Spain Economic Outlook

Fourth quarter 2014 Spain Unit

- The recovery in Spain is continuing at the expected pace of growth
- The European economy's recent performance will limit the acceleration of Spanish growth in 2015
- Spain will continue to grow faster than the EMU thanks to the recovery of its fundamentals, a more expansionary monetary policy and a fiscal reform which will boost domestic demand
- Uncertainty and imbalances, still high, mean there is a pressing need for reforms which will enable the Spanish economy's growth capacity to increase

Index

1 Editorial	3
2 Global recovery, slow and with downside risks	5
3 Current trends and growth outlook for the Spanish economy	7
Box 1. Which Autonomous Communities are most sensitive to the European cycle? An analysis using the BBVA-RVAR model	25
Box 2. Impact of the Personal Income Tax reform	30
Box 3. Non-conventional ECB policies and credit supply: consequences for the Spanish economy	35
Box 4. Stylised facts about property investment	40
4 Tables	45

Closing date: 30 October 2014

1 Editorial

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Economic activity in Spain continues to show the dynamism we expected, such that we are maintaining our forecast for 1.3% growth for 2014 as a whole. However, the deterioration observed in GDP growth in some European countries in recent months, together with the increased uncertainty in the financial markets recently, adds a negative bias to the outlook for the coming quarters. In any case, we expect that diverse factors will continue to support GDP growth in Spain, and this growth expands to an average of 2.0% in 2015, significantly better than the eurozone as a whole, as has been the case in recent quarters.

Thus the most recent activity data confirm that the recovery continues. As we expected, GDP growth has stabilised around annualised growth of 2.0%. In particular, during 3Q14, GDP expanded 0.5% vs. the previous quarter, similar to the rate of growth in 2Q14 (0.6%) and to the rate we are estimating for 4Q14 based on the information available to date (0.5%). Although exports have grown again, the main driver of the recovery has been the increase in internal demand and, more particularly, private consumption. Equally, public expenditure has not become the drag that we expected at the beginning of the year. Finally, investment in machinery and equipment continues to grow, although at the margin we note a deceleration after six consecutive quarters of growth.

There are significant challenges ahead for the recovery of the Spanish economy. In the previous edition of this Outlook we warned that the performance of the financial markets was inconsistent with the uncertainty derived from various geopolitical risks. A more volatile environment could put at risk economies such as Spain, which to a large extent depend on external financing and growth. In this context, the lack of acceleration in the eurozone economy, in a context of low inflation, is a focus of concern. Specifically, while three months ago we expected EMU GDP growth of 1.9% in 2015, now the forecasts have moderated to 1.3%. In the past, a 1.0% contraction in EMU GDP was nearly fully reflected in Spain's GDP in the short term (see Box 1).

In any case, there are diverse factors that should support continuing expansion in the Spanish economy of around 2%, in spite of lower growth in Europe. First, the lack of traction in the EMU is still not being reflected in export growth. The decoupling of Spanish exports vs. the European economy is not without precedent, and in fact happened in 1993, 2012 and 2013, even with the EMU in recession. The geographical diversification of the past few years, the reforms implemented to improve competitiveness and the investment made in the key sectors should help to sustain growth in Spanish exports.

Second, monetary policy will be more ambitious than we anticipated three months ago. On the one hand, the measures announced by the ECB have had the immediate consequences of euro depreciation and a fall in risk-free interest rates. The first factor will be essential if growth in exports is to be maintained in an environment of less growth in Europe. Thus, we are expecting to see euro depreciation vs. the dollar next year reach an average of 10% vs. 2014, and this adds 0.4-0.5pp to GDP in 2015. On the other hand, the drop in risk-free rates will be transferred to the cost of household and corporate financing in the coming months. In addition, in a context of abundant, cheap liquidity, we expect to see the competition between financial institutions reduce credit spreads. If the demand for credit accompanies the stimulus to demand, which is what we were predicting in our scenario three months ago, this could add around 0.5pp to GDP growth in 2015 (see Box 2).

Third, as we anticipated in the previous edition of this publication, the fiscal policy stance will move from contractive to neutral-expansive as a consequence of the cyclical improvement and of a greater than expected impact of the recovery on the State and Social Security accounts. The margin that this generates is

being taken up by the public sector to avoid the implementation of measures that would otherwise have been necessary to meet their fiscal targets. In fact, the deficit target for next year is now expected to be met, even including the cut in income tax, which should boost growth in 2015.

