3	236.7	-43.6	-9.0	18.0	166.2	5.1	140.7	30.6	3.0	43.4	25.8
2014	550.9	314.4	236.6	-49.5	-6.6	18.6	161.9	4.6	150.9	15.6	1.5	42.9	27.4
2015	575.7	328.6	247.0	-39.6	-5.2	21.2	181.1	7.0	162.5	25.6	2.4	42.9	28.2
2016	591.5	340.3	251.1	-31.8	-6.0	20.8	192.5	5.2	177.5	20.2	1.8	42.5	30.0
2017	609.4	353.8	255.6	-28.5	-6.2	21.3	199.6	5.2	189.0	15.8	1.4	42.0	31.0
2014 I	545.4	308.4	237.0	-43.8	-8.3	18.1	166.8	5.5	143.6	28.6	2.8	43.5	26.3
II	547.4	310.0	237.4	-47.9	-7.7	19.4	162.3	4.9	143.4	23.9	2.3	43.4	26.2
III	548.6	311.6	236.9	-49.8	-7.2	19.2	160.8	4.8	145.3	20.2	2.0	43.2	26.5
IV	550.9	314.4	236.6	-49.5	-6.6	18.6	161.9	4.6	150.9	15.6	1.5	42.9	27.4
2015 I	556.3	317.4	238.9	-45.2	-6.3	18.0	169.3	4.0	154.3	19.0	1.8	42.9	27.7
II	562.2	320.7	241.5	-44.1	-6.0	19.1	172.4	4.9	160.3	16.9	1.6	43.0	28.5
III	569.6	324.4	245.2	-41.4	-5.5	20.0	178.3	6.0	161.0	23.3	2.2	43.1	28.3
IV	575.7	328.6	247.0	-39.6	-5.2	21.2	181.1	7.0	162.5	25.6	2.4	42.9	28.2
Annual percentage changes, 4-quarter cumulated operations											**Difference from one year ago**		
2009	-2.4	-4.1	0.4	-23.9	50.6	-25.4	17.8	-5.3	-27.2	--	6.3	1.1	-7.5
2010	-1.5	-2.4	-0.2	-17.9	-34.9	-15.0	12.2	-9.8	1.5	--	1.3	0.5	0.7
2011	-1.5	-1.7	-1.2	29.0	1.4	-2.4	-10.5	-13.0	-0.2	--	-1.6	0.1	0.3
2012	-2.7	-5.7	1.6	-4.3	10.4	25.3	1.0	-27.7	6.2	--	-0.8	1.8	2.1
2013	-2.0	-3.6	0.1	-28.2	-6.8	-9.2	13.6	-20.5	0.5	--	1.7	0.9	0.7
2014	0.9	1.6	-0.1	13.6	-27.0	3.5	-2.6	-10.9	7.2	--	-1.5	-0.4	1.6
2015	4.5	4.5	4.4	-20.1	-21.5	13.9	11.9	53.7	7.7	--	0.9	0.0	0.8
2016	2.7	3.6	1.7	-19.5	15.9	-1.8	6.3	-25.8	9.2	--	-0.6	-0.5	1.8
2017	3.0	3.9	1.8	-10.6	4.0	2.5	3.7	0.0	6.5	--	-0.4	-0.5	1.0
2014 I	-1.5	-2.5	0.0	-24.0	-10.8	-6.4	10.6	-19.8	3.1	--	1.0	0.6	1.2
II	-0.6	-1.0	-0.2	-7.7	-16.2	-1.2	3.3	-26.1	1.8	--	0.1	0.2	0.6
III	-0.1	0.2	-0.4	8.5	-19.4	4.4	-2.5	-22.2	1.8	--	-0.8	-0.2	0.5
IV	0.9	1.6	-0.1	13.6	-27.0	3.5	-2.6	-10.9	7.2	--	-1.5	-0.4	1.6
2015 I	2.0	2.9	0.8	3.2	-23.5	-0.6	1.5	-26.5	7.5	--	-1.0	-0.5	1.4
II	2.7	3.4	1.8	-8.0	-22.6	-1.8	6.2	-1.6	11.8	--	-0.7	-0.4	2.3
III	3.8	4.1	3.5	-16.8	-22.9	4.4	10.9	24.6	10.8	--	0.2	-0.1	1.8
IV	4.5	4.5	4.4	-20.1	-21.5	13.9	11.9	53.7	7.7	--	0.9	0.0	0.8

Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 7.1.- Non-financial corporations: Gross operating surplus
EUR Billions, 4-quarter cummulated

Gross Operating Surplus

■ Gross Value Added
■ Compensation of employees and net taxes on production (paid)
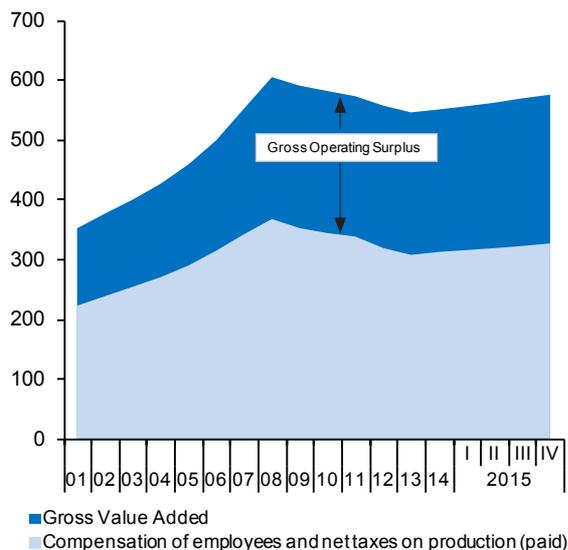
Chart 7.2.- Non-financial corporations: GVA, GOS and saving
Annual percentage change, 4-quarter moving averages

— Gross Value Added
— Gross Operating Surplus
— Saving
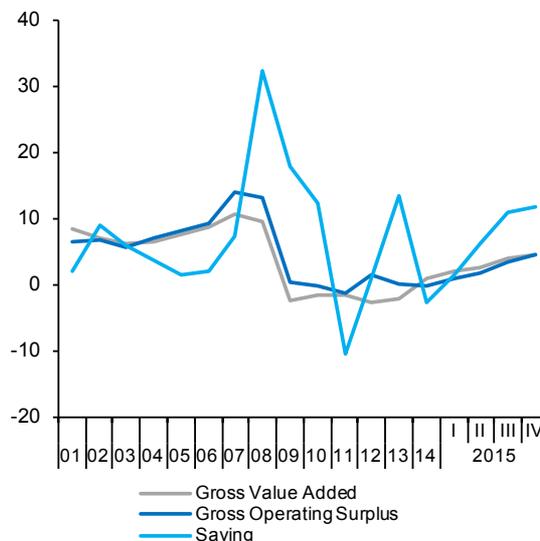
Chart 7.3.- Non-financial corporations: Saving, investment and deficit
Percentage of GDP, 4-quarter moving averages

■ Net lending (+) / borrowing (-) (right)
— Saving rate (a) (left)
— Investment rate (left)
(a) Including net capital transfers.
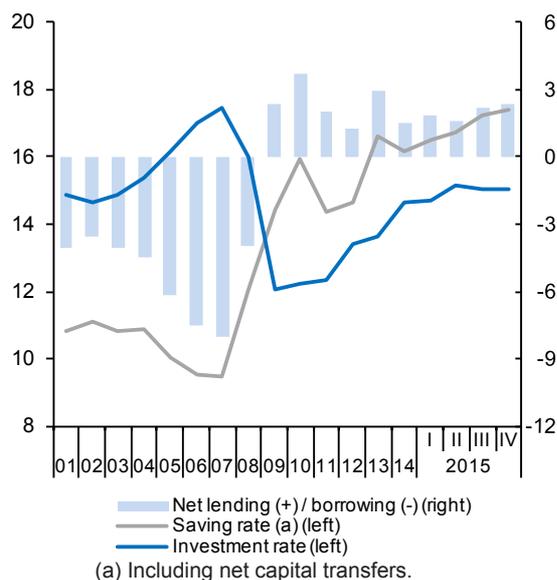
Chart 7.4.- Non-financial corporations: Profit share and investment rate
Percentage of non-financial corporations GVA, 4-quarter moving averages

— Profit share   — Investment rate
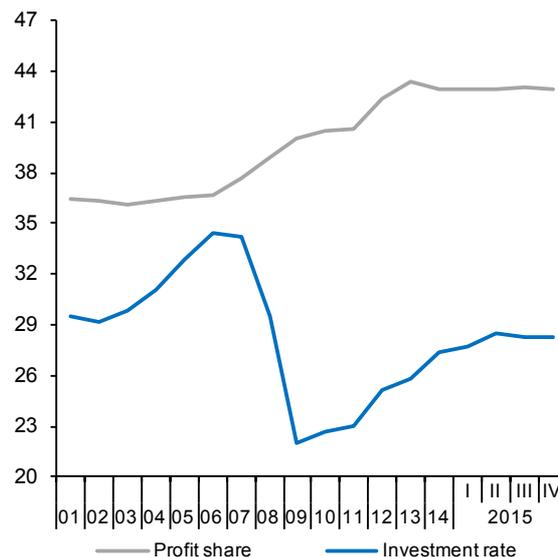
Table 8

National accounts: Public revenue, expenditure and deficit (ESA 2010, Base 2010)

Forecasts in blue

	Gross value added	Taxes on production and imports receivable	Taxes on income and weath receivable	Social contributions receivable	Compensation of employees	Interests and other capital incomes payable (net)	Social benefits payable	Subsidies and net current transfers payable	Gross disposable income	Final consumption expenditure	Gross saving	Net capital expenditure	Net lending(+)/net borrowing(-)	Net lending(+)/net borrowing(-) excluding financial entities bail-out
	1	2	3	4	5	6	7	8	9=1+2+3+4-5-6-7-8	10	11=9-10	12	13=11-12	14
EUR Billions, 4-quarter cumulated operations														
2009	151.0	91.9	101.6	139.7	125.6	8.0	155.1	23.9	171.7	221.0	-49.3	68.9	-118.2	-118.9
2010	152.0	110.1	100.6	138.6	124.9	10.8	162.7	21.4	181.5	221.7	-40.2	61.3	-101.4	-102.2
2011	150.3	106.2	102.0	137.8	122.6	16.2	164.2	22.6	170.7	219.7	-49.0	53.9	-102.9	-99.4
2012	142.2	108.2	106.3	131.9	113.9	20.3	168.5	18.7	167.1	205.2	-38.1	70.8	-108.9	-70.6
2013	142.9	114.6	105.0	128.2	114.7	24.1	170.6	20.5	160.8	202.4	-41.5	29.7	-71.2	-68.2
2014	143.1	118.9	105.4	130.1	114.9	25.7	170.7	20.5	165.6	202.4	-36.8	24.5	-61.3	-60.3
2015	147.1	126.1	109.5	132.3	118.7	24.6	170.3	21.8	179.5	208.7	-29.2	25.8	-55.0	-54.1
2016	152.1	132.2	110.9	135.5	122.8	21.1	171.4	21.4	193.9	213.7	-19.8	24.6	-44.4	-44.4
2017	155.7	139.3	114.6	139.7	125.8	18.6	173.4	21.7	209.9	219.0	-9.1	24.8	-33.9	-33.9
2014 I	142.8	115.9	105.6	128.6	114.6	24.7	170.2	20.8	162.6	202.6	-40.0	29.1	-69.1	-66.1
II	142.7	117.0	105.9	128.6	114.5	24.9	169.8	22.5	162.5	202.5	-40.0	25.9	-65.9	-65.6
III	143.0	118.0	106.2	129.2	114.8	24.9	169.1	21.3	166.3	203.0	-36.6	23.7	-60.3	-59.5
IV	143.1	118.9	105.4	130.1	114.9	25.7	170.7	20.5	165.6	202.4	-36.8	24.5	-61.3	-60.3
2015 I	144.1	119.7	106.1	130.2	115.9	26.1	170.6	21.6	165.9	203.7	-37.8	25.1	-62.9	-61.9
II	145.0	122.6	107.6	131.1	116.8	25.7	170.6	20.8	172.4	205.6	-33.3	25.5	-58.8	-57.7
III	145.5	124.5	109.0	131.5	117.2	25.4	170.7	21.1	176.0	206.6	-30.5	27.6	-58.1	-57.7
IV	147.1	126.1	109.5	132.3	118.7	24.6	170.3	21.8	179.5	208.7	-29.2	25.8	-55.0	-54.1
Percentage of GDP, 4-quarter cumulated operations														
2009	14.0	8.5	9.4	12.9	11.6	0.7	14.4	2.2	15.9	20.5	-4.6	6.4	-11.0	-11.0
2010	14.1	10.2	9.3	12.8	11.6	1.0	15.1	2.0	16.8	20.5	-3.7	5.7	-9.4	-9.5
2011	14.0	9.9	9.5	12.9	11.5	1.5	15.3	2.1	15.9	20.5	-4.6	5.0	-9.6	-9.3
2012	13.6	10.4	10.2	12.6	10.9	1.9	16.2	1.8	16.0	19.7	-3.7	6.8	-10.4	-6.8
2013	13.9	11.1	10.2	12.4	11.1	2.3	16.5	2.0	15.6	19.6	-4.0	2.9	-6.9	-6.6
2014	13.7	11.4	10.1	12.5	11.0	2.5	16.4	2.0	15.9	19.4	-3.5	2.4	-5.9	-5.8
2015	13.6	11.7	10.1	12.2	11.0	2.3	15.8	2.0	16.6	19.3	-2.7	2.4	-5.1	-5.0
2016	13.6	11.8	9.9	12.1	11.0	1.9	15.3	1.9	17.3	19.1	-1.8	2.2	-4.0	-4.0
2017	13.5	12.0	9.9	12.1	10.9	1.6	15.0	1.9	18.2	18.9	-0.8	2.1	-2.9	-2.9
2014 I	13.9	11.2	10.2	12.5	11.1	2.4	16.5	2.0	15.8	19.6	-3.9	2.8	-6.7	-6.4
II	13.8	11.3	10.3	12.4	11.1	2.4	16.4	2.2	15.7	19.6	-3.9	2.5	-6.4	-6.4
III	13.8	11.4	10.2	12.5	11.1	2.4	16.3	2.1	16.0	19.6	-3.5	2.3	-5.8	-5.7
IV	13.7	11.4	10.1	12.5	11.0	2.5	16.4	2.0	15.9	19.4	-3.5	2.4	-5.9	-5.8
2015 I	13.7	11.4	10.1	12.4	11.0	2.5	16.3	2.1	15.8	19.4	-3.6	2.4	-6.0	-5.9
II	13.7	11.6	10.2	12.4	11.0	2.4	16.1	2.0	16.3	19.4	-3.1	2.4	-5.5	-5.4
III	13.6	11.6	10.2	12.3	10.9	2.4	15.9	2.0	16.4	19.3	-2.8	2.6	-5.4	-5.4
IV	13.6	11.7	10.1	12.2	11.0	2.3	15.8	2.0	16.6	19.3	-2.7	2.4	-5.1	-5.0

Sources: INE (Quarterly National Accounts) and Funcas (Forecasts).

Chart 8.1.- Public sector: Revenue, expenditure and deficit (a)
Percentage of GDP, 4-quarter moving averages

- Net lending or borrowing (right)
- Revenue (left)
- Expenditure (left)
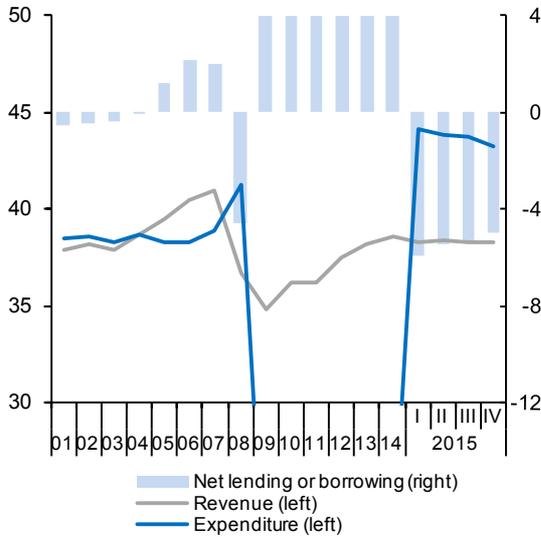
(a) Excluding financial entities bail-out expenditures.

Chart 8.2.- Public sector: Main revenues
Percentage of GDP, 4-quarter moving averages

- Taxes on production and imports
- Taxes on income and weath
- Social contributions
- Other
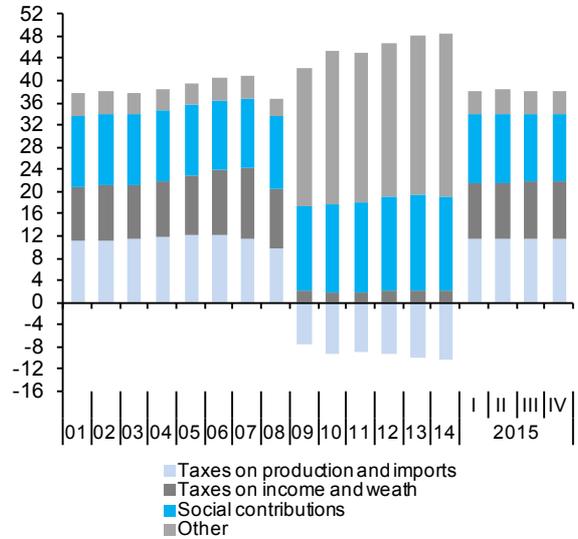
Chart 8.3.- Public sector: Main expenditures
Percentage of GDP, 4-quarter moving averages

- Compensation of employees
- Interests and other capital (net)
- Social benefits
- Gross fixed capital formation
- Rest
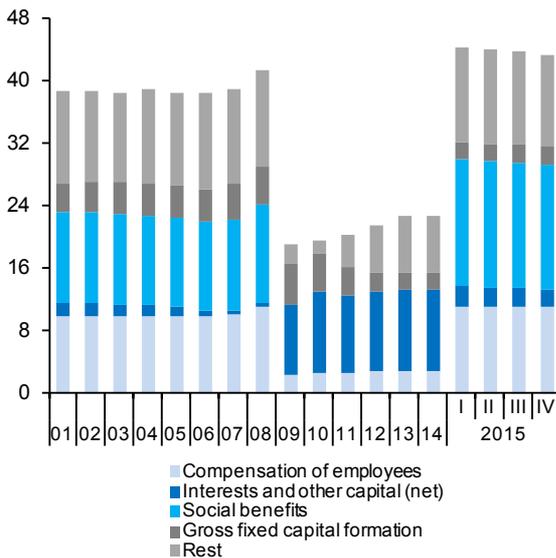
Chart 8.4.- Public sector: Saving, investment and deficit (a)
Percentage of GDP, 4-quarter moving averages

- Net lending or borrowing (right)
- Saving (b) (left)
- Gross capital formation (left)
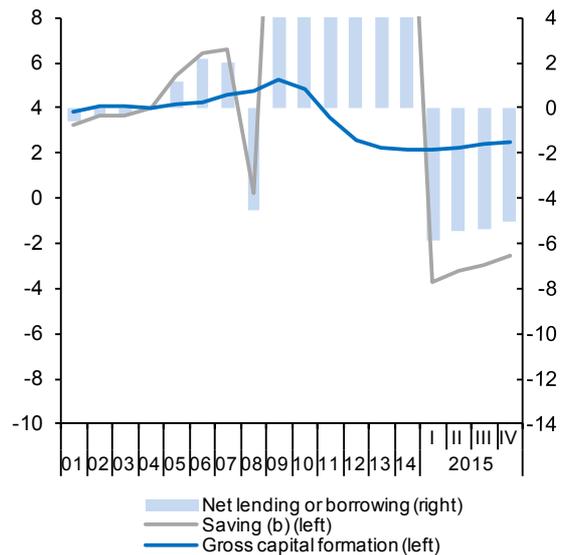
(a) Excluding financial entities bail-out expenditures.
(b) Including net capital transfers.

Table 9
Public sector balances, by level of Government
Forecasts in blue

		Deficit					Debt				
		Central Government (a)	Regional Governments	Local Governments	Social Security	TOTAL Government (a)	Central Government	Regional Governments	Local Governments	Social Security	TOTAL Government (consolidated)
		EUR Billions, 4-quarter cumulated operations					**EUR Billions, end of period**				
2009		-99.1	-21.7	-5.9	7.8	-118.9	487.7	92.4	34.7	17.2	568.7
2010		-52.5	-40.2	-7.1	-2.4	-102.2	551.6	123.4	35.5	17.2	649.3
2011		-35.0	-54.8	-8.5	-1.1	-99.4	624.2	145.1	36.8	17.2	743.5
2012		-44.3	-19.4	3.3	-10.2	-70.6	761.9	188.4	44.0	17.2	890.7
2013		-46.2	-16.2	5.7	-11.5	-68.2	837.9	209.8	42.1	17.2	966.0
2014		-37.2	-18.2	5.9	-10.9	-60.3	895.7	236.8	38.3	17.2	1,033.7
2015		-27.3	-18.0	4.8	-13.6	-54.1	940.5	261.5	35.1	17.2	1,072.2
2016		-19.8	-11.2	3.4	-16.8	-44.4	--	--	--	--	1,109.3
2017		-12.5	-6.9	2.9	-17.3	-33.9	--	--	--	--	1,143.3
2014	I	-46.9	-16.9	5.3	-10.6	-69.1	866.0	225.0	41.9	17.2	995.7
	II	-39.2	-18.3	5.4	-13.8	-65.9	885.1	228.2	42.0	17.2	1,012.5
	III	-39.8	-18.2	6.0	-8.3	-60.3	891.8	232.1	40.8	17.2	1,020.1
	IV	-38.2	-18.2	5.9	-10.9	-61.3	895.7	236.8	38.3	17.2	1,033.7
2015	I	-40.3	-17.1	6.0	-11.5	-62.9	912.9	240.4	38.3	17.2	1,051.8
	II	-35.5	-16.5	6.8	-13.7	-58.8	922.7	249.9	37.7	17.2	1,057.2
	III	-32.0	-17.9	5.4	-13.6	-58.1	938.8	253.2	36.9	17.2	1,067.3
	IV	-28.2	-18.0	4.8	-13.6	-55.0	940.5	261.5	35.1	17.2	1,072.2
		Percentage of GDP, 4-quarter cumulated operations					**Percentage of GDP**				
2009		-9.2	-2.0	-0.5	0.7	-11.0	45.2	8.6	3.2	1.6	52.7
2010		-4.9	-3.7	-0.7	-0.2	-9.5	51.0	11.4	3.3	1.6	60.1
2011		-3.3	-5.1	-0.8	-0.1	-9.3	58.3	13.6	3.4	1.6	69.5
2012		-4.2	-1.9	0.3	-1.0	-6.8	73.1	18.1	4.2	1.6	85.4
2013		-4.5	-1.6	0.6	-1.1	-6.6	81.3	20.3	4.1	1.7	93.7
2014		-3.6	-1.7	0.6	-1.0	-5.8	86.0	22.7	3.7	1.7	99.3
2015		-2.5	-1.7	0.4	-1.3	-5.0	87.0	24.2	3.3	1.6	99.2
2016		-1.8	-1.0	0.3	-1.5	-4.0	--	--	--	--	99.2
2017		-1.1	-0.6	0.3	-1.5	-2.9	--	--	--	--	98.9
2014	I	-4.6	-1.6	0.5	-1.0	-6.7	84.0	21.8	4.1	1.7	96.6
	II	-3.8	-1.8	0.5	-1.3	-6.4	85.7	22.1	4.1	1.7	98.0
	III	-3.8	-1.8	0.6	-0.8	-5.8	86.0	22.4	3.9	1.7	98.4
	IV	-3.7	-1.7	0.6	-1.0	-5.9	86.0	22.7	3.7	1.7	99.3
2015	I	-3.8	-1.6	0.6	-1.1	-6.0	87.0	22.9	3.6	1.6	100.2
	II	-3.3	-1.6	0.6	-1.3	-5.5	87.1	23.6	3.6	1.6	99.8
	III	-3.0	-1.7	0.5	-1.3	-5.4	87.7	23.6	3.4	1.6	99.7
	IV	-2.7	-1.6	0.5	-1.2	-5.0	87.0	24.2	3.3	1.6	99.2

(a) Excluding financial entities bail-out expenditures.

Sources: National Statistics Institute, Bank of Spain (Financial Accounts of the Spanish Economy) and Funcas (Forecasts).

Chart 9.1.- Government deficit

Percent of GDP, 4-quarter cumulated operations

Central   Regional
Local   Social Security
TOTAL
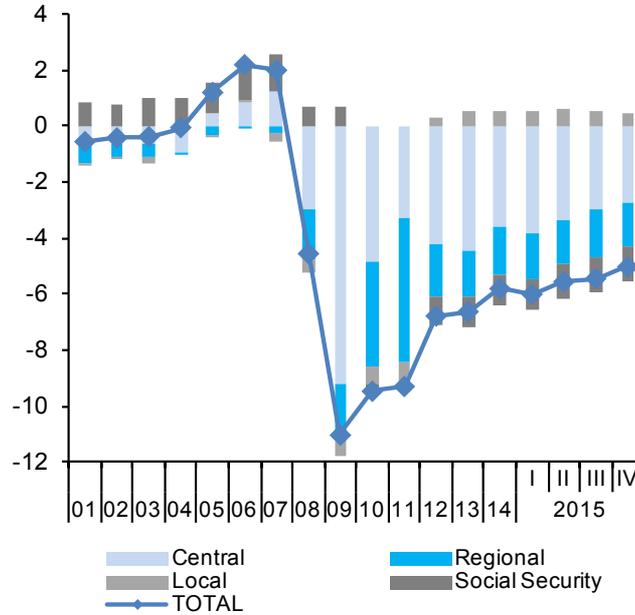
Chart 9.2.- Government debt

Percent of GDP

Central   Regional
Local   Social Security
TOTAL consolidated
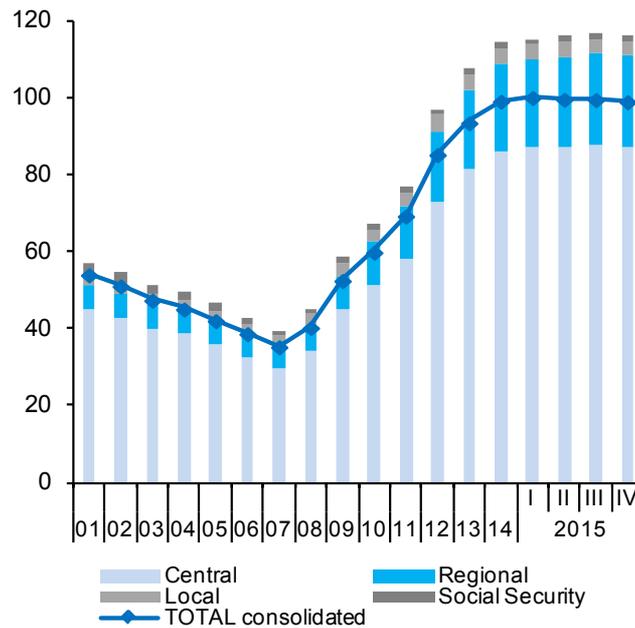
Table 10
General activity and industrial sector indicators (a)

		General activity indicators				Industrial sector indicators					
		Economic Sentiment Index	Composite PMI index	Social Security affiliates (f)	Electricity consumption (temperature adjusted)	Industrial production index	Social Security affiliates in industry	Manufacturing PMI index	Industrial confidence index	Turnover index deflated	Industrial orders
		Index	Index	Thousands	1000 GWH (smoothed)	2010=100	Thousands	Index	Balance of responses	2010=100 (smoothed)	Balance of responses
2009		82.6	40.9	17,657	256.9	99.2	2,411	40.9	-30.8	96.5	-55.2
2010		93.1	50.0	17,244	263.8	100.0	2,295	50.6	-13.8	100.0	-36.7
2011		93.1	46.6	16,970	261.3	98.4	2,232	47.3	-12.5	101.1	-30.7
2012		88.4	43.1	16,335	255.7	91.9	2,114	43.8	-17.5	97.0	-37.1
2013		92.5	48.3	15,855	250.2	90.5	2,022	48.5	-13.9	93.8	-30.6
2014		102.4	55.1	16,111	249.8	91.6	2,023	53.2	-7.1	95.1	-16.4
2015		108.8	56.8	16,642	253.7	94.7	2,067	53.6	-0.3	96.5	-5.5
2016 (b)		107.0	55.0	16,819	89.3	95.7	2,091	54.1	-2.0	90.6	-5.0
2014	III	103.2	56.0	16,163	62.6	91.6	2,026	53.1	-5.7	95.9	-14.6
	IV	103.9	54.5	16,289	62.7	91.8	2,033	53.7	-5.3	94.2	-13.8
2015	I	107.3	56.6	16,431	62.9	93.2	2,046	54.4	-3.2	95.9	-10.5
	II	109.3	57.7	16,598	63.2	94.6	2,061	54.9	0.9	97.0	-2.3
	III	109.1	57.2	16,708	63.4	95.2	2,074	52.9	0.7	96.0	-5.3
	IV	109.6	55.5	16,829	63.5	95.7	2,088	52.5	0.3	97.0	-4.0
2016	I	107.3	55.0	16,939	63.6	95.8	2,105	54.3	-1.9	95.9	-5.1
	II (b)	106.1	55.2	17,004	21.3	--	2,115	53.5	-2.2	--	-4.5
2016	Feb	107.3	54.5	16,939	21.2	95.3	2,105	54.1	-2.7	95.8	-5.0
	Mar	106.9	55.1	16,972	21.2	96.5	2,109	53.4	-1.6	--	-5.4
	Apr	106.1	55.2	17,004	21.3	--	2,115	53.5	-2.2	--	-4.5
Percentage changes (c)											
2009		--	--	-6.2	-4.7	-15.8	-10.6	--	--	-19.6	--
2010		--	--	-2.3	2.7	0.8	-4.8	--	--	3.6	--
2011		--	--	-1.6	-0.9	-1.6	-2.7	--	--	1.1	--
2012		--	--	-3.7	-2.2	-6.7	-5.3	--	--	-4.1	--
2013		--	--	-2.9	-2.1	-1.6	-4.4	--	--	-3.3	--
2014		--	--	1.6	-0.2	1.3	0.1	--	--	1.4	--
2015		--	--	3.3	1.6	3.4	2.2	--	--	1.5	--
2016 (d)		--	--	3.0	0.2	2.6	2.8	--	--	0.4	--
2014	III	--	--	3.0	-0.5	-0.9	1.4	--	--	-0.2	--
	IV	--	--	3.2	0.7	1.0	1.4	--	--	-0.3	--
2015	I	--	--	3.5	1.7	6.2	2.6	--	--	1.9	--
	II	--	--	4.1	1.7	6.1	3.1	--	--	2.6	--
	III	--	--	2.7	1.5	2.2	2.4	--	--	0.8	--
	IV	--	--	2.9	0.4	2.3	2.8	--	--	-0.3	--
2016	I	--	--	2.6	0.7	0.5	3.2	--	--	-1.0	--
	II (e)	--	--	1.5	1.0	--	2.0	--	--	--	--
2016	Feb	--	--	0.2	0.8	-0.3	0.2	--	--	-0.1	--
	Mar	--	--	0.2	1.4	1.2	0.2	--	--	--	--
	Apr	--	--	0.2	0.5	--	0.3	--	--	--	--

(a) Seasonally adjusted, except for annual data. (b) Period with available data. (c) Annualized percent change from the previous quarter for quarterly data, non-annualized percent change from the previous month for monthly data, unless otherwise indicated. (d) Growth of available period over the same period of the previous year. (e) Annualized growth of the average of available months over the monthly average of the previous quarter. (f) Excluding domestic service workers and non-profesional caregivers.

Sources: European Commission, Markit Economics Ltd., M. of Labour, M. of Industry, National Statistics Institute, REE and Funcas.

Chart 10.1.- General activity indicators (I)
Annualized percent change from previous period

- Social Security affiliates
- Electricity consumption
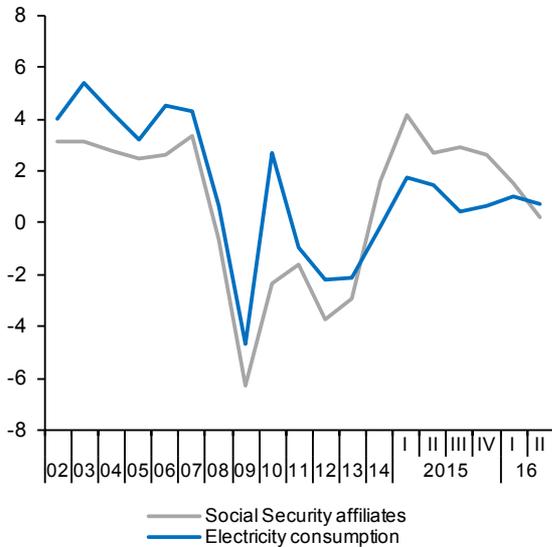
Chart 10.2.- General activity indicators (II)
Index

- Economic Sentiment (left)
- Composite PMI (right)
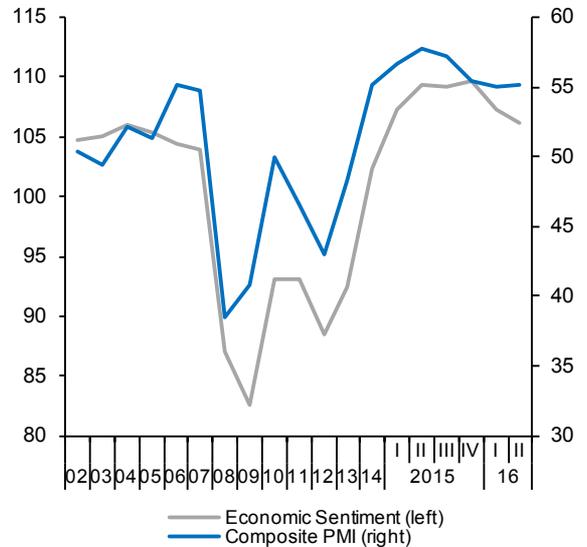
Chart 10.3.- Industrial sector indicators (I)
Annualized percent change from previous period

- Social Security affiliates in industry
- IPI
- Turnover
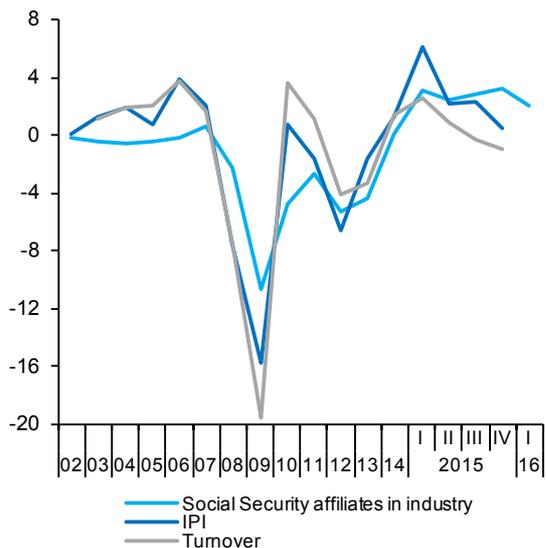
Chart 10.4.- Industrial sector indicators (II)
Index

- Manufacturing PMI (left)
- Industrial confidence (right)
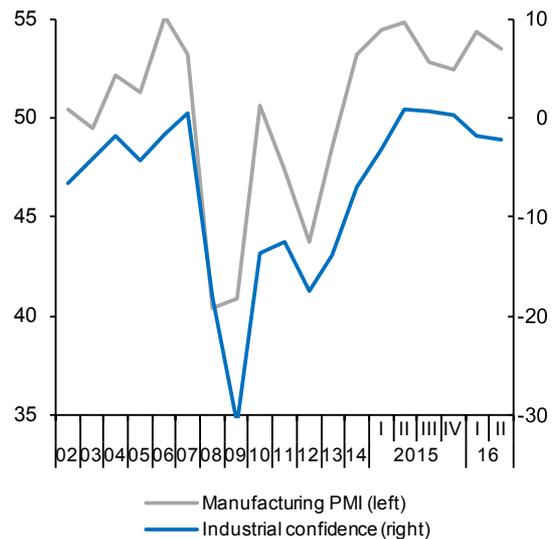
Table 11

Construction and services sector indicators (a)