Finally, the absorption of the imbalances accumulated before the crisis continues. Proof of this process is the growing probability of seeing an increase in residential investment. In fact, several of the factors that normally herald this event in the real estate sector are already presenting improvements (see Box 4). In any case, the high level of oversupply and family and corporate indebtedness indicate that **the recovery of the sector will be moderate and slow**, a consequence of the improvement in the economic environment rather than one of the drivers, as in previous cycles.

The risks to this scenario present a downwards bias. The duration of the lack of momentum in some European economies will be of particular importance, as will be the interaction with the process of falling prices. The exhaustion of fiscal and monetary policies, together with the lack of will to implement new reforms to improve how the economy functions, is likely to lead to a highly fragile scenario. There is thus a possibility that the ECB's latest measures will not be as effective in driving credit as we assume in this publication. Finally, the uncertainty over the political environment is likely to increase in the coming quarters, which could promote an increase in precautionary household savings and a decline in corporate investment.

However, there are also some upside risks. In particular, in the past few weeks the oil price has fallen more than we anticipated. For an importer such as Spain, if the current price is maintained it would mean an important increase in competitiveness for Spanish exporters and a non-negligible saving for families. If the fall were driven by supply and proved to be long-lasting, the gains could add more than a point to Spain's GDP over the coming year (see Section 3).

Due to both the potential downside risks and the inability of the current rate of growth to relatively rapidly reduce the continuing imbalances in the Spanish economy, reforms still need to be driven through that improve how the goods and services markets work. In this respect, the government has presented a new tax system, which proposes a more transparent and efficient regime (see Box 2). Nonetheless, the reform is far from the ambitious proposals made by the Committee of Experts. Thus what we need is to continue making progress towards a system which facilitates the change in the productive model, and which, at the same time, guarantees the sustainability of the public accounts in the medium and long term.

Lastly, we value positively the approval of the Employment Activation Strategy 2014-16, which is aimed at modernising the public employment services (SPE, in the Spanish acronym) as a driver of the active employment policies (PAE, in the Spanish acronym). In contrast to its predecessors, the strategy stretches over several years and makes accurate diagnoses of the structural weaknesses of the Spanish labour market. In addition, it correctly identifies the most vulnerable groups and has a result-driven focus, which will have an impact on how the PAE budget is allocated in the future. However, the ideal would be to increase the resources and redirect those already in existence towards actions which increase the employability of the labour force, particularly the long-term unemployed. Equally, the Spanish economy needs the reform of the PAE to be accompanied by measures that incentivise permanent contracts and reduce the temporary nature of the labour market in Spain.

The short-term risks to the recovery of the eurozone are another reason to continue the reform process. The challenges to the Spanish economy are long-term and different in nature from those facing the chief European countries. Growth in the eurozone would help Spain towards a more intense and short-term recovery, but what would really make a difference in the long term is that Spain should grow and create quality employment thanks to the policies and reforms being carried out.

2 Global recovery, slow and with downside risks

Global economic growth has slightly accelerated during the last few months. According to the BBVA GAIN¹ model, world GDP grew by 0.6% QoQ in 2Q14 and by 0.8% in 3Q14. This figure may be biased to the downside due to an uptick of in financial markets' tensions since the middle of September. Similarly, the geopolitical risks to which we referred in the last edition of our Spain Economic Outlook persist.

In 2015, global growth will reach 3.7%, 0.5pp above the forecast for 2014, to a large extent due to the support of demand-side policies. For example, monetary policy remains expansionary, while fiscal policy will have a less restrictive stance in 2014-15 than in the recent past, in both the US and the eurozone. Even China is weighing up the possibility of introducing additional measures to support domestic growth, if necessary.

Furthermore, **the drop in oil prices is a favourable factor for global growth expectations**, to the extent that it is the result of a positive supply shock, especially for the **sustained increase in unconventional oil production**². The diminished transfer of income from importers to producers gives more scope for the former to attend to their spending, saving and investment decisions, which is a positive factor in the economic scenario. All increases in productive capacity of a limited resource for which there is growing demand, such as oil, even when it is being more efficiently employed, help to put a brake on prices. In real terms, these are at similar levels to those of the oil crisis at the end of the 1970s. These income transfers to consumer countries have their flip side in the countries producing oil and, in general, raw materials, where prices are also falling due to the moderation of demand from Asia.