	Construction indicators						Service sector indicators					
	Social Security affiliates in construction	Consumption of cement	Industrial production index construction materials	Construction confidence index	Official tenders (f)	Housing permits (f)	Social Security affiliates in services (g)	Turnover index (nominal)	Services PMI index	Hotel overnight stays	Passenger air transport	Services confidence index
	Thousands	**Million Tons**	**2010=100 (smoothed)**	**Balance of responses**	**EUR Billions**	**Million m²**	**Thousands**	**2010=100 (smoothed)**	**Index**	**Million (smoothed)**	**Million (smoothed)**	**Balance of responses**
2009	1,800	28.9	115.9	-32.3	39.6	19.4	12,247	99.2	41.0	251.0	186.3	-29.6
2010	1,559	24.5	100.0	-29.7	26.2	16.3	12,186	100.0	49.3	267.2	191.7	-22.4
2011	1,369	20.4	91.6	-55.4	13.7	14.1	12,176	98.9	46.5	286.8	203.3	-20.8
2012	1,136	13.6	66.9	-54.9	7.4	8.5	11,907	92.8	43.1	280.7	193.2	-21.5
2013	997	10.7	63.1	-55.6	9.2	6.8	11,728	91.0	48.3	286.0	186.5	-15.3
2014	980	10.8	62.1	-41.4	13.1	6.9	11,995	93.3	55.2	295.3	194.9	9.9
2015	1,027	11.4	66.9	-25.3	10.1	9.9	12,432	97.8	57.3	308.3	206.6	19.4
2016 (b)	1,029	10.3	66.2	-33.2	8.6	12.6	12,573	90.7	54.8	210.5	170.1	18.3
2014 III	983	2.8	61.2	-35.0	3.2	1.9	12,045	93.7	56.7	73.9	48.8	8.8
IV	995	2.8	61.8	-22.6	3.0	1.5	12,148	94.7	54.3	74.5	49.3	14.0
2015 I	1,015	2.8	63.9	-23.3	2.8	2.1	12,276	95.9	56.7	75.3	49.9	17.5
II	1,027	2.9	66.1	-27.7	2.6	2.5	12,390	97.2	58.3	76.2	50.8	20.1
III	1,029	2.8	68.0	-28.5	2.3	2.5	12,484	98.3	58.1	77.6	52.0	19.7
IV	1,036	2.9	69.1	-21.7	2.3	2.7	12,580	98.9	55.9	79.3	53.6	20.2
2016 I	1,042	2.8	69.7	-31.7	2.4	3.2	12,673	99.3	54.7	81.3	55.3	18.8
II (b)	1,047	--	--	-37.6	--	--	12,723	--	55.1	--	--	16.5
2016 Feb	1,043	1.0	69.7	-22.7	0.5	1.2	12,672	99.3	54.1	27.1	18.4	18.5
Mar	1,042	0.9	69.8	-42.5	1.1	--	12,702	--	55.3	27.3	18.6	19.3
Apr	1,047	--	--	-37.6	--	--	12,723	--	55.1	--	--	16.5
Percentage changes (c)												
2009	-23.1	-32.3	-25.2	--	-0.4	-56.8	-3.1	-13.4	--	-6.5	-7.9	--
2010	-13.4	-15.4	-13.7	--	-33.9	-16.1	-0.5	0.8	--	6.4	2.9	--
2011	-12.2	-16.4	-8.4	--	-47.9	-13.2	-0.1	-1.1	--	7.3	6.0	--
2012	-17.0	-33.6	-27.0	--	-45.5	-39.9	-2.2	-6.2	--	-2.1	-5.0	--
2013	-12.2	-20.9	-5.7	--	23.2	-20.3	-1.5	-2.0	--	1.9	-3.5	--
2014	-1.7	0.8	-1.4	--	42.6	2.2	2.3	2.6	--	3.2	4.6	--
2015	4.7	5.6	7.7	--	-22.7	42.6	3.6	4.8	--	4.4	6.0	--
2016 (d)	2.5	-0.5	7.7	--	-19.8	42.9	3.2	3.4	--	13.3	14.4	--
2014 III	3.6	18.5	-8.1	--	30.5	21.2	3.4	3.7	--	2.5	5.2	--
IV	5.0	-0.4	4.0	--	2.0	-8.0	3.5	4.4	--	3.4	4.2	--
2015 I	8.5	5.8	13.9	--	-16.3	23.6	4.3	5.4	--	4.0	5.2	--
II	4.8	7.6	14.8	--	-24.3	37.3	3.7	5.5	--	5.2	7.4	--
III	0.6	-11.8	11.8	--	-28.9	31.9	3.1	4.3	--	7.1	9.7	--
IV	2.8	25.4	7.1	--	-24.2	85.9	3.1	2.8	--	9.3	12.3	--
2016 I	2.3	-14.3	3.3	--	-14.8	42.8	3.0	1.4	--	10.2	13.5	--
II (e)	1.9	--	--	--	--	--	1.6	--	--	--	--	--
2016 Feb	0.3	2.3	0.2	--	-18.9	43.8	0.2	1.9	--	0.8	1.1	--
Mar	-0.1	-3.7	0.2	--	-17.4	--	0.2	--	--	0.8	1.0	--
Apr	0.4	--	--	--	--	--	0.2	--	--	--	--	--

(a) Seasonally adjusted, except for annual data and (f). (b) Period with available data. (c) Annualized percent change from the previous quarter for quarterly data, non-annualized percent change from the previous month for monthly data, unless otherwise indicated. (d) Growth of available period over the same period of the previous year. (e) Annualized growth of the average of available months over the monthly average of the previous quarter. (f) Percent changes are over the same period of the previous year. (g) Excluding domestic service workers and non-profesional caregivers.

Sources: European Commision, Markit Economics Ltd., M. of Labour, M. of Public Works, National Statistics Institute, AENA, OFICEMEN, SEOPAN and Funcas.

Chart 11.1.- Construction indicators (I)
Annualized percentage changes from previous period and index

- S. Security affiliates in construction (left)
- Construction confidence index (right)
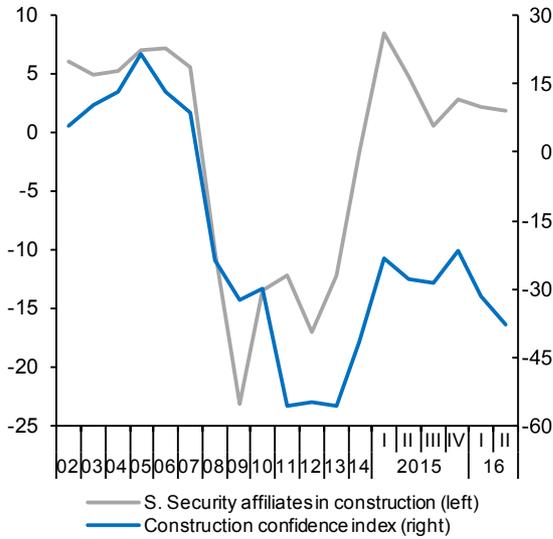
Chart 11.2.- Construction indicators (II)
Annualized percentage changes from previous period

- Official tenders
- Housing permits
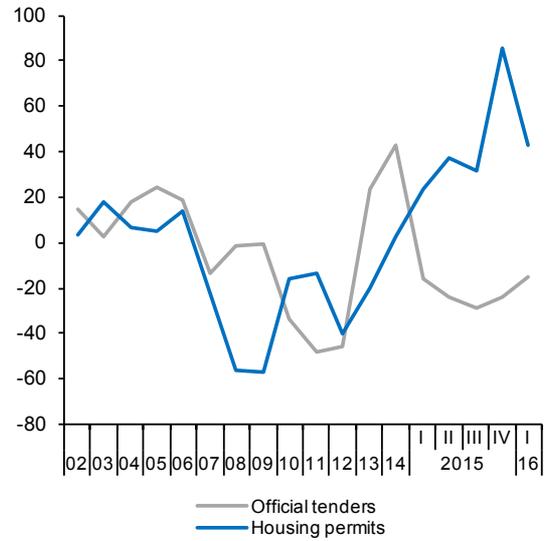
Chart 11.3.- Services indicators (I)
Percentage changes from previous period

- Social Security affiliates in services
- Turnover
- Hotel overnight stays
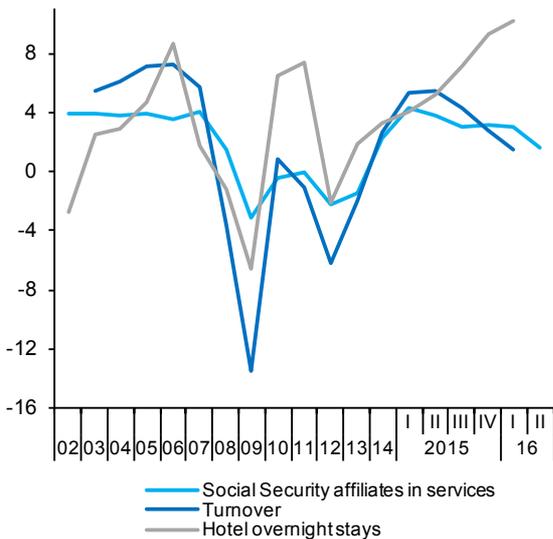
Chart 11.4.- Services indicators (II)
Index

- Services PMI (left)
- Services confidence (right)
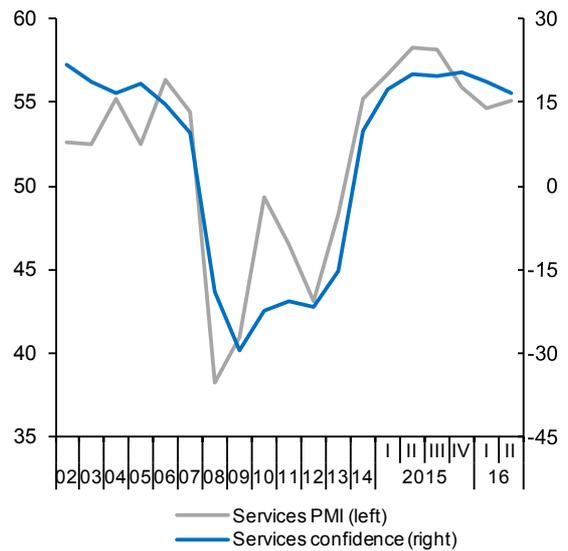
Table 12

Consumption and investment indicators (a)

|		Consumption indicators				Investment in equipment indicators		
		Retail sales deflated	Car registrations	Consumer confidence index	Hotel overnight stays by residents in Spain	Industrial orders for consumer goods	Cargo vehicles registrations	Industrial orders for investment goods	Import of capital goods (volume)
		2010=100 (smoothed)	Thousands (smoothed)	Balance of responses	Million (smoothed)	Balance of responses	Thousands (smoothed)	Balance of responses	2005=100 (smoothed)
2009		101.0	971.2	-28.2	109.8	-40.2	142.1	-50.8	66.2
2010		100.0	1,000.1	-20.9	113.2	-26.7	152.1	-31.1	70.3
2011		94.6	808.3	-17.1	111.5	-21.7	142.0	-23.0	68.0
2012		87.8	710.6	-31.7	102.1	-24.2	107.7	-38.6	60.6
2013		84.4	742.3	-25.3	100.6	-21.8	107.6	-33.5	68.9
2014		85.3	890.1	-8.9	104.7	-9.2	137.5	-16.5	81.6
2015		87.9	1,094.0	0.3	110.3	-3.1	180.3	0.2	93.3
2016	(b)	86.2	305.0	-2.9	21.3	0.5	42.7	-0.8	86.9
2014	III	85.3	227.9	-7.9	26.2	-7.3	35.0	-16.7	82.9
	IV	85.9	241.3	-9.6	26.6	-10.1	37.8	-11.3	85.7
2015	I	86.5	255.4	-0.6	27.0	-4.7	41.3	-9.1	90.1
	II	87.2	266.8	1.6	27.3	-5.4	44.3	5.7	93.2
	III	88.0	277.1	-1.3	27.5	-3.4	46.0	-0.7	94.2
	IV	88.7	286.2	1.6	27.9	1.1	46.1	4.9	93.8
2016	I	89.3	291.4	-2.5	28.5	1.0	44.9	-2.3	93.7
	II (b)	--	--	-4.3	--	-1.1	--	3.7	--
2016 Feb		89.3	97.2	-1.4	9.5	0.6	15.0	1.1	--
Mar		89.5	97.4	-5.1	9.6	-0.1	14.8	-7.0	--
Apr		--	--	-4.3	--	-1.1	--	3.7	--
Percentage changes (c)									
2009		-5.5	-18.1	--	-3.0	--	-40.0	--	-26.4
2010		-1.0	3.0	--	3.2	--	7.0	--	6.1
2011		-5.4	-19.2	--	-1.5	--	-6.6	--	-3.2
2012		-7.2	-12.1	--	-8.4	--	-24.2	--	-10.9
2013		-3.8	4.5	--	-1.4	--	-0.1	--	13.7
2014		1.0	19.9	--	4.1	--	27.8	--	18.4
2015		3.0	22.9	--	5.3	--	31.1	--	14.4
2016	(d)	-1.8	9.7	--	15.2	--	1.5	--	-0.5
2014	III	2.6	21.4	--	6.5	--	23.3	--	7.4
	IV	2.8	25.7	--	6.4	--	35.7	--	14.0
2015	I	2.9	25.3	--	5.2	--	42.9	--	22.1
	II	3.1	19.2	--	4.6	--	32.6	--	14.8
	III	3.5	16.3	--	3.9	--	15.9	--	4.4
	IV	3.4	13.8	--	5.2	--	1.2	--	-2.0
2016	I	3.0	7.5	--	8.5	--	-10.2	--	-0.5
	II (e)	--	--	--	--	--	--	--	--
2016 Feb		0.2	0.4	--	0.7	--	-1.2	--	0.1
Mar		0.2	0.3	--	0.7	--	-1.3	--	--
Apr		--	--	--	--	--	--	--	--

(a) Seasonally adjusted, except for annual data. (b) Period with available data. (c) Annualized percent change from the previous quarter for quarterly data, non-annualized percent change from the previous month for monthly data, unless otherwise indicated. (d) Growth of available period over the same period of the previous year. (e) Annualized growth of the average of available months over the monthly average of the previous quarter.

Sources: European Commission, M. of Economy, M. of Industry, National Statistics Institute, DGT, ANFAC and Funcas.

Chart 12.1.- Consumption indicators

Percent change from previous period and balance of responses

Retail sales (left)

Industrial orders for consumer goods (right, balance of responses)

Consumer confidence index (right, balance of responses)
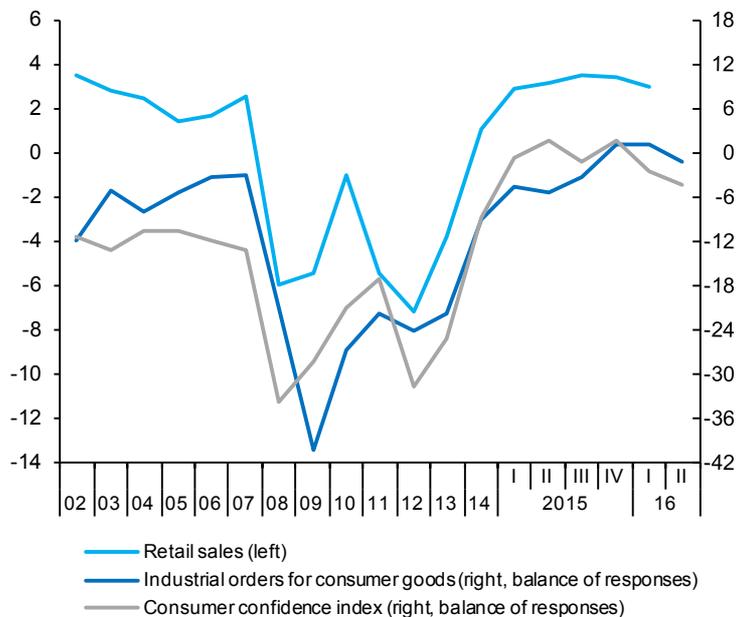
Chart 12.2.- Investment indicators

Percent change from previous period and balance of responses

Imports of capital goods

Industrial orders for investment goods (balance of responses)

FUNCAS Economic Trends and Statistics Department
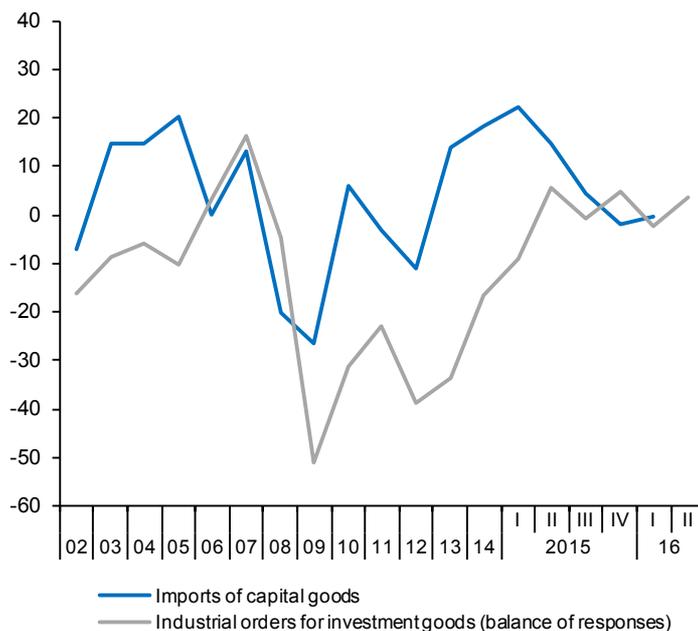
Table 13a
Labour market (I)
Forecasts in blue

		Population aged 16-64	Labour force		Employment		Unemployment		Participation rate 16-64 (a)	Employment rate 16-64 (b)	Unemployment rate (c)			
			Original	Seasonally adjusted	Original	Seasonally adjusted	Original	Seasonally adjusted			Total	Aged 16-24	Spanish	Foreign
											Seasonally adjusted			
		1	2=4+6	3=5+7	4	5	6	7	8	9	10=7/3	11	12	13
		Million							**Percentage**					
2009		31.2	23.3	--	19.1	--	4.2	--	74.1	60.8	17.9	37.7	16.0	28.2
2010		31.1	23.4	--	18.7	--	4.6	--	74.6	59.7	19.9	41.5	18.1	29.9
2011		31.1	23.4	--	18.4	--	5.0	--	74.9	58.8	21.4	46.2	19.5	32.6
2012		30.9	23.4	--	17.6	--	5.8	--	75.3	56.5	24.8	52.9	23.0	35.9
2013		30.6	23.2	--	17.1	--	6.1	--	75.3	55.6	26.1	55.5	24.4	37.0
2014		30.3	23.0	--	17.3	--	5.6	--	75.3	56.8	24.4	53.2	23.0	34.5
2015		30.2	22.9	--	17.9	--	5.1	--	75.5	58.7	22.1	48.3	20.9	30.5
2016		30.1	22.8	--	18.3	--	4.6	--	75.4	60.3	19.9	--	--	--
2017		30.0	22.8	--	18.7	--	4.1	--	75.5	61.7	18.2	--	--	--
2014	II	30.3	23.0	22.9	17.4	17.3	5.6	5.6	75.2	56.8	24.5	52.7	23.1	34.4
	III	30.3	22.9	22.9	17.5	17.4	5.4	5.5	75.2	57.3	24.1	53.5	22.7	33.8
	IV	30.3	23.0	23.0	17.6	17.6	5.5	5.4	75.5	57.6	23.7	51.8	22.4	33.3
2015	I	30.2	22.9	22.9	17.5	17.7	5.4	5.3	75.4	57.3	23.1	50.2	21.9	32.0
	II	30.2	23.0	23.0	17.9	17.8	5.1	5.1	75.6	58.7	22.4	48.9	21.2	31.1
	III	30.2	22.9	22.9	18.0	17.9	4.9	4.9	75.4	59.4	21.6	47.7	20.5	29.9
	IV	30.1	22.9	22.9	18.1	18.1	4.8	4.8	75.3	59.5	20.9	46.2	19.9	28.4
2016	I	30.1	22.8	22.9	18.0	18.2	4.8	4.6	75.5	59.4	20.3	45.3	19.2	28.1
		Percentage changes (d)							**Difference from one year ago**					
2009		0.4	0.8	--	-6.7	--	60.0	--	0.3	-4.6	6.6	13.3	5.8	10.8
2010		-0.1	0.4	--	-2.0	--	11.7	--	0.4	-1.2	2.0	3.8	2.1	1.7
2011		-0.2	0.3	--	-1.6	--	8.0	--	0.4	-0.9	1.5	4.7	1.4	2.7
2012		-0.5	0.0	--	-4.3	--	15.9	--	0.4	-2.3	3.4	6.7	3.5	3.3
2013		-1.1	-1.1	--	-2.8	--	4.1	--	0.0	-0.9	1.3	2.6	1.5	1.1
2014		-0.9	-1.0	--	1.2	--	-7.3	--	0.0	1.2	-1.7	-2.3	-1.4	-2.5
2015		-0.5	-0.1	--	3.0	--	-9.9	--	0.2	1.9	-2.4	-4.9	-2.1	-4.0
2016		-0.4	-0.3	--	2.4	--	-10.0	--	0.0	1.6	-2.1	--	--	--
2017		-0.3	-0.2	--	2.0	--	-8.8	--	0.1	1.4	-1.7	--	--	--
2014	II	-1.0	-1.0	0.3	1.1	4.4	-7.0	-11.3	0.1	1.3	-1.6	-2.7	-1.4	-1.6
	III	-0.8	-1.0	-0.4	1.6	1.8	-8.7	-6.9	-0.2	1.3	-1.9	-1.7	-1.6	-3.7
	IV	-0.6	-0.2	1.5	2.5	3.6	-8.1	-5.0	0.3	1.7	-2.0	-3.1	-1.8	-3.2
2015	I	-0.4	0.1	-0.9	3.0	2.3	-8.2	-10.7	0.3	1.8	-2.2	-4.2	-1.9	-4.1
	II	-0.5	0.2	0.4	3.0	4.0	-8.4	-11.1	0.4	1.9	-2.1	-3.8	-1.9	-3.2
	III	-0.5	-0.1	-1.4	3.1	2.6	-10.6	-14.3	0.2	2.1	-2.5	-5.8	-2.2	-3.9
	IV	-0.5	-0.7	-0.6	3.0	3.1	-12.4	-13.2	-0.2	1.9	-2.8	-5.5	-2.5	-4.8
2016	I	-0.5	-0.3	0.5	3.3	3.5	-12.0	-10.5	0.1	2.1	-2.8	-4.9	-2.6	-3.9

(a) Labour force aged 16-64 over population aged 16-64. (b) Employed aged 16-64 over population aged 16-64. (c) Unemployed in each group over labour force in that group. (d) Annual percentage changes for original data; annualized quarterly percentage changes for S.A. data.

Sources: INE (Labour Force Survey) and Funcas.

Chart 13a.1.- Labour force, Employment and Unemployment, SA
Annual / annualized quarterly growth rates and percentage of active population

Unemployment rate (right)   Labour force (growth rate, left)
Employed (growth rate, left)
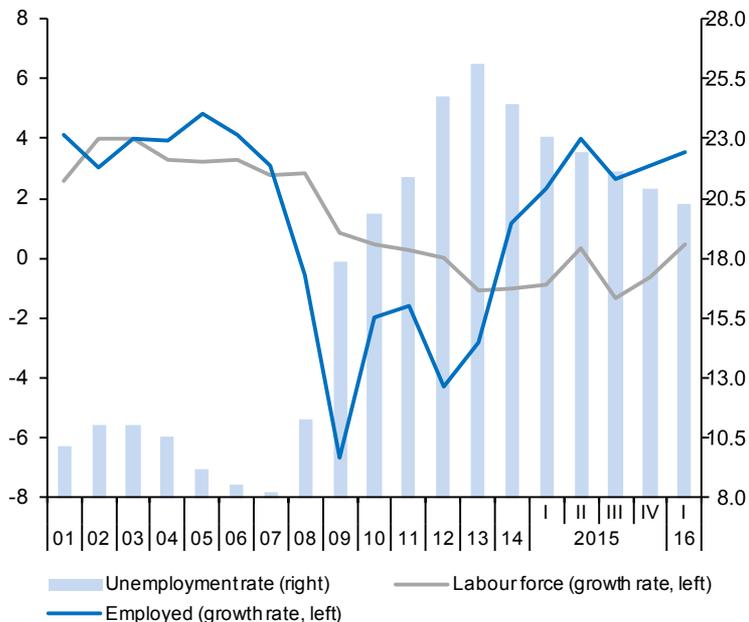
Chart 13a.2.- Unemployment rates, SA
Percentage

Total   Aged 16-24   Spanish   Foreign
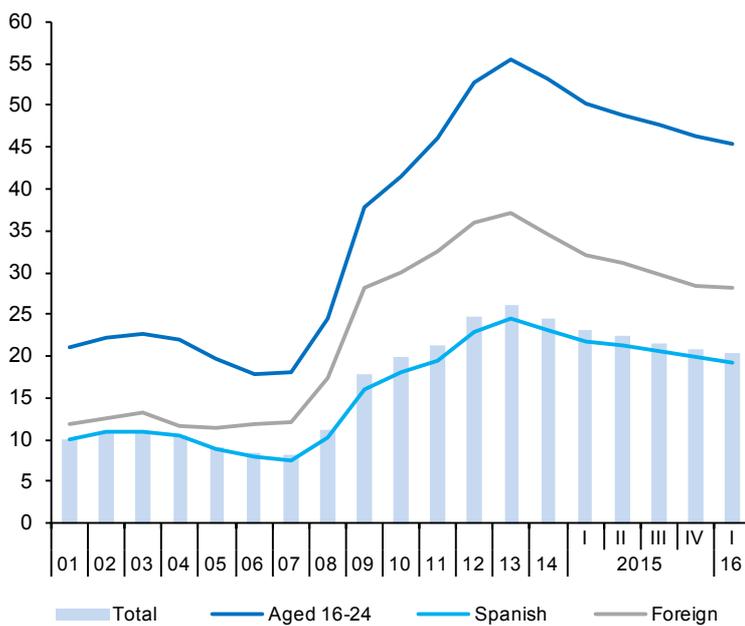
Table 13b
Labour market (II)

		Employed by sector				Employed by professional situation					Employed by duration of the working-day		
							Employees						
								By type of contract		Self- emplo-yed	Full-time	Part-time	Part-time employ-ment rate (b)
		Agriculture	Industry	Construc-tion	Services	Total	Temporary	Indefinite	Temporary employment rate (a)				
		1	2	3	4	5=6+7	6	7	8=6/5	9	10	11	12
Million (original data)													
2009		0.79	2.81	1.89	13.62	15.88	4.00	11.88	25.2	3.23	16.71	2.40	12.5
2010		0.79	2.65	1.65	13.64	15.59	3.86	11.73	24.7	3.13	16.29	2.44	13.0
2011		0.76	2.60	1.40	13.66	15.39	3.87	11.52	25.1	3.03	15.92	2.50	13.6
2012		0.74	2.48	1.16	13.24	14.57	3.41	11.16	23.4	3.06	15.08	2.55	14.5
2013		0.74	2.36	1.03	13.02	14.07	3.26	10.81	23.1	3.07	14.43	2.71	15.8
2014		0.74	2.38	0.99	13.23	14.29	3.43	10.86	24.0	3.06	14.59	2.76	15.9
2015		0.74	2.48	1.07	13.57	14.77	3.71	11.06	25.1	3.09	15.05	2.81	15.7
2016 (c)		0.78	2.48	1.03	13.74	14.94	3.74	11.19	25.0	3.09	15.20	2.83	15.7
2014	II	0.74	2.36	0.98	13.28	14.32	3.43	10.89	24.0	3.04	14.51	2.84	16.4
	III	0.67	2.43	1.02	13.39	14.41	3.55	10.86	24.6	3.09	14.88	2.62	15.0
	IV	0.73	2.44	1.03	13.37	14.48	3.51	10.97	24.2	3.09	14.75	2.82	16.1
2015	I	0.72	2.44	1.06	13.24	14.39	3.40	11.00	23.6	3.06	14.62	2.84	16.3
	II	0.74	2.51	1.09	13.53	14.76	3.70	11.06	25.1	3.10	15.05	2.82	15.8
	III	0.71	2.52	1.08	13.74	14.95	3.91	11.04	26.2	3.10	15.30	2.75	15.2
	IV	0.78	2.46	1.06	13.79	14.99	3.85	11.14	25.7	3.11	15.25	2.84	15.7
2016	I	0.78	2.48	1.03	13.74	14.94	3.74	11.19	25.0	3.09	15.20	2.83	15.7
Annual percentage changes									Difference from one year ago	**Annual percentage changes**			Difference from one year ago
2009		-4.8	-13.3	-23.2	-2.3	-5.8	-18.4	-0.6	-3.9	-10.6	-7.5	-0.4	0.8
2010		-0.3	-5.6	-12.6	0.1	-1.8	-3.6	-1.2	-0.5	-2.9	-2.5	1.7	0.5
2011		-3.9	-1.7	-15.0	0.2	-1.3	0.3	-1.8	0.4	-3.3	-2.2	2.5	0.5
2012		-1.6	-4.6	-17.3	-3.0	-5.3	-11.8	-3.1	-1.7	1.1	-5.3	2.3	0.9
2013		-0.9	-5.2	-11.4	-1.7	-3.5	-4.6	-3.1	-0.3	0.4	-4.3	6.0	1.3
2014		-0.1	1.0	-3.5	1.7	1.5	5.3	0.4	0.9	-0.4	1.1	1.9	0.1
2015		0.1	4.3	8.1	2.6	3.4	8.3	1.9	1.1	1.1	3.2	1.9	-0.2
2016 (d)		8.4	1.7	-2.7	3.8	3.8	10.1	1.8	1.4	1.1	4.0	-0.2	-0.6
2014	II	-1.8	-0.1	-5.3	2.0	1.7	6.5	0.3	1.1	-1.7	0.8	2.6	0.2
	III	-4.8	3.5	-0.5	1.8	2.0	4.6	1.3	0.6	-0.5	1.8	0.4	-0.2
	IV	-6.2	4.2	4.0	2.6	2.8	5.3	2.0	0.6	1.4	2.6	2.4	0.0
2015	I	-11.3	6.2	12.6	2.6	3.3	5.4	2.7	0.5	1.3	2.9	3.3	0.1
	II	0.1	6.4	11.6	1.9	3.1	8.0	1.6	1.1	2.3	3.7	-0.9	-0.6
	III	6.5	3.8	5.9	2.6	3.7	10.1	1.6	1.5	0.3	2.8	4.8	0.2
	IV	7.0	1.0	2.7	3.2	3.5	9.5	1.6	1.4	0.6	3.4	0.8	-0.3
2016	I	8.4	1.7	-2.7	3.8	3.8	10.1	1.8	1.4	1.1	4.0	-0.2	-0.6

(a) Percentage of employees with temporary contract over total employees. (b) Percentage of part-time employed over total employed. (c) Period with available data.

Source: INE (Labour Force Survey).

Chart 13b.1.- Employment by sector
Annual percentage changes

Agriculture — Industry — Construction — Services
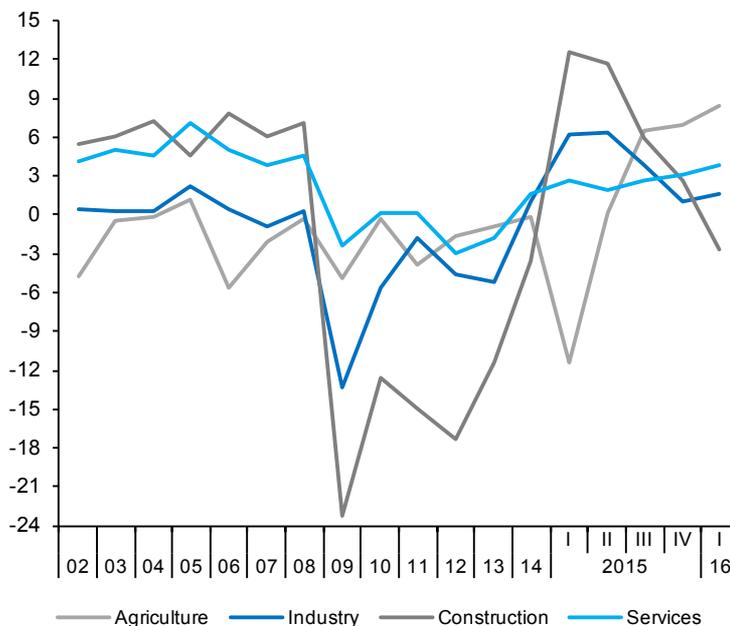
Chart 13b.2.- Employment by type of contract
Annual percentage changes and percentage over total employees

Temporary employment rate (right)
Temporary (left)
Indefinite (left)
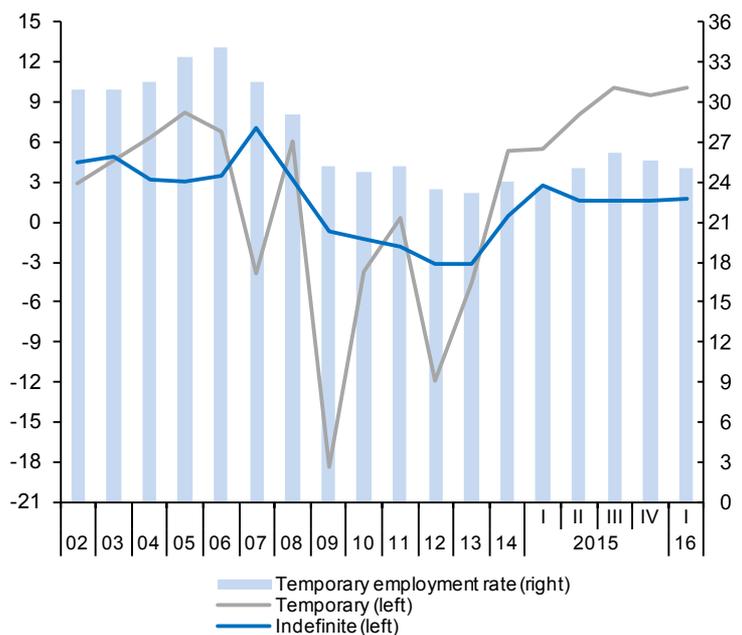
Table 14

Index of Consumer Prices

Forecasts in blue

| | | Total | Total excluding food and energy | Excluding unprocessed food and energy | | | | Unprocessed food | Energy | Food |
				Total	Non-energy industrial goods	Services	Processed food			
% of total in 2016		100.0	67.06	82.12	26.94	40.13	15.06	6.45	11.42	21.50
Indexes, 2011 = 100										
2011		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012		102.4	101.3	101.6	100.8	101.5	103.1	102.3	108.9	102.8
2013		103.9	102.4	103.0	101.4	102.9	106.2	105.9	108.9	106.1
2014		103.7	102.3	103.1	101.0	103.1	106.6	104.6	108.0	106.0
2015		103.2	102.9	103.7	101.3	103.8	107.6	106.4	98.3	107.3
2016		102.8	103.8	104.7	101.7	105.1	108.9	108.4	88.2	108.8
2017		104.5	104.7	105.7	102.2	106.3	110.6	110.6	93.8	110.6
Annual percentage changes										
2011		3.2	1.3	1.7	0.6	1.8	3.8	1.8	15.7	3.2
2012		2.4	1.3	1.6	0.8	1.5	3.1	2.3	8.9	2.8
2013		1.4	1.1	1.4	0.6	1.4	3.1	3.6	0.0	3.2
2014		-0.2	0.0	0.0	-0.4	0.1	0.4	-1.2	-0.8	-0.1
2015		-0.5	0.5	0.6	0.3	0.7	0.9	1.8	-9.0	1.2
2016		-0.4	0.9	1.0	0.5	1.2	1.2	1.9	-10.2	1.4
2017		1.6	0.9	1.0	0.5	1.1	1.6	2.0	6.3	1.7
2016	Jan	-0.3	0.8	0.9	0.5	1.0	1.4	3.3	-10.3	1.9
	Feb	-0.8	1.0	1.0	0.5	1.3	1.3	0.8	-14.1	1.2
	Mar	-0.8	1.0	1.1	0.5	1.4	1.3	2.2	-14.8	1.5
	Apr	-1.1	0.8	0.9	0.4	1.0	1.2	2.9	-16.0	1.7
	May	-1.0	0.9	0.9	0.4	1.2	1.2	1.8	-15.3	1.4
	Jun	-1.0	0.9	0.9	0.4	1.2	1.2	1.2	-14.8	1.2
	Jul	-0.7	0.9	1.0	0.5	1.2	1.1	2.6	-13.4	1.6
	Aug	-0.1	1.0	1.0	0.6	1.3	1.1	1.7	-8.7	1.3
	Sep	0.3	1.0	1.0	0.5	1.3	1.1	1.9	-5.5	1.3
	Oct	0.3	0.9	1.0	0.4	1.3	1.0	0.6	-4.1	0.9
	Nov	0.3	0.9	0.9	0.3	1.3	1.0	1.4	-4.3	1.1
	Dec	0.7	0.9	0.9	0.3	1.3	1.1	2.2	-1.8	1.4
2017	Jan	1.5	0.9	1.0	0.5	1.3	1.2	1.5	5.2	1.3
	Feb	1.9	0.9	1.0	0.5	1.3	1.4	2.0	8.8	1.6
	Mar	1.7	0.8	0.9	0.5	1.0	1.5	2.1	7.3	1.7
	Apr	2.0	1.0	1.1	0.5	1.4	1.5	2.1	8.7	1.7
	May	1.7	0.8	0.9	0.4	1.1	1.6	2.1	7.1	1.7
	Jun	1.6	0.8	0.9	0.4	1.0	1.6	2.1	6.2	1.7
	Jul	1.5	0.8	0.9	0.4	1.0	1.6	2.1	5.7	1.8
	Aug	1.5	0.8	1.0	0.4	1.1	1.6	2.1	5.2	1.8
	Sep	1.5	0.8	1.0	0.5	1.1	1.6	2.1	5.2	1.8
	Oct	1.6	0.8	1.0	0.5	1.1	1.6	2.1	5.5	1.8
	Nov	1.6	0.8	1.0	0.5	1.1	1.6	2.1	5.5	1.8
	Dec	1.6	0.8	1.0	0.5	1.1	1.6	2.1	5.5	1.8

Sources: INE and Funcas (Forecasts).

Chart 14.1.- Inflation rate (I)
Annual percentage changes

All-Items ——— All-Items ex. food and energy
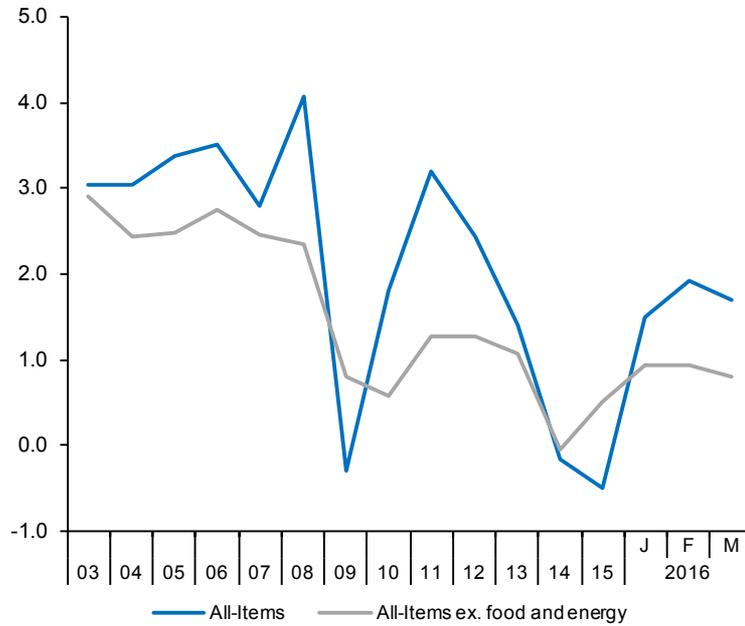
Chart 14.2.- Inflation rate (II)
Annual percentage changes

Non-energy industrial goods ——— Services
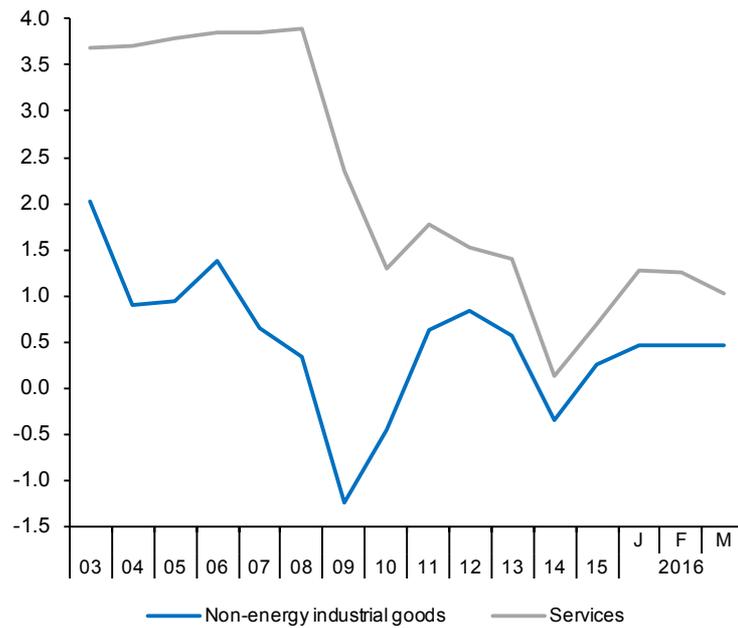
Table 15