Figure 2.1 Global GDP (Forecasts based on the BBVA GAIN model, %)

Source: BBVA Research

In the eurozone, the recovery will be even slower than expected. The stagnation of GDP growth in 2Q14, and the fact that this will probably carry through into 3Q14, together with weaker performances in general in the larger economies, has led us to revise our outlook for growth in the region downwards for both 2014 and 2015.

^{1:} For further details on the methodology of BBVA Research GAIN see the Global Economic Watch for March 2013, available at: http://bit.ly/1nl5RIn 2: The recent fall in oil prices is not only due to increasing supply, but also USD appreciation and a moderation in expectations of demand, in both DMs and EMs.

This is partly the result of the impact of the Ukraine/Russia crisis, which is making itself felt in trade and the confidence indicators of the more exposed economies. In the EMU as a whole, this reduced confidence coincides with an environment of price moderation and, above all, the limited ability of the authorities in the region to take steps to tackle this deterioration of expectations of low growth and inflation. The lack of agreement between the national authorities as to the causes of the problems, and thus the differences about the most appropriate measures to implement, together with an increasingly domestic rather than European bias to their decisions, is continuing to hamper governance of the eurozone. What the eurozone needs is a combination of deeper reforms, the continuation of monetary stimuli and, finally, a fiscal policy that uses the room provided by rules to support growth.

The ECB has continued to take action, going ahead with the first TLTRO auction, with rather disappointing results, and setting in motion its purchase programme for assets in the banking system backed by credit. All the measures, both those already implemented and those that will probably be announced, are designed to bring inflation expectations more closely into line with the objective of price stability, which has been de-anchoring in the EMU since 2H12. The depreciation of the euro has to make a contribution to this scenario, and this is consistent with the different expectations of what the Fed and ECB will do. While for the former we are expecting a gradual withdrawal of stimuli, for the latter we are expecting the opposite, balance-sheet expansion.

An additional positive element for the conditions of growth in the eurozone is the recent announcement of the asset quality review and balance-sheet stress test on the banking sector, the results of which have just been published. This process has given the market more and more homogenous information on the European banking sector and implies the implementation of the common banking supervision in the eurozone. All of this is a necessary condition for allowing the flow of bank credit to meet the demand for solvency.

3 Current trends and growth outlook for the Spanish economy

The Spanish economic recovery has stabilised in an international context of rising financial volatility and sluggish growth in Europe

The financial context has grown more uncertain in recent months than the situation observed in the first half of the year, featuring rising volatility and risk premiums after the return of geopolitical tensions, concern over slower growth and inflation in the developed economies, and the uncertainty produced by shifts in monetary policy at the world level. The sluggish growth observed in the eurozone in recent quarters has been a particular worry for Spain (see Section 1). However, the available data suggest that the Spanish economy is growing at a similar pace to the rates observed in previous quarters even in these conditions. In any event, Spanish exports, and with them the rest of the economy would suffer in a prolonged scenario of stagnation or recession in the eurozone, despite the efforts of the ECB to implement a more expansive monetary policy.

On the domestic front, private demand has continued to recover in line with expectations. In addition to sustained growth in consumer spending and capital investment, new housing construction investment has begun gradually to pick up for the first time since 2007, and it is probable that positive but modest growth rates will be seen during the second half of the year. The improvement in domestic demand has been supported mainly by structural factors, like the correction of imbalances, the reorientation of output towards exports, some of the reforms undertaken and the reduction in financial tensions. However, certain other factors have emerged which will boost demand in the short run, including in particular the more expansionary monetary policy implemented and the recent switch towards a weakly pro-cyclical fiscal policy.

To sum up, the Spanish economy is expected to continue growing for the rest of the year at a sufficient rate to achieve an annual expansion of around 1.3%. The new factors included in the scenario are dominated by the downward revision in the growth outlook for the European economy, in view of which we have also revised our forecast for Spanish growth in 2015 down by three decimal points to 2.0%. Overall, then, the pace of recovery remains sound and it is fully supported by both external and internal factors. On the international economy scene, a moderate acceleration of the world economy is expected, which should therefore help ensure the expansion of exports. At the domestic level, the recovery in the fundamentals, progress towards the correction of imbalances and the demand-side stimuli provided by economy policy will result in a general increase in domestic demand.

In any case, we should not forget that **the recovery is not free of risks** and that problems remain on a number of fronts, which will need to be solved to consolidate growth in the medium and long run. In this regard, **governments in both Spain and Europe need to work on supply-side policies to dispel concerns and boost their capacity to achieve structural growth**.