Other prices and costs indicators

| | | GDP deflator (a) | Industrial producer prices | | Housing prices | | Urban land prices (M. Public Works) | Labour Costs Survey | | | | Wage increases agreed in collective bargaining |
			Total	Excluding energy	Housing Price Index (INE)	M² average price (M. Public Works)		Total labour costs per worker	Wage costs per worker	Other cost per worker	Total labour costs per hour worked	
		2010=100	2010=100		2007=100			2000=100				
2009		99.8	96.4	98.2	91.9	93.2	85.8	142.3	139.2	151.8	150.0	--
2010		100.0	100.0	100.0	90.1	89.6	74.8	142.8	140.4	150.2	151.5	--
2011		100.0	106.9	104.2	83.4	84.6	69.8	144.5	141.9	152.5	154.8	--
2012		100.1	111.0	105.9	72.0	77.2	65.4	143.6	141.1	151.3	154.7	--
2013		100.6	111.7	106.7	64.3	72.7	55.1	143.8	141.1	152.2	155.2	--
2014		100.2	110.2	105.9	64.5	71.0	52.6	143.3	140.9	150.7	155.5	--
2015		100.9	107.9	106.2	66.8	71.7	54.9	144.2	142.5	149.6	156.5	--
2016	(b)	--	102.2	105.2	--	--	--	--	--	--	--	--
2014	II	100.2	110.6	105.8	64.7	71.0	52.5	145.9	144.5	150.2	153.9	--
	III	100.3	111.2	106.0	64.8	70.8	51.2	138.5	134.8	149.7	160.3	--
	IV	100.4	109.1	105.8	65.0	71.2	55.9	149.1	149.2	148.9	162.2	--
2015	I	100.7	107.7	105.9	64.6	70.9	53.8	140.6	137.2	151.1	147.0	--
	II	100.7	109.2	106.5	67.3	71.8	55.0	146.5	145.4	149.8	154.6	--
	III	101.0	108.5	106.6	67.8	71.8	56.1	138.8	135.6	148.9	160.0	--
	IV	101.1	106.1	105.7	67.7	72.5	54.5	151.0	151.8	148.6	164.5	--
2016	I	--	102.2	105.2	--	--	--	--	--	--	--	--
2016	Jan	--	102.8	105.4	--	--	--	--	--	--	--	--
	Feb	--	101.6	105.1	--	--	--	--	--	--	--	--
	Mar	--	102.3	105.1	--	--	--	--	--	--	--	--
Annual percent changes												
2009		0.3	-3.4	-2.3	-6.7	-7.4	-5.8	3.5	3.2	4.3	5.1	2.3
2010		0.2	3.7	1.8	-2.0	-3.9	-12.8	0.4	0.9	-1.1	1.0	1.5
2011		0.0	6.9	4.2	-7.4	-5.6	-6.7	1.2	1.0	1.6	2.2	2.0
2012		0.0	3.8	1.7	-13.7	-8.7	-6.4	-0.6	-0.6	-0.8	-0.1	1.0
2013		0.6	0.6	0.7	-10.6	-5.8	-15.7	0.2	0.0	0.6	0.3	0.5
2014		-0.4	-1.3	-0.8	0.3	-2.4	-4.6	-0.3	-0.1	-1.0	0.2	0.5
2015		0.6	-2.1	0.3	3.6	1.1	4.3	0.6	1.1	-0.7	0.6	0.8
2016	(c)	--	-5.2	-0.9	--	--	--	--	--	--	--	1.1
2014	II	-0.5	-0.1	-1.0	0.8	-2.9	-9.3	0.0	0.0	-0.3	0.8	0.5
	III	-0.2	-0.9	-0.4	0.3	-2.6	-3.3	-0.4	-0.1	-1.4	-0.1	0.6
	IV	-0.3	-2.1	-0.1	1.8	-0.3	5.2	-0.5	-0.2	-1.6	-0.2	0.5
2015	I	0.5	-1.9	0.2	1.5	-0.1	5.9	0.5	1.4	-1.9	0.9	0.7
	II	0.5	-1.2	0.7	4.0	1.2	4.7	0.4	0.6	-0.2	0.5	0.7
	III	0.7	-2.4	0.5	4.5	1.4	9.7	0.3	0.5	-0.5	-0.1	0.8
	IV	0.7	-2.8	-0.1	4.2	1.8	-2.4	1.2	1.7	-0.2	1.4	0.8
2016	I	--	-5.1	-0.7	--	--	--	--	--	--	--	1.1
2016	Jan	--	-4.2	-0.4	--	--	--	--	--	--	--	1.1
	Feb	--	-5.7	-0.6	--	--	--	--	--	--	--	1.1
	Mar	--	-5.4	-0.9	--	--	--	--	--	--	--	1.1

(a) Seasonally adjusted. (b) Period with available data. (c) Growth of available period over the same period of the previous year.

Sources: M. of Public Works, M. of Labour and INE (National Statistics Institute).

Chart 15.1.- Housing and Urban land prices
Index (2007=100)

Housing (INE)
Housing (M. of Public Works)
Urban Land (M. of Public Works)
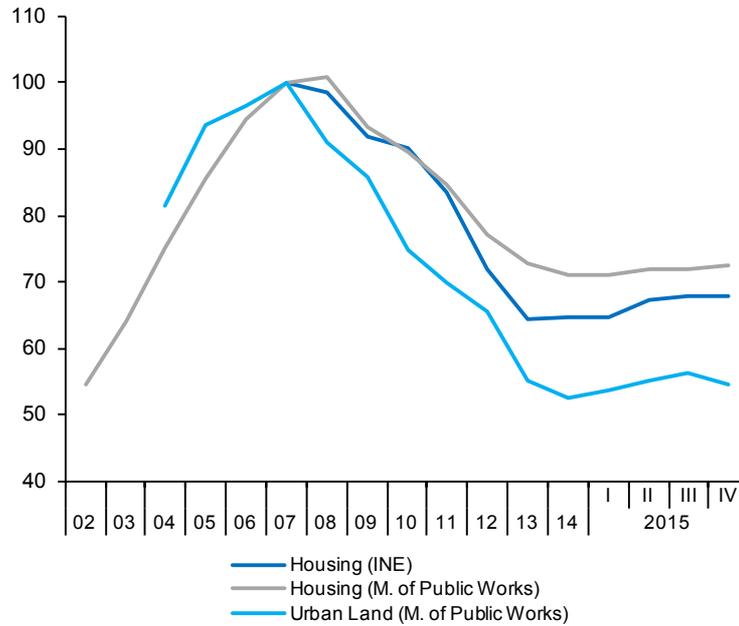
Chart 15.2.- Wage costs
Annual percent change

Total labour cost
Wage cost
Wage increases agreed in collective bargaining
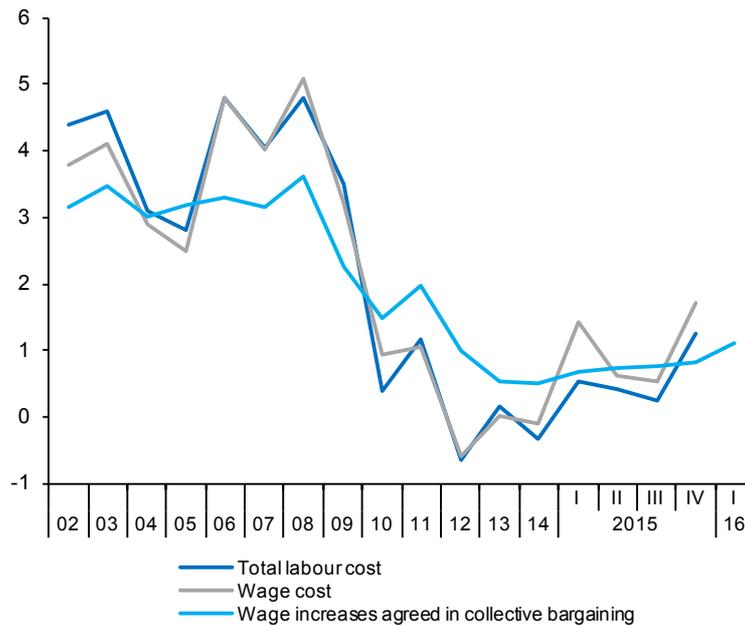
Table 16
External trade (a)

		Exports of goods			Imports of goods			Exports to EU countries (monthly average)	Exports to non-EU countries (monthly average)	Total Balance of goods (monthly average)	Balance of goods excluding energy (monthly average)	Balance of goods with EU countries (monthly average)
		Nominal (monthly average)	Prices	Real	Nominal (monthly average)	Prices	Real					
		EUR Billions	2005=100		EUR Billions	2005=100		EUR Billions				
2009		13.3	101.6	101.5	17.2	96.2	92.0	9.2	4.1	-3.9	-1.6	-0.7
2010		15.6	103.4	116.6	20.0	100.9	102.2	10.5	5.0	-4.4	-1.5	-0.4
2011		17.9	108.4	128.1	21.9	109.5	103.2	11.9	6.1	-4.0	-0.3	0.3
2012		18.8	110.6	131.9	21.5	114.6	96.6	11.9	6.9	-2.7	1.2	1.0
2013		19.7	110.4	137.7	21.0	109.8	98.7	12.3	7.3	-1.4	2.1	1.4
2014		20.0	109.4	141.9	22.1	107.2	106.3	12.7	7.3	-2.1	1.1	0.9
2015		20.9	110.0	148.1	22.9	104.5	113.5	13.5	7.3	-2.0	0.3	0.7
2016	(b)	19.3	107.8	147.4	21.4	100.8	113.2	13.1	6.2	-2.1	-0.5	1.1
2014	II	19.9	109.0	142.3	21.9	107.1	105.7	12.5	7.3	-2.0	1.3	0.9
	III	20.4	109.4	145.2	22.4	108.1	107.3	12.9	7.4	-2.1	1.2	1.1
	IV	20.3	109.8	144.6	22.1	107.9	105.8	12.8	7.6	-1.7	1.2	0.8
2015	I	20.2	110.0	143.4	22.3	104.5	110.3	13.2	7.0	-2.1	0.3	0.8
	II	20.9	110.6	147.6	23.1	105.4	113.4	13.5	7.4	-2.2	0.3	0.7
	III	21.0	109.4	149.8	23.2	104.4	115.1	13.5	7.5	-2.2	0.1	0.6
	IV	21.1	109.9	150.0	22.8	103.9	113.7	13.7	7.4	-1.7	0.2	0.7
2016	I (b)	20.4	107.8	147.4	22.0	100.8	113.2	13.7	6.6	-1.7	-0.1	1.0
2015	Dec	21.1	108.8	151.2	22.4	103.3	112.3	13.7	7.3	-1.3	0.5	0.7
2016	Jan	20.7	107.8	149.5	22.2	100.2	114.8	13.9	6.7	-1.6	0.1	1.2
	Feb	20.1	107.8	145.3	21.8	101.3	111.5	13.6	6.5	-1.8	-0.3	0.7
		Percentage changes (c)								Percentage of GDP		
2009		-15.5	-6.8	-9.4	-27.3	-11.8	-17.5	-15.5	-15.4	-4.3	-1.7	-0.8
2010		16.8	1.8	14.9	16.5	4.9	11.1	14.3	22.5	-4.9	-1.7	-0.4
2011		15.2	4.8	9.9	9.6	8.5	1.0	12.7	20.5	-4.5	-0.4	0.3
2012		5.1	2.0	3.0	-2.0	4.7	-6.4	0.5	14.1	-3.1	1.4	1.2
2013		4.3	-0.2	4.4	-2.2	-4.2	2.2	3.1	6.3	-1.6	2.5	1.7
2014		2.0	-0.9	3.1	5.2	-2.4	7.7	3.5	-0.4	-2.4	1.3	1.0
2015		4.3	0.6	3.7	3.7	-2.5	6.4	6.4	0.5	-2.2	0.3	0.8
2016	(d)	2.4	-1.6	4.1	1.0	-2.8	3.9	4.9	-2.5	--	--	--
2014	II	9.1	-1.0	10.1	2.0	4.3	-2.2	0.1	27.1	-2.3	1.5	1.0
	III	9.9	1.3	8.5	10.6	3.8	6.6	12.6	5.6	-2.4	1.3	1.3
	IV	-0.4	1.4	-1.8	-6.6	-1.0	-5.5	-5.3	8.7	-2.0	1.4	0.9
2015	I	-2.3	0.9	-3.2	4.2	-11.8	17.8	16.5	-28.6	-2.3	0.4	0.9
	II	14.5	2.1	12.2	15.8	3.5	11.9	7.6	28.5	-2.4	0.3	0.8
	III	1.7	-4.4	6.1	1.7	-4.1	6.0	-1.0	6.7	-2.4	0.1	0.7
	IV	2.2	1.8	0.5	-6.7	-1.9	-4.9	7.9	-7.2	-1.8	0.3	0.8
2016	I (e)	-13.6	-7.4	-6.8	-12.9	-11.4	-1.7	0.8	-36.1	--	--	--
2015	Oct	-1.7	-1.1	-0.6	-3.4	-0.8	-2.6	-0.7	-3.5	--	--	--
	Nov	-2.0	-0.9	-1.1	-0.7	-2.9	2.3	1.3	-8.0	--	--	--
	Dec	-2.8	0.0	-2.8	-1.8	1.1	-2.9	-2.4	-3.8	--	--	--

(a) Seasonally adjusted, except for annual data. (b) period with available data. (c) Annualized percent change from the previous quarter for quarterly data, non-annualized percent change from the previous month for monthly data. (d) Growth of available period over the same period of the previous year. (e) Annualized growth of the average of available months over the monthly average of the previous quarter.
Source: Ministry of Economy.

Chart 16.1.- External trade (real)
Percent change from previous period

Exports ——— Imports
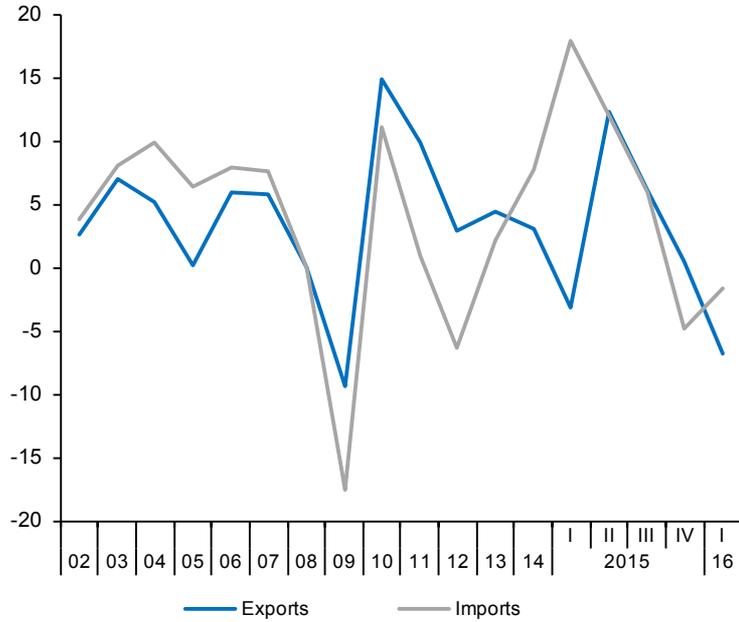
Chart 16.2.- Trade balance
EUR Billions, moving sum of 12 months

Balance of non-energy goods
Balance of energy goods
Total balance of goods
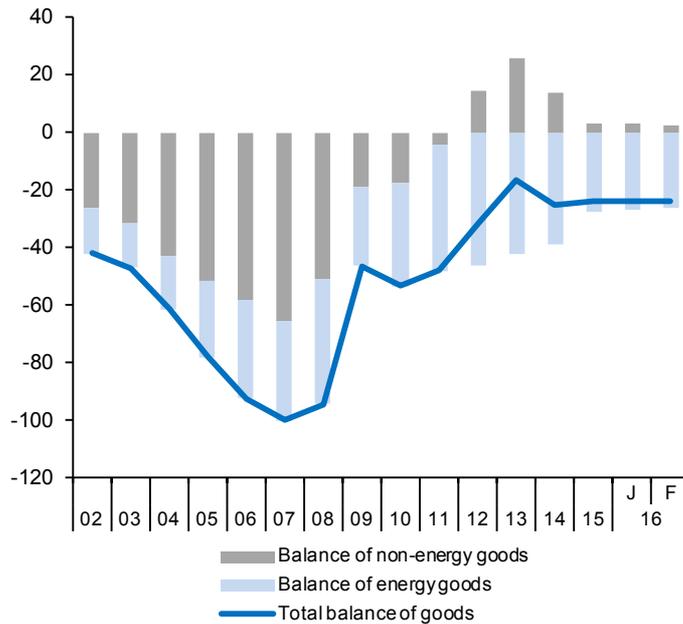
Table 17
Balance of Payments (according to IMF manual)
(Net transactions)

| | | Current account | | | | | Capital account | Current and capital accounts | Financial account | | | | | | Bank of Spain | Errors and omissions |
		Total	Goods	Services	Primary Income	Secondary Income			Financial account, excluding Bank of Spain							
									Total	Direct investment	Porfolio investment	Other invest-ment	Financial derivatives			
		1 = 2 + 3 + 4 + 5	2	3	4	5	6	7=1+6	8 = 9 + 10 + 11 + 12	9	10	11	12	13	14
EUR billions															
2009		-46.19	-41.47	29.54	-19.62	-14.64	3.33	-42.86	-40.70	1.94	-44.04	-4.66	6.05	-10.46	-8.31
2010		-42.39	-47.80	33.93	-15.13	-13.38	4.89	-37.49	-27.24	-1.46	-28.40	11.23	-8.61	-15.70	-5.44
2011		-34.04	-44.48	42.59	-18.36	-13.79	4.06	-29.98	79.51	9.23	26.25	41.96	2.07	-109.23	0.26
2012		-2.40	-29.25	45.25	-7.01	-11.39	5.18	2.77	170.51	-21.12	55.40	144.57	-8.35	-168.76	-1.02
2013		15.57	-14.20	47.65	-4.75	-13.14	6.78	22.35	-81.94	-14.40	-34.53	-34.05	1.04	117.08	12.79
2014		10.24	-22.51	48.47	-4.16	-11.56	4.45	14.69	-5.56	9.36	-6.10	-9.93	1.11	26.66	6.42
2015		15.15	-22.32	48.02	-0.92	-9.63	5.97	21.12	73.59	22.85	7.77	44.37	-1.41	-40.16	12.30
2014	I	-3.26	-5.68	8.47	-1.68	-4.37	1.62	-1.64	18.80	5.18	18.13	-5.33	0.82	-12.49	7.95
	II	0.18	-5.14	12.08	-4.06	-2.70	1.68	1.86	-6.79	0.69	-28.64	22.32	-1.16	16.04	7.38
	III	5.22	-6.61	17.11	-3.29	-1.99	0.35	5.57	4.63	-7.62	33.44	-21.41	0.22	-2.76	-3.70
	IV	8.09	-5.09	10.81	4.87	-2.50	0.81	8.90	-22.20	11.10	-29.03	-5.51	1.23	25.87	-5.23
2015	I	-1.59	-4.31	8.41	-1.11	-4.58	0.82	-0.76	14.22	1.70	-1.09	14.41	-0.79	-14.79	0.19
	II	2.55	-5.35	12.16	-2.06	-2.19	2.20	4.75	17.98	14.55	5.06	-1.06	-0.57	-8.82	4.41
	III	6.00	-7.01	16.87	-2.69	-1.17	1.96	7.95	10.05	5.96	-0.85	5.02	-0.08	0.24	2.34
	IV	8.19	-5.65	10.58	4.95	-1.69	0.99	9.18	31.33	0.65	4.65	25.99	0.04	-16.79	5.36

			Goods and Services		Income and Transfers											
2015	Dec	3.98	0.20		3.78		0.88	4.85	17.71	2.80	-6.12	21.41	-0.37	-10.96	1.90
2016	Jan	-0.66	0.64		-1.30		-0.50	-1.17	-15.98	2.26	-7.92	-9.53	-0.79	6.67	-8.15
	Feb	-1.45	0.97		-2.42		0.69	-0.76	7.58	2.62	21.37	-15.91	-0.49	-13.00	-4.66
Percentage of GDP															
2009		-4.3	-3.8	2.7	-1.8	-1.4	0.3	-4.0	-3.8	0.2	-4.1	-0.4	0.6	-1.0	-0.8
2010		-3.9	-4.4	3.1	-1.4	-1.2	0.5	-3.5	-2.5	-0.1	-2.6	1.0	-0.8	-1.5	-0.5
2011		-3.2	-4.2	4.0	-1.7	-1.3	0.4	-2.8	7.4	0.9	2.5	3.9	0.2	-10.2	0.0
2012		-0.2	-2.8	4.3	-0.7	-1.1	0.5	0.3	16.3	-2.0	5.3	13.9	-0.8	-16.2	-0.1
2013		1.5	-1.4	4.6	-0.5	-1.3	0.7	2.2	-7.9	-1.4	-3.3	-3.3	0.1	11.4	1.2
2014		1.0	-2.2	4.7	-0.4	-1.1	0.4	1.4	-0.5	0.9	-0.6	-1.0	0.1	2.6	0.6
2015		1.4	-2.1	4.4	-0.1	-0.9	0.6	2.0	6.8	2.1	0.7	4.1	-0.1	-3.7	1.1
2014	I	-1.3	-2.3	3.4	-0.7	-1.7	0.6	-0.7	7.5	2.1	7.3	-2.1	0.3	-5.0	3.2
	II	0.1	-1.9	4.6	-1.5	-1.0	0.6	0.7	-2.6	0.3	-10.8	8.4	-0.4	6.1	2.8
	III	2.0	-2.6	6.7	-1.3	-0.8	0.1	2.2	1.8	-3.0	13.0	-8.4	0.1	-1.1	-1.4
	IV	3.0	-1.9	4.0	1.8	-0.9	0.3	3.3	-8.2	4.1	-10.7	-2.0	0.5	9.6	-1.9
2015	I	-0.6	-1.7	3.3	-0.4	-1.8	0.3	-0.3	5.5	0.7	-0.4	5.6	-0.3	-5.7	0.1
	II	0.9	-1.9	4.4	-0.8	-0.8	0.8	1.7	6.5	5.3	1.8	-0.4	-0.2	-3.2	1.6
	III	2.2	-2.6	6.3	-1.0	-0.4	0.7	3.0	3.8	2.2	-0.3	1.9	0.0	0.1	0.9
	IV	2.9	-2.0	3.8	1.8	-0.6	0.4	3.3	11.1	0.2	1.7	9.2	0.0	-6.0	1.9

Source: Bank of Spain.

Chart 17.1.- Balance of payments: Current and capital accounts
EUR Billions, 12-month cumulated

Goods and services
Income and transfers (current and capital)
Current and capital account
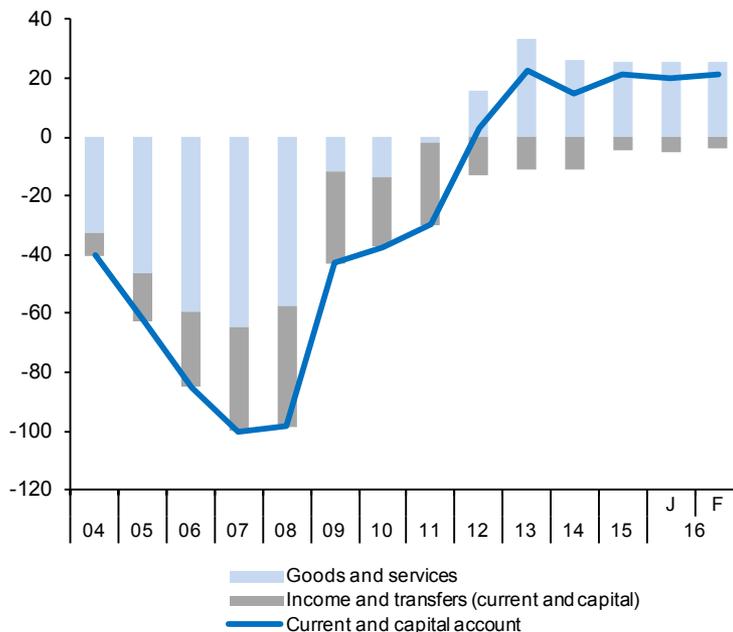
Chart 17.2.- Balance of payments: Financial account
EUR Billions, 12-month cumulated

Bank of Spain
Portfolio invesment
Direct investment
Other investment
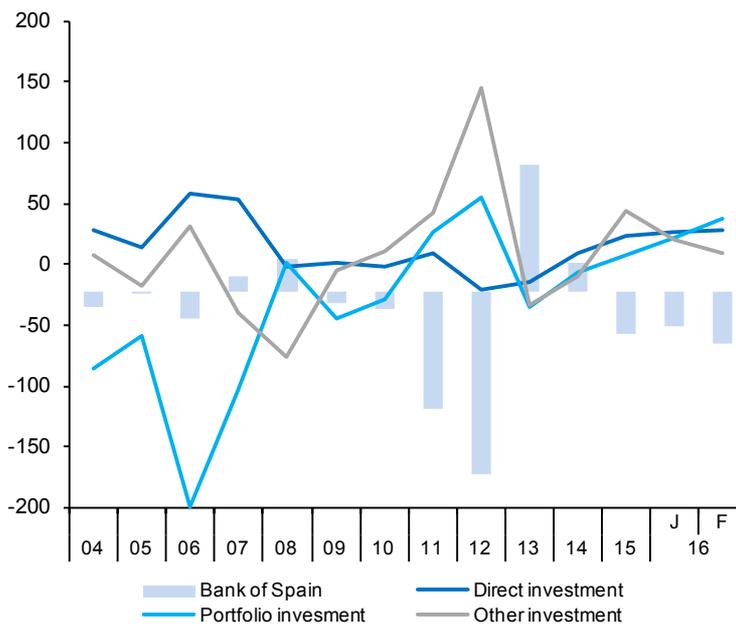
Table 18
State and Social Security System budget

		State							Social Security System (b)			
		National accounts basis			Revenue, cash basis (a)				Accrued income		Expenditure	
		Surplus or deficit	Revenue	Expenditure	Total	Direct taxes	Indirect taxes	Others	Surplus or deficit	Total	of which, social contributions	Total	of which, pensions
		1=2-3	2	3	4=5+6+7	5	6	7	8=9-11	9	10	11	12
EUR billions, 12-month cumulated												
2009		-99.7	134.0	233.6	162.5	87.5	55.7	19.3	8.8	123.7	107.3	114.9	92.0
2010		-50.6	161.2	211.8	175.0	86.9	71.9	16.3	2.4	122.5	105.5	120.1	97.7
2011		-32.0	168.1	200.1	177.0	89.6	71.2	16.1	-0.5	121.7	105.4	122.1	101.5
2012		-44.1	173.0	217.1	215.4	96.2	71.6	47.7	-5.8	118.6	101.1	124.4	105.5
2013		-45.4	169.7	215.1	191.1	94.0	73.7	23.3	-8.9	121.3	98.1	130.2	111.1
2014		-40.2	174.3	214.5	205.9	95.6	78.2	32.1	-14.0	119.3	99.2	133.3	114.4
2015		-30.0	181.0	211.0	217.5	97.8	82.7	37.0	-16.7	123.7	100.5	140.4	117.8
2016	(c)	-8.8	42.2	51.0	46.6	16.7	23.1	6.7	3.4	32.5	25.7	29.1	25.9
2016	Jan	-30.0	179.7	209.7	216.1	97.0	82.3	36.7	-16.8	123.9	100.6	140.6	118.0
	Feb	-31.0	178.4	209.4	214.8	97.1	83.0	34.7	-17.0	123.9	100.8	141.0	118.3
	Mar	-28.1	180.9	209.0	210.7	97.0	83.7	30.0	-16.6	124.6	101.0	141.2	118.5
Annual percentage changes												
2009		--	-19.3	17.8	-13.9	-14.2	-21.2	20.4	--	-0.5	-1.3	4.7	5.9
2010		--	20.3	-9.3	7.7	-0.7	29.1	-15.7	--	-1.0	-1.7	4.5	6.2
2011		--	4.2	-5.6	1.1	3.1	-0.9	-0.8	--	-0.7	-0.1	1.7	3.9
2012		--	3.0	8.5	21.7	7.3	0.5	195.9	--	-2.5	-4.0	1.9	3.9
2013		--	-1.9	-0.9	-11.3	-2.2	3.0	-51.1	--	2.3	-3.0	4.6	5.3
2014		--	2.7	-0.3	7.7	1.6	6.1	37.6	--	-1.6	1.1	2.4	3.0
2015		--	3.8	-1.6	5.7	2.3	5.8	15.3	--	3.7	1.3	5.4	3.0
2016	(d)	--	3.9	-3.0	-1.4	1.4	5.8	-22.9	--	2.7	1.9	2.7	2.8
2016	Jan	--	3.2	-2.3	4.2	1.3	4.8	11.5	--	4.3	1.4	5.3	2.9
	Feb	--	2.1	-2.3	2.9	1.3	5.2	1.8	--	3.8	1.6	5.6	2.9
	Mar	--	3.9	-3.0	-1.4	1.4	5.8	-22.9	--	4.3	1.6	5.6	2.9
Percentage of GDP, 12-month cumulated												
2009		-9.2	12.4	21.7	15.1	8.1	5.2	1.8	0.8	11.5	9.9	10.6	8.5
2010		-4.7	14.9	19.6	16.2	8.0	6.7	1.5	0.2	11.3	9.8	11.1	9.0
2011		-3.0	15.7	18.7	16.5	8.4	6.7	1.5	0.0	11.4	9.8	11.4	9.5
2012		-4.2	16.6	20.8	20.7	9.2	6.9	4.6	-0.6	11.4	9.7	11.9	10.1
2013		-4.4	16.5	20.9	18.5	9.1	7.1	2.3	-0.9	11.8	9.5	12.6	10.8
2014		-3.9	16.7	20.6	19.8	9.2	7.5	3.1	-1.3	11.5	9.5	12.8	11.0
2015		-2.8	16.7	19.5	20.1	9.0	7.7	3.4	-1.5	11.4	9.3	13.0	10.9
2016	Jan	-0.8	3.9	4.7	4.3	1.5	2.1	0.6	0.3	3.0	2.4	2.7	2.4
	Feb	-2.8	16.6	19.4	20.0	9.0	7.6	3.4	-1.6	11.5	9.3	13.0	10.9
	Mar	-2.9	16.5	19.4	19.9	9.0	7.7	3.2	-1.6	11.5	9.3	13.0	10.9

(a) Including the regional and local administrations share in direct and indirect taxes. (b) Not included unemployment benefits and wage guarantee fund (c) Cummulated since January. (d) Percent change over the same period of the previous year.

Sources: M. of Economy and M. of Labour.

Chart 18.1.- State: Revenue, expenditure and deficit (cash basis)
EUR Billions, 12-month cumulated

Surplus or deficit (right) — Revenue (left)
Expenditure (left)
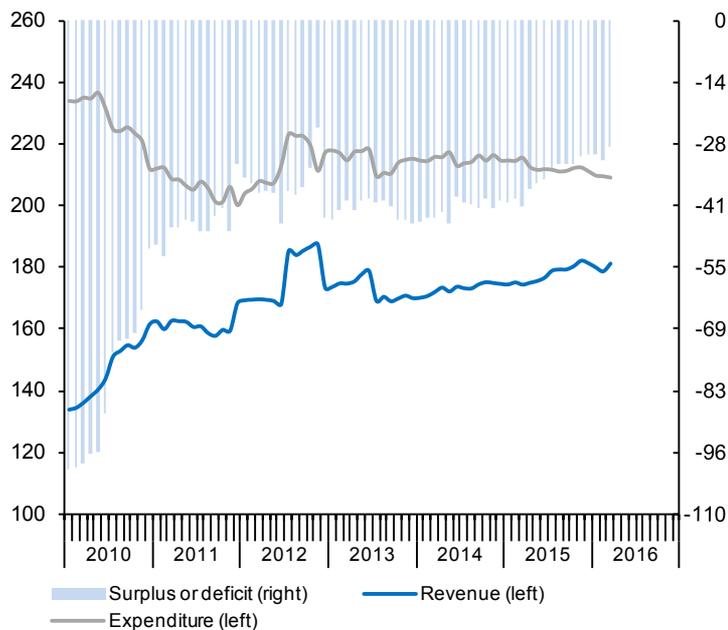
Chart 18.2.- Social Security System: Revenue, expenditure and deficit
EUR Billions, 12-month cumulated

Surplus or deficit (right) — Revenue (left) — Expenditure (left)
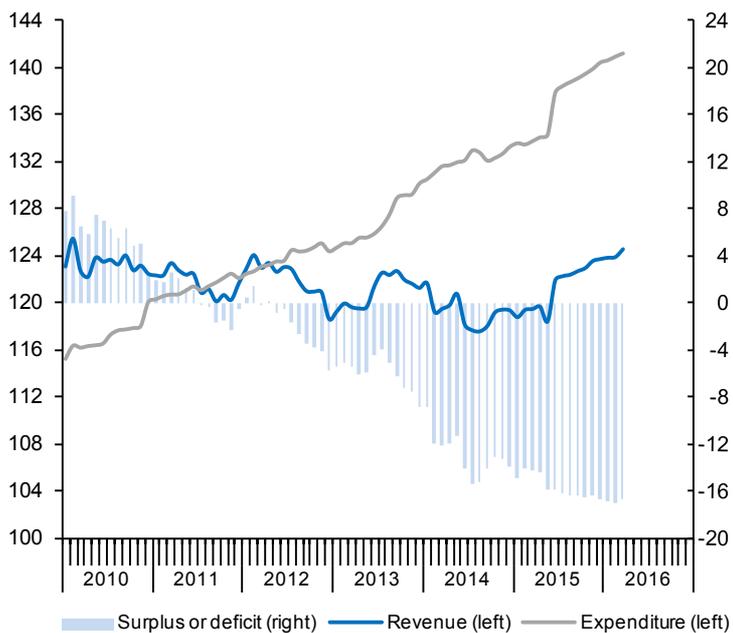
Table 19
Monetary and financial indicators

	Interest rates (percentage rates)					Credit stock (EUR billion)				Contribution of Spanish MFI to Eurozone M3	Stock market (IBEX-35)
	10 year Bonds	Spread with German Bund (basis points)	Housing credit to households	Consumer credit to households	Credit to non-financial corporations (less than 1 million)	TOTAL	Government	Non-financial corporations	Households		
	Average of period data					**End of period data**					
2009	3.98	75.7	3.4	10.5	4.7	2,715.6	568.7	1,246.5	900.4	--	11,940.0
2010	4.25	150.8	2.6	8.6	4.3	2,788.5	649.3	1,244.0	895.2	--	9,859.1
2011	5.44	283.3	3.5	8.6	5.1	2,805.5	743.5	1,194.0	867.9	--	8,563.3
2012	5.85	435.1	3.4	9.1	5.6	2,821.3	890.7	1,099.7	830.9	--	8,167.5
2013	4.56	299.2	3.2	9.7	5.5	2,760.0	966.0	1,011.0	783.0	--	9,916.7
2014	2.72	156.0	3.1	9.6	4.9	2,724.8	1,033.7	942.5	748.5	--	10,279.5
2015	1.74	124.0	2.5	9.0	3.8	2,714.3	1,072.2	918.0	724.1	--	9,544.2
2016 (a)	1.63	135.6	2.3	8.8	3.4	2,710.1	1,070.3	911.9	721.6	--	8,461.4
2014 III	2.43	143.7	3.1	9.7	4.8	2,747.3	1,020.1	970.7	756.4	--	10,825.5
IV	1.99	129.0	2.8	9.5	4.3	2,724.8	1,033.7	942.5	748.5	--	10,279.5
2015 I	1.43	112.3	2.6	9.3	4.2	2,742.9	1,051.8	950.8	740.4	--	11,521.1
II	1.77	126.0	2.5	8.9	3.7	2,733.8	1,057.2	934.8	741.8	--	10,769.5
III	2.03	132.5	2.5	9.2	3.7	2,723.8	1,067.3	927.8	728.8	--	9,559.9
IV	1.71	118.4	2.4	8.7	3.5	2,714.3	1,072.2	918.0	724.1	--	9,544.2
2016 I	1.67	135.5	2.3	8.8	3.4	--	--	905.3	718.1	--	8,723.1
II (a)	1.53	135.6	--	--	--	--	--	--	--	--	9,025.7
2016 Feb	1.72	148.7	2.3	8.7	3.4	2,710.1	1,070.3	916.0	724.1	--	8,461.4
Mar	1.55	134.1	2.3	8.6	3.2	--	--	911.9	721.6	--	8,723.1
Apr	1.53	135.6	--	--	--	--	--	--	--	--	9,025.7
						Percentage change from same period previous year					**(b)**
2009	--	--	--	--	--	4.1	29.3	-1.4	-0.3	-0.8	29.8
2010	--	--	--	--	--	3.4	14.2	0.7	0.2	-2.2	-17.4
2011	--	--	--	--	--	1.7	14.5	-2.0	-2.4	-1.6	-13.1
2012	--	--	--	--	--	1.3	19.8	-6.4	-3.8	0.1	-4.6
2013	--	--	--	--	--	-1.1	8.5	-5.9	-5.1	-4.4	21.4
2014	--	--	--	--	--	-0.2	7.0	-4.4	-3.6	3.4	3.7
2015	--	--	--	--	--	0.5	3.7	-0.9	-2.2	5.3	-20.7
2016 (a)	--	--	--	--	--	0.3	3.4	-2.0	-2.0	5.6	-11.3
2014 III	--	--	--	--	--	-0.8	6.2	-4.7	-4.1	0.5	-0.9
IV	--	--	--	--	--	-0.2	7.0	-4.4	-3.6	3.4	-5.0
2015 I	--	--	--	--	--	0.2	5.6	-2.6	-3.2	4.5	12.1
II	--	--	--	--	--	0.0	4.4	-2.5	-2.6	3.6	-6.5
III	--	--	--	--	--	0.1	4.6	-2.6	-2.5	4.6	-11.2
IV	--	--	--	--	--	0.5	3.7	-0.9	-2.2	5.3	-0.2
2016 I	--	--	--	--	--	--	--	-2.0	-2.0	5.6	-8.6
II (a)	--	--	--	--	--	--	--	--	--	--	3.5
2016 Feb	--	--	--	--	--	0.3	3.4	-1.2	-2.1	7.0	-4.0
Mar	--	--	--	--	--	--	--	-2.0	-2.0	5.6	3.1
Apr	--	--	--	--	--	--	--	--	--	--	3.5

(a) Period with available data. (b) Percent change from preceeding period.
Source: Bank of Spain.