However, potentially positive risk factors also exist. Despite the geopolitical instability in the Middle East (and between Russia and the Ukraine), the oil price has fallen faster in recent weeks than was foreseen in the central BBVA Research scenario, but this development is probably linked rather to rising crude supply than to any fall in world demand. If it continues, and if the supply-side origins of the phenomenon are confirmed, these downward pressures would provide some relief for the productive system and, therefore, would help drive growth in the Spanish economy.

Growth in the Spanish economy has stabilised

Ahead of detailed results, the flash GDP estimate published by the Spanish National Statistics Institute (INE in the Spanish acronym) showed that the Spanish economy grew by 0.5% QoQ in 3Q14³, in line with our forecast of three months ago. If this estimate is confirmed, it will mean that the pace of expansion has stabilised after accelerating for four successive quarters, resulting in a year-on-year change of 1.6%. With regard to the composition of this growth, partial indicators suggest that **both domestic demand (principally** private) and net exports would have made positive contributions to quarterly growth (around 0.4pp and 0.1pp respectively) (see Figure 3.1).

Available fourth quarter data point to a similar rate of growth to those seen during the first nine months (MICA-BBVA: between 0.5% and 0.6% QoQ)⁴ (see Figure 3.2). This trajectory is consistent with the results of the BBVA Economic Activity Survey (BBVA-EAS)⁵, which reflects the stabilisation of the growth expectations (see Figures 3.3 and 3.4).



Source: BBVA Research based on INE data



(e): estimated

Source: BBVA Research based on INF data

3: The detailed Quarterly National Accounts (CNTR in the Spanish acronym) for 3Q14 will be published on 27 November, when some revision of the interim estimates is possible. Coinciding with publication of these results, the INE will disclose the initial CNTR results based on the 2010 accounting framework established in the new European System of National and Regional (ESA 2010), which replaces the former methodological standard (ESA 1995). The initial results for the complete Annual National Accounts (CNA) series were presented in late September. The methodological, statistical and other changes made by the 2010 accounting framework have required a review of the level of nominal GDP in all years of the 1995-2013 series (e.g. X.Xpp for the base year of 2010). These changes entail an upward review in cumulative GDP figures of 1.2pp for the expansionary period (1995-2008) and a downward review of 0.9pp for the period of recession. There was no change in the estimated fall in GDP for 2013 (-1.2%). For further information, see the press release published by the NSI, which is available in Spanish at: http://www.ine.es/prensa/np862.pdf

4: For further details of the MICA-BBVA Model, see Camacho, M. and Doménech, R. (2010): "MICA-BBVA: A Factor Model of Economic and Financial Indicators for Short-term GDP Forecasting", BBVA WP 10/21, available at:

https://www.bbvaresearch.com/wp-content/uploads/migrados/WP_1021_tcm348-231736.pdf 5: For further details of the BBVA Economic Activity Survey (BBVA-EAS), see Box 1 of the Outlook Spain report for the second quarter of 2014, available at: https://www.bbvaresearch.com/wp-content/uploads/2014/05/1405_Spain_Economic_Outlook.pdf







(e): estimated

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Source: BBVA Research based on INE data

Source: BBVA Research based on INE data

Private domestic demand continues to play a key role

Consumption indicators (especially consumer durables) suggest that growth in household spending slowed slightly in the third quarter of 2014. While the wage component of disposable family incomes and financial wealth again grew between July and September, improved perceptions of the economic situation⁶ and the positive impact of the Efficient Vehicles Incentives Programme (PIVE in the Spanish acronym) have eased (see Figure 3.5). Both the synthetic BBVA consumption indicator (ISC-BBVA) and the BBVA model of indicators coincident with consumption (MICC-BBVA) point to household spending growth of around 0.6% QoQ in 3Q14 (2.3% YoY), between one and two points less than in the preceding quarter (see Figure 3.6).

Figure 3.5





Source: BBVA Research based on MINECO, Datastream, EU and ANFAC data

(e): estimated Source: BBVA Research based on INE data

6: Households' perceptions of their future financial situation have improved uninterruptedly since August 2012, significantly affecting their willingness to spend. See Box 4 of our Consumption Outlook report for the second half of 2009 for a detailed analysis of how the trend in household expectations conditions consumer spending. https://www.bbvaresearch.com/wp-content/uploads/2014/08/Consumption_Watch.pdf

Figure 3.6 Spain: actual household consumption data and real-time forecasts 2 4 2 1 0 0 -2 -1 -2 -4 -3 -6 Jarlar-un-1 'n 4 Ś Sep-Consumption (% QoQ, lhs) Consumption (% YoY, rhs) MICC-BBVA (% YoY, rhs) ISC-BBVA (% YoY, rhs)

⁽e): estimated

Growth in investment in machinery and capital goods appears to have slowed in the third quarter of the year. This development is reflected in the partial indicators for this demand item. While some indicators, like the order book for machinery and imports of capital goods, continue to show signs of expansion, others, like industrial output and business confidence among producers of capital equipment, point to a downward correction. As a result, our synthetic investment indicator (BBVA-SII) suggests overall growth of around 0.7% QoQ in 3Q14 (7.2% YoY) in investments in machinery and equipment, 1.4pp below the growth observed in the preceding quarter (see Figure 3.7).

Meanwhile, the **correction in investment in housing seems to be coming to an end**. Housing sales in the first two months of the third quarter displayed average monthly growth of 1.1% (swda). The ongoing improvement in the fundamentals of domestic demand, together with the continued strength of house purchases by foreign citizens, may continue to favour a gradual recovery in sales⁷. Meanwhile, the latest figures for new building approvals show a slight change of trend in the national aggregate, although regional results continue to be very mixed. As a result, **the synthetic housing investment indicator (ISCV-BBVA) reflects practical stagnation in this demand item in 3Q14 (0.2% QoQ; -2.6% YoY)** (see Figure 3.8).



(e): estimated Source: BBVA Research based on INE data



(e): estimated

Source: BBVA Research based on INE data

Public demand undergoes shows a partial downward correction

Based on budget execution figures, it is estimated that nominal central government spending fell by around 0.7% QoQ in 3Q14 (swda) (see Figure 3.9). Meanwhile, it is estimated that the central government's consumption in real terms returned to negative growth rates of around 0.5% QoQ (0.1% YoY) in the third quarter, after the spike observed in the first half of the year (4.5pp between December 2013 and June 2014). Data from the Spanish Labour Force Survey (EPA in its Spanish acronym) suggest that the adjustment was concentrated in the non-wage component of spending. In fact, the number of public

^{7:} The recent tax reform may already be having an effect on the property market. Changes in Personal Income Tax envisage higher taxation of capital gains generated on the sale of homes acquired before 1995, which could have incentivised transactions involving secondhand properties before the new rules come into force in January 2015. There has been a small increase in the share of house sales represented by used homes since the second half of the year began, and in July and August secondhand properties represented 87% of total sales compared to 84.5% in the first six months of the year. Gains generated on house sales are currently subject to inflation adjustment for the years between the original purchase and the sale of the property. Furthermore, if a home was acquired before 1995, certain amortisation coefficients are also applied to discount a part of the gains arising from the enormous revaluations of older properties. The tax reform which will come into force in January 2015 removes these adjustment coefficients, so that the whole of the capital gains generated on sales will be taxed. However, the reform will reduce the Personal Income Tax rate applicable to capital gains in 2015. As a result, gains of up to EUR6,000 will be taxed at 20%, gains of between EUR6,000 and EUR50,000 at 22%, and gains above the latter amount will be taxed at 24%.



sector employees stabilised between July and September after increasing in the first half of the year (see Figure 3.10).

However, the budget execution data suggest that the contraction in public investment should continue to slow. In this regard, data on public bidding tendered by the Spanish Ministry show a very significant year-on-year increase (around 52.0%) between January and August, although starting from historically low levels. This expansionary momentum favoured **the growth of investment in non-residential construction, which showed an increase of around 0.7% QoQ (-1.5% YoY).**



⁽e) Estimate.(*) Not including fixed capital consumption. Source: BBVA Research based on Ministry of Finance and INE data

Source: BBVA Research based on INE data

Exports have continued on the path of moderate expansion

Stronger world trade in **2Q14 allowed Spanish exports to return to the anticipated growth path**. As a result, the quarter closed on an expansive note (1.3% QoQ; 1.7% YoY), leaving behind the poor start to the year.

The available data for the third quarter indicate continued export growth, although the rate of expansion probably slowed due to slack world demand (see Figure 3.11), which could not be offset by the depreciation of nominal interest rates. Overall, current information displays positive signs for 3Q14 as a whole, despite the presence of demand-side factors which invite caution. Specifically, both actual swda figures