Chart 19.1.- 10 year bond yield
Percentage rates and basis points

Spread (right) — Spanish debt (left) — German debt (left)
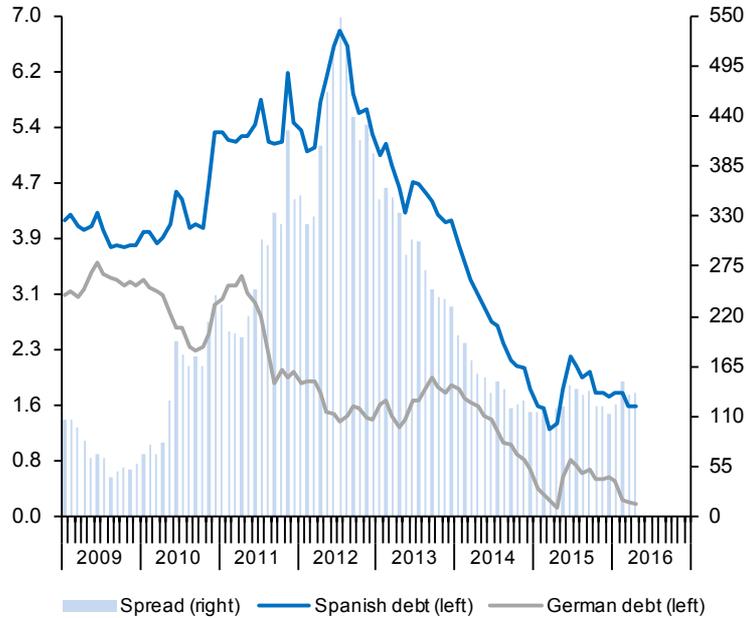
Chart 19.2.- Credit stock growth
Annual percentage change

Government — Total
Non-financial corporations — Households
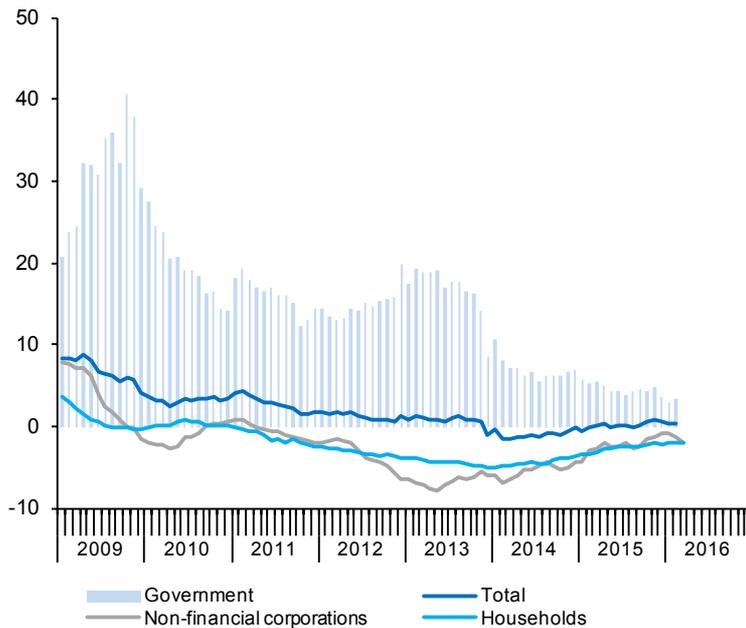
Table 20

Competitiveness indicators in relation to EMU

	Relative Unit Labour Costs in industry (Spain/EMU)			Harmonized Consumer Prices			Producer prices			Real Effective Exchange Rate in relation to developed countries
	Relative productivity	Relative wages	Relative ULC	Spain	EMU	Spain/EMU	Spain	EMU	Spain/EMU	
	1998=100			2015=100			2010=100			1999 I =100
2009	108.3	97.8	110.8	92.2	91.8	100.4	96.2	97.0	99.2	114.0
2010	107.4	94.4	113.8	94.1	93.3	100.9	100.0	100.0	100.0	112.8
2011	106.4	94.9	112.1	96.9	95.8	101.2	106.5	105.2	101.2	113.1
2012	105.2	95.2	110.4	99.3	98.2	101.1	110.1	107.9	102.0	111.6
2013	103.5	93.1	111.1	100.8	99.5	101.3	110.0	107.4	102.4	113.4
2014	102.3	93.2	109.7	100.6	99.8	100.8	108.4	105.8	102.4	112.4
2015	100.9	92.8	108.8	100.0	100.0	100.0	106.8	104.0	102.7	109.0
2016 (a)	--	--	--	98.0	99.2	98.8	101.9	100.8	101.0	107.7
2014 II	--	--	--	101.5	100.3	101.2	108.6	106.1	102.4	113.4
III	--	--	--	100.3	100.0	100.4	109.3	106.1	103.0	111.7
IV	--	--	--	100.7	100.1	100.7	107.7	105.3	102.3	111.8
2015 I	--	--	--	98.8	99.2	99.6	106.6	104.2	102.3	108.7
II	--	--	--	101.2	100.5	100.6	108.0	104.9	102.9	109.6
III	--	--	--	99.8	100.0	99.7	107.3	104.0	103.2	108.6
IV	--	--	--	100.3	100.2	100.0	105.2	102.8	102.4	109.0
2016 I	--	--	--	98.0	99.2	98.8	101.9	100.8	101.0	107.7
2016 Jan	--	--	--	97.6	98.7	98.9	102.5	101.2	101.3	107.6
Feb	--	--	--	97.2	98.9	98.3	101.3	100.5	100.8	107.2
Mar	--	--	--	99.2	100.1	99.1	101.9	100.8	101.1	108.2
	Annual percentage changes					Differential	Annual percentage changes		Differential	Annual percentage changes
2009	-2.4	7.1	-8.9	-0.2	0.3	-0.5	-3.3	-4.5	1.2	-0.4
2010	-1.4	-7.2	6.3	2.0	1.6	0.4	3.9	3.1	0.9	-1.0
2011	-0.8	-2.2	1.4	3.0	2.7	0.3	6.5	5.2	1.3	0.2
2012	-2.4	0.4	-2.8	2.4	2.5	-0.1	3.4	2.6	0.8	-1.3
2013	-1.6	1.3	-2.9	1.5	1.3	0.2	-0.1	-0.4	0.4	1.5
2014	-0.5	1.0	-1.5	-0.2	0.3	-0.5	-1.5	-1.5	0.0	-0.9
2015	-0.5	1.0	-1.5	-0.6	0.2	-0.8	-1.5	-1.7	0.3	-3.0
2016 (b)	--	--	--	-0.8	0.0	-0.8	-4.4	-3.3	-1.2	-1.0
2014 II	--	--	--	0.2	0.6	-0.4	-0.6	-1.1	0.5	-0.3
III	--	--	--	-0.4	0.4	-0.7	-0.9	-1.2	0.3	-1.4
IV	--	--	--	-0.6	0.2	-0.8	-1.7	-1.5	-0.2	-1.9
2015 I	--	--	--	-1.1	-0.3	-0.8	-1.3	-2.1	0.9	-3.4
II	--	--	--	-0.3	0.2	-0.5	-0.6	-1.1	0.5	-3.3
III	--	--	--	-0.6	0.1	-0.7	-1.8	-1.9	0.2	-2.8
IV	--	--	--	-0.5	0.2	-0.6	-2.3	-2.4	0.1	-2.6
2016 I	--	--	--	-0.8	0.0	-0.8	-4.4	-3.3	-1.2	-1.0
2016 Jan	--	--	--	-0.4	0.3	-0.7	-3.6	-2.4	-1.2	-1.5
Feb	--	--	--	-1.0	-0.2	-0.8	-4.9	-3.6	-1.3	-0.9
Mar	--	--	--	-1.0	0.0	-0.9	-4.8	-3.8	-1.1	-0.5

(a) Period with available data. (b) Growth of available period over the same period of the previous year.

Sources: Eurostat, Bank of Spain and Funcas.

Chart 20.1.- Relative Unit Labour Costs in industry (Spain/EMU)
1998=100

Relative wages
Relative productivity
Relative ULC
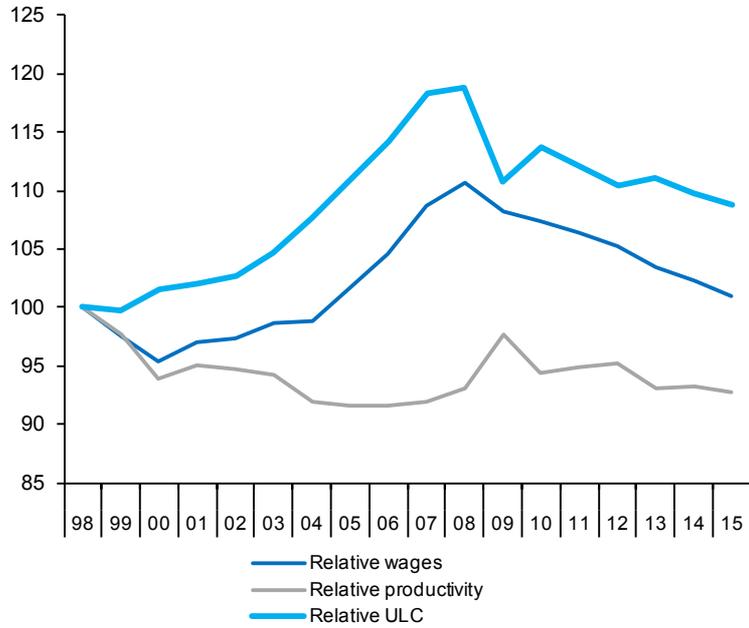
Chart 20.2.- Harmonized Consumer Prices
Annual growth in % and percentage points

Differential Spain EMU
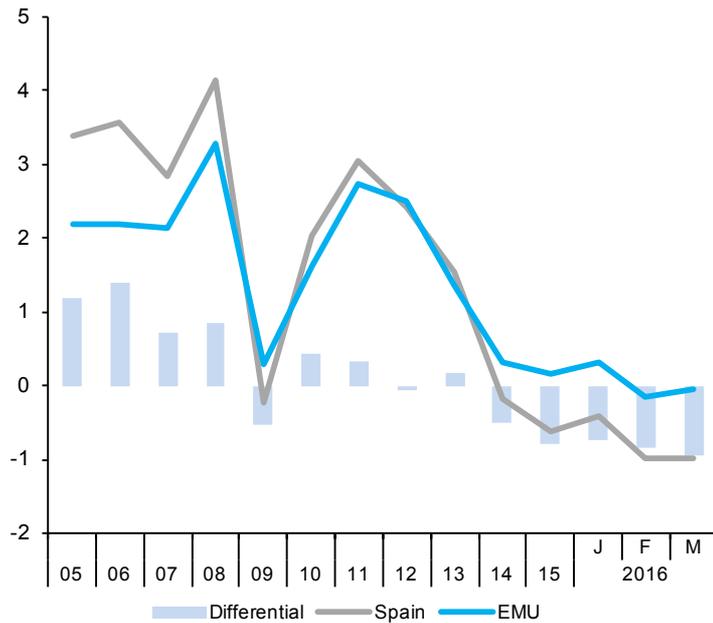
Table 21a
Imbalances: International comparison (I)
In blue: European Commission Forecasts

|	Government net lending (+) or borrowing (-)				Government gross debt				Current Account Balance of Payments (National Accounts)			
	Spain	EU-15	USA	UK	Spain	EU-15	USA	UK	Spain	EU-15	USA	UK
Billions of national currency												
2005	11.2	-269.5	-542.8	-47.0	393.5	6,844.8	8,496.5	552.0	-70.3	44.5	-737.7	-16.6
2006	22.1	-171.7	-410.6	-40.9	392.2	7,057.1	8,817.8	597.1	-90.7	27.8	-802.2	-32.3
2007	21.6	-100.5	-512.5	-44.3	383.8	7,135.0	9,267.3	646.2	-104.1	26.1	-718.1	-37.3
2008	-49.4	-285.2	-1,030.1	-76.2	439.8	7,572.7	10,720.2	786.3	-102.9	-80.2	-691.6	-55.2
2009	-118.2	-756.9	-1,824.2	-159.2	568.7	8,531.5	12,405.1	975.5	-46.5	14.0	-381.9	-45.2
2010	-101.4	-760.1	-1,793.9	-150.0	649.3	9,581.6	14,175.8	1,190.9	-42.0	33.8	-445.9	-43.5
2011	-101.3	-547.1	-1,644.6	-124.0	743.5	10,258.0	15,362.2	1,324.2	-35.3	72.5	-481.5	-27.4
2012	-108.9	-536.1	-1,424.2	-137.5	890.7	10,891.7	16,557.3	1,420.7	-4.6	160.5	-468.2	-54.7
2013	-71.2	-409.5	-881.9	-97.5	966.0	11,241.0	17,459.9	1,495.9	15.2	195.7	-395.8	-77.9
2014	-61.3	-385.1	-842.2	-102.2	1,033.7	11,786.7	18,178.6	1,602.2	10.3	223.1	-401.1	-92.5
2015	-55.0	-330.0	-724.8	-82.2	1,072.2	12,115.5	18,992.0	1,122.7	15.1	282.1	-604.6	-96.2
2016	-44.1	-292.2	-824.7	-65.2	1,122.7	12,227.2	20,016.7	1,729.9	17.3	321.1	-515.5	-93.8
2017	-35.7	-244.9	-859.2	-48.3	1,158.4	12,474.3	20,945.9	1,789.4	15.6	331.8	-612.7	-87.4
Percentage of GDP												
2005	1.2	-2.5	-4.1	-3.5	42.3	63.4	64.9	41.5	-7.6	0.4	-5.6	-1.2
2006	2.2	-1.5	-3.0	-2.9	38.9	62.0	63.6	42.4	-9.0	0.2	-5.8	-2.3
2007	2.0	-0.8	-3.5	-3.0	35.5	59.6	64.0	43.5	-9.6	0.2	-5.0	-2.5
2008	-4.4	-2.4	-7.0	-5.0	39.4	63.5	72.8	51.7	-9.2	-0.7	-4.7	-3.6
2009	-11.0	-6.7	-12.7	-10.7	52.7	75.4	86.0	65.7	-4.3	0.1	-2.6	-3.0
2010	-9.4	-6.5	-12.0	-9.6	60.1	81.3	94.7	76.6	-3.9	0.3	-3.0	-2.8
2011	-9.5	-4.5	-10.6	-7.7	69.5	84.7	99.0	81.8	-3.3	0.6	-3.1	-1.7
2012	-10.4	-4.3	-8.8	-8.3	85.4	88.2	102.5	85.3	-0.4	1.3	-2.9	-3.3
2013	-6.9	-3.3	-5.3	-5.6	93.7	90.3	104.8	86.2	1.5	1.6	-2.4	-4.5
2014	-5.9	-3.0	-4.9	-5.6	99.3	91.8	104.8	88.2	1.0	1.7	-2.3	-5.1
2015	-5.1	-2.5	-4.0	-4.4	99.2	90.0	105.9	89.2	1.4	2.1	-3.4	-5.2
2016	-3.9	-2.1	-4.4	-3.4	100.3	89.5	107.5	89.7	1.5	2.4	-2.8	-4.9
2017	-3.1	-1.7	-4.4	-2.4	99.6	88.5	107.6	89.1	1.3	2.4	-3.1	-4.4

Source: European Commission.

Chart 21a.1.- Government deficit
Percentage of GDP
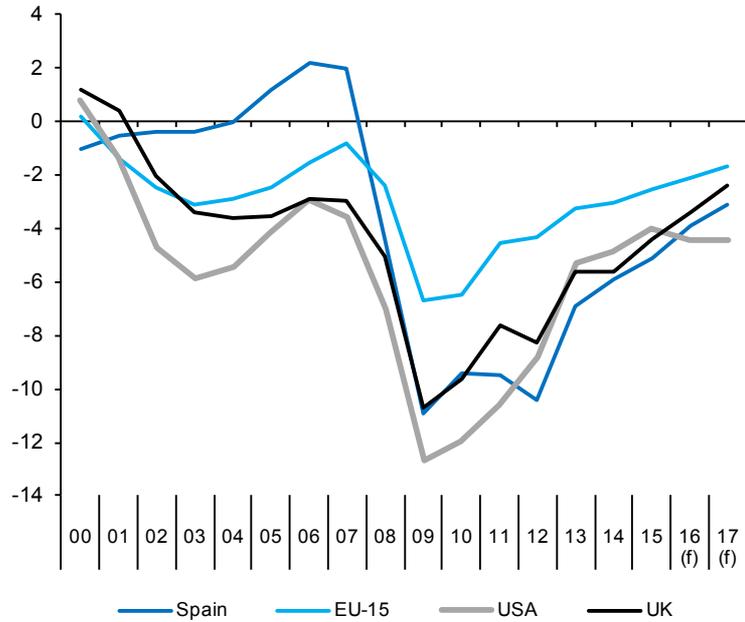
(f) European Commission forecast.

Chart 21a.2.- Government gross debt
Percentage of GDP
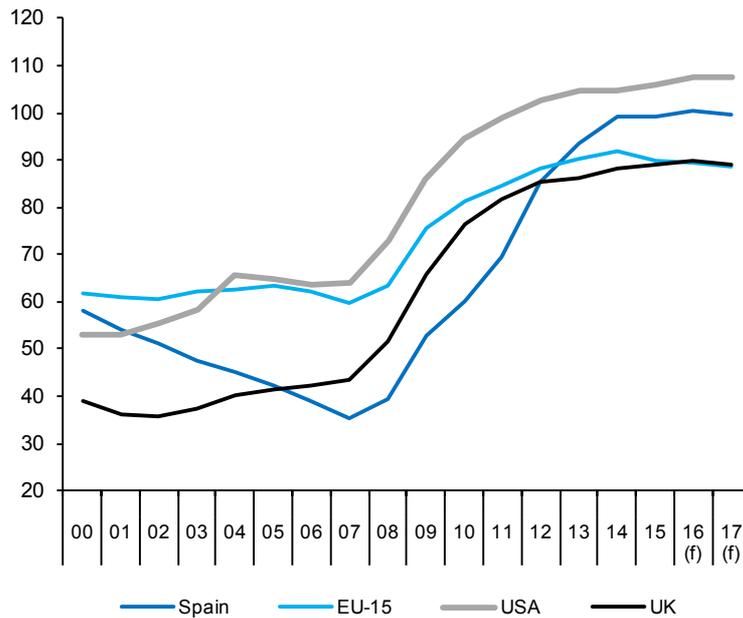

(f) European Commission forecast.

Table 21b
Imbalances: International comparison (II)

|	Household debt (a)				Non-financial corporations debt (a)				Financial corporations debt (a)			
	Spain	EMU-18	USA	UK	Spain	EMU-18	USA	UK	Spain	EMU-18	USA	UK
Billions of national currency												
2005	653.5	4,753.0	11,953.6	1,189.8	925.0	6,894.0	8,152.0	1,102.9	541.5	8,460.4	13,705.8	2,381.7
2006	780.7	5,175.2	13,238.1	1,310.9	1,158.8	7,529.8	8,970.3	1,201.6	771.2	9,528.6	15,094.1	2,619.8
2007	876.6	5,541.0	14,156.6	1,426.4	1,344.5	8,325.9	10,091.4	1,281.6	1,000.0	10,784.9	17,276.2	3,128.7
2008	914.0	5,751.9	14,015.0	1,477.0	1,422.6	8,929.7	10,683.2	1,476.9	1,068.0	11,915.7	17,994.7	3,617.5
2009	906.2	5,860.4	13,762.3	1,473.8	1,406.1	8,990.4	10,146.1	1,413.7	1,147.5	12,370.8	16,545.6	3,599.5
2010	902.5	6,001.4	13,514.3	1,476.9	1,429.4	9,115.2	9,993.5	1,378.6	1,141.4	12,615.8	15,331.1	3,736.5
2011	875.2	6,085.4	13,302.5	1,486.7	1,415.7	9,437.5	10,264.7	1,393.9	1,153.8	13,486.5	14,916.4	3,653.7
2012	838.2	6,079.4	13,359.3	1,509.2	1,310.4	9,569.6	10,784.1	1,472.0	1,182.1	14,049.7	14,705.4	3,747.9
2013	790.8	6,032.5	13,503.2	1,525.5	1,235.3	9,590.0	11,285.8	1,403.1	992.9	12,935.0	14,884.1	3,615.7
2014	754.0	6,036.0	13,877.1	1,565.8	1,175.2	9,736.2	11,990.9	1,363.2	922.0	13,418.8	15,194.2	3,599.7
2015	729.6	--	14,219.2	1,624.6	1,131.3	--	12,784.2	1,382.6	836.4	--	15,242.0	3,328.1
Percentage of GDP												
2005	70.2	56.2	91.3	89.4	99.4	81.5	62.3	82.9	58.2	100.0	104.7	179.0
2006	77.5	58.1	95.5	93.2	115.0	84.6	64.7	85.4	76.5	107.0	108.9	186.2
2007	81.1	58.9	97.8	96.1	124.4	88.6	69.7	86.3	92.5	114.7	119.3	210.8
2008	81.9	59.7	95.2	97.2	127.5	92.7	72.6	97.2	95.7	123.7	122.3	238.1
2009	84.0	63.1	95.4	99.2	130.3	96.8	70.4	95.2	106.3	133.2	114.8	242.3
2010	83.5	62.9	90.3	94.9	132.2	95.5	66.8	88.6	105.6	132.2	102.5	240.2
2011	81.8	62.1	85.7	91.8	132.3	96.3	66.1	86.1	107.8	137.6	96.1	225.6
2012	80.4	61.8	82.7	90.6	125.6	97.3	66.8	88.4	113.4	142.9	91.0	225.1
2013	76.7	60.7	81.0	87.9	119.8	96.6	67.7	80.9	96.3	130.2	89.3	208.4
2014	72.4	59.7	80.0	86.2	112.9	96.3	69.1	75.0	88.6	132.8	87.6	198.1
2015	67.5	--	79.3	87.1	104.6	--	71.3	74.1	77.4	--	85.0	178.5

(a) Loans and securities other than shares, excluding financial derivatives.
Sources: Eurostat, European Central Bank and Federal Reserve.

Chart 21b.1.- Household debt
Percentage of GDP

Spain — EMU — USA — UK
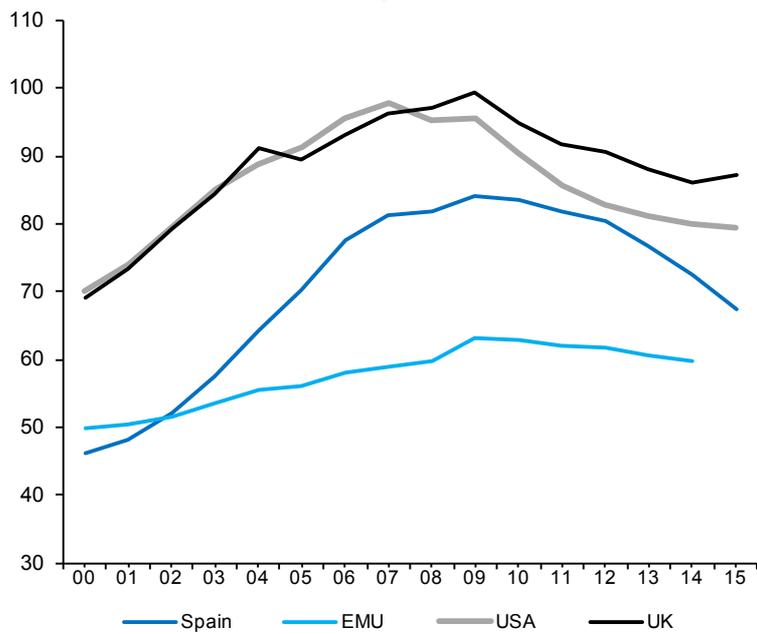
Chart 21b.2.- Non-financial corporations debt
Percentage of GDP

Spain — EMU — USA — UK
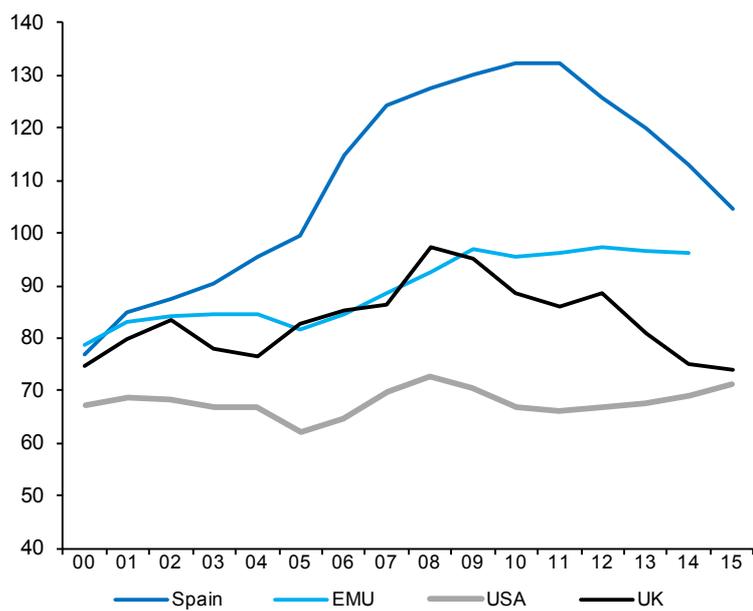
KEY FACTS: 50 FINANCIAL SYSTEM INDICATORS – FUNCAS

Updated: May 15th, 2016

Highlights

Indicator	Last value available	Corresponding to:
Bank lending to other resident sectors (monthly average % var.)	-0.4	February 16
Other resident sectors' deposits in credit institutions (monthly average % var.)	-0.3	February 16
Doubtful loans (monthly % var.)	-0.7	February 16
Recourse to the Eurosystem (Eurozone financial institutions, million euros)	241,003	April 16
Recourse to the Eurosystem (Spanish financial institutions, million euros)	129,792	April 16
Recourse to the Eurosystem (Spanish financial institutions million euros)- Main L/T refinancing operations	5,798	April 16
Operating expenses/gross operating income ratio (%)	50.98	December 15
Customer deposits/employees ratio (thousand euros)	5,595.62	December 15
Customer deposits/branches ratio (thousand euros)	36,791.09	December 15
Branches/institutions ratio	229.04	December 15

A. Money and interest rates

Indicator	Source:	Average 2000-2013	2014	2015	2016 April	2016 May 15	Definition and calculation
1. Monetary Supply (% chg.)	ECB	5.6	3.8	4.7	-	-	M3 aggregate change (non-stationary)
2. Three-month interbank interest rate	Bank of Spain	2.49	0.21	-0.02	-0.25	-0.26	Daily data average
3. One-year Euribor interest rate (from 1994)	Bank of Spain	2.76	0.48	0.17	-0.012	-0.012	End-of-month data
4. Ten-year Treasury bonds interest rate (from 1998)	Bank of Spain	4.6	2.7	1.7	1.5	1.5	Market interest rate (not exclusively between account holders)
5. Corporate bonds average interest rate	Bank of Spain	4.5	2.3	2.2	1.65	1.60	End-of-month straight bonds average interest rate (> 2 years) in the AIAF market

Comment on "Money and Interest Rates:" The 3-month interbank rate has fallen to -0.26% and the 1-year Euribor remains at -0.012% in the first fortnight of May. The ECB has announced new expansionary monetary policy measures, amid the persistence of negative inflation rates. As for the Spanish 10-year bond yield, it has remained unchanged at 1.5%

B. Financial markets

Indicator	Source:	Average 2000-2013	2014	2015	2016 February	2016 March	Definition and calculation
6. Outright spot treasury bills transactions trade ratio	Bank of Spain	34.6	75.6	75.5	88.8	90.58	(Traded amount/ outstanding balance) x100 in the market (not exclusively between account holders)
7. Outright spot government bonds transactions trade ratio	Bank of Spain	77.7	73.2	65.3	57.74	65.16	(Traded amount/ outstanding balance) x100 in the market (not exclusively between account holders)
8. Outright forward treasury bills transactions trade ratio	Bank of Spain	0.9	2.6	1.3	0.06	-	(Traded amount/ outstanding balance) x100 in the market (not exclusively between account holders)
9. Outright forward government bonds transactions trade ratio	Bank of Spain	4.5	4.6	3.4	1.92	1.26	(Traded amount/ outstanding balance) in the market (not exclusively between account holders)
10. Three-month maturity treasury bills interest rate	Bank of Spain	2.3	0.1	0.1	0.1	0.1	Outright transactions in the market (not exclusively between account holders)
11. Government bonds yield index (Dec1987=100)	Bank of Spain	603.2	1,037.9	1,058.2	1,080.1	1,090.5	Outright transactions in the market (not exclusively between account holders)
12. Madrid Stock Exchange Capitalization (monthly average % chg.)	Bank of Spain and Madrid Stock Exchange	0.4	0.6	0.5	-3.6	6.4	Change in the total number of resident companies
13. Stock market trading volume. Stock trading volume (monthly average % var.)	Bank of Spain and Madrid Stock Exchange	3.7	7.0	-0.2	-20.3	3.77	Stock market trading volume. Stock trading volume: change in total trading volume
14. Madrid Stock Exchange general index (Dec1985=100)	Bank of Spain and Madrid Stock Exchange	1,026.8	1,042.5	965.1	855.7	880.4[a]	Base 1985=100
15. Ibex-35 (Dec1989=3000)	Bank of Spain and Madrid Stock Exchange	9,767.1	10,528.8	10,647.2	8,461.4	8,721.5[a]	Base dec1989=3000
16. Madrid Stock Exchange PER ratio (share value/ profitability)	Bank of Spain and Madrid Stock Exchange	16.2	26.1	15.4	17.3	28.2[a]	Madrid Stock Exchange Ratio "share value/ capital profitability"

B. Financial markets (continued)

Indicator	Source:	Average 2000-2013	2014	2015	2016 February	2016 March	Definition and calculation
17. Long-term bonds. Stock trading volume (% chg.)	Bank of Spain and Madrid Stock Exchange	4.2	7.4	21.3	-0.9	201	Variation for all stocks
18. Commercial paper. Trading balance (% chg.)	Bank of Spain and AIAF	2.0	-1.3	-0.2	2.1	-0.9	AIAF fixed-income market
19. Commercial paper. Three-month interest rate	Bank of Spain and AIAF	2.7	0.6	0.1	0.1	0.3	AIAF fixed-income market
20. IBEX-35 financial futures concluded transactions (% chg.)	Bank of Spain	1.3	4.3	1.3	3.6	-18.3	IBEX-35 shares concluded transactions
21. IBEX-35 financial options concluded transactions (% chg.)	Bank of Spain	8.6	6.4	17.7	-16.2	6.5	IBEX-35 shares concluded transactions

(a) Last data published: May 15th, 2016.

Comment on "Financial Markets:" During March, there was an increase in transactions with outright spot T-bills and of spot government bonds transactions, which stood at 90.6% and 65.2%, respectively. The stock market has recovered some momentum, with the IBEX-35 up to 8,722 points, and the General Index of the Madrid Stock Exchange to 880. Additionally, there was a decrease of 18.3% in financial IBEX-35 futures transactions and an increase of 6.5% in transactions with IBEX-35 financial options.

C. Financial Savings and Debt

Indicator	Source:	Average 2007-2012	2013	2014	2015 Q 3	2015 Q 4	Definition and calculation
22. Net Financial Savings/GDP (National Economy)	Bank of Spain	-5.3	2.1	1.0	2.1	2.2	Difference between financial assets and financial liabilities flows over GDP
23. Net Financial Savings/GDP (Households and non-profit institutions)	Bank of Spain	0.7	3.7	3.1	3.3	3.6	Difference between financial assets and financial liabilities flows over GDP
24. Debt in securities (other than shares) and loans/GDP (National Economy)	Bank of Spain	276.4	315.4	319.1	306.4	302.3	Public debt, non-financial companies debt and households and non-profit institutions debt over GDP

C. Financial Savings and Debt (continued)

Indicator	Source:	Average 2007-2012	2013	2014	2015 Q 3	2015 Q 4	Definition and calculation
25. Debt in securities (other than shares) and loans/GDP (Households and non-profit institutions)	Bank of Spain	82.1	76.7	72.4	68.6	67.5	Households and non-profit institutions debt over GDP
26. Households and non-profit institutions balance: financial assets (quarterly average % chg.)	Bank of Spain	1.9	6.8	4.8	-1.8	2.3	Total assets percentage change (financial balance)
27. Households and non-profit institutions balance: financial liabilities (quarterly average % chg.)	Bank of Spain	3.5	-5.3	-3.8	-1.6	-0.6	Total liabilities percentage change (financial balance)

Comment on "Financial Savings and Debt:" During 2015Q4, there was an increase in financial savings to GDP in the overall economy that reached 2.2% of GDP. There was also an increase in the financial savings rate of households from 3.3% in 2015Q3 to 3.6% in 2015Q4. The debt to GDP ratio fell from 68.6% to 67.5% in the same period. Finally, the stock of financial assets on households' balance sheets registered a growth of 2.3%, and there was a 0.6% decrease in the stock of financial liabilities.

D. Credit institutions. Business Development

Indicator	Source:	Average 2000-2013	2014	2015	2016 January	2016 February	Definition and calculation
28. Bank lending to other resident sectors (monthly average % var.)	Bank of Spain	9.1	-4.6	-4.0	-0.6	-0.4	Lending to the private sector percentage change for the sum of banks, savings banks and credit unions
29. Other resident sectors' deposits in credit institutions (monthly average % var.)	Bank of Spain	9.0	-1.5	-0.1	0.3	-0.3	Deposits percentage change for the sum of banks, savings banks and credit unions
30. Debt securities (monthly average % var.)	Bank of Spain	10.1	1.2	-15.2	1.7	0.9	Asset-side debt securities percentage change for the sum of banks, savings banks and credit unions
31. Shares and equity (monthly average % var.)	Bank of Spain	14.1	-6.8	-6.0	-0.3	-0.2	Asset-side equity and shares percentage change for the sum of banks, savings banks and credit unions
32. Credit institutions. Net position (difference between assets from credit institutions and liabilities with credit institutions) (% of total assets)	Bank of Spain	-1.7	-5.9	-5.2	-5.0	-5.2	Difference between the asset-side and liability-side "Credit System" item as a proxy of the net position in the interbank market (month-end)

D. Credit institutions. Business Development (continued)

Indicator	Source:	Average 2000-2013	2014	2015	2016 January	2016 February	Definition and calculation
33. Doubtful loans (monthly average % var.)	Bank of Spain	40.5	-12.7	-22.4	-0.6	-0.7	Doubtful loans. Percentage change for the sum of banks, savings banks and credit unions.
34. Assets sold under repurchase (monthly average % var.)	Bank of Spain	-0.8	-6.1	-30.8	-10.5	-13.6	Liability-side assets sold under repurchase. Percentage change for the sum of banks, savings banks and credit unions.
35. Equity capital (monthly average % var.)	Bank of Spain	11.1	-1.1	-1.8	-0.3	-0.5	Equity percentage change for the sum of banks, savings banks and credit unions.

Comment on "Credit institutions. Business Development:" The latest available data as of February 2016 show a decrease in bank credit to the private sector of 0.4%. Data also show a fall in financial institutions deposit-taking from the previous month of 0.3%. Holdings of debt securities increased by 0.9%, while shares and equity fell 0.2%. Also, doubtful loans decreased 0.7% compared to the previous month.

E. Credit institutions. Market Structure and Eurosystem Refinancing

Indicator	Source:	Average 2000-2012	2013	2014	2015 September	2015 December	Definition and calculation
36. Number of Spanish credit institutions	Bank of Spain	206	155	138	135	135	Total number of banks, savings banks and credit unions operating in Spanish territory
37. Number of foreign credit institutions operating in Spain	Bank of Spain	64	86	86	81	82	Total number of foreign credit institutions operating in Spanish territory
38. Number of employees	Bank of Spain	249,001	212,998	203,305	-	-	Total number of employees in the banking sector
39. Number of branches	Bank of Spain	40,630	33,527	31,999	31,176	30,921	Total number of branches in the banking sector
40. Recourse to the Eurosystem (total Eurozone financial institutions) (Euro millions)	Bank of Spain	373,328	665,849	506,285	411,245	241,003 [(a)]	Open market operations and ECB standing facilities. Eurozone total
41. Recourse to the Eurosystem (total Spanish financial institutions) (Euro millions)	Bank of Spain	41,806	201,865	141,338	132,123	129,792[(a)]	Open market operations and ECB standing facilities. Spain total

E. Credit institutions. Market Structure and Eurosystem Refinancing (continued)

Indicator	Source:	Average 2000-2012	2013	2014	2015 September	2015 December	Definition and calculation
42. Recourse to the Eurosystem (total Spanish financial institutions): main long term refinancing operations (Euro millions)	Bank of Spain	21,288	19,833	21,115	27,164	5,798[a]	Open market operations: main long term refinancing operations. Spain total

(a) Last data published: April 2016.

Comment on "Credit institutions. Market Structure and Eurosystem Refinancing:" In April 2016, recourse to Eurosystem funding by Spanish credit institutions accounted for 53.85% of net total funds borrowed from the ECB by the Eurozone. There has been a 203 million euro increase in the recourse to the Eurosystem by Spanish banks from March.

F. Credit institutions. Efficiency and Productivity, Risk and Profitability

Indicator	Source:	Average 2000-2012	2013	2014	2015 September	2015 December	Definition and calculation
43. "Operating expenses/gross operating income" ratio	Bank of Spain	52.27	48.25	47.27	49.02	50.98	Operational efficiency indicator. Numerator and denominator are obtained directly from credit institutions´ P&L accounts
44. "Customer deposits/ employees" ratio (Euro thousands)	Bank of Spain	2,899.17	5,426,09	5,892.09	6,174.3	5,595.62	Productivity indicator (business by employee)
45. "Customer deposits/ branches" ratio (Euro thousands)	Bank of Spain	20,102.13	34,472.09	40,119.97	40,263.86	36,791.09	Productivity indicator (business by branch)
46. "Branches/ institutions" ratio	Bank of Spain	199.04	216.30	142.85	144.33	229.04	Network expansion indicator
47. "Employees/ branches" ratio	Bank of Spain	6.1	6.3	6.8	6.52	6.57	Branch size indicator
48. Equity capital (monthly average % var.)	Bank of Spain	0.12	0.16	0.07	0.26	0.28	Credit institutions equity capital variation indicator
49. ROA	Bank of Spain	0.75	0.13	0.49	0.47	0.42	Profitability indicator, defined as the "pre-tax profit/average total assets"
50. ROE	Bank of Spain	11.20	1.88	6.46	5.91	5.62	Profitability indicator, defined as the "pre-tax profit/equity capital"

Comment on "Credit institutions. Efficiency and Productivity, Risk and Profitability:" In December 2015, most of the profitability and efficiency indicators improved for Spanish banks. Productivity indicators have also improved since the restructuring process of the Spanish banking sector was implemented.

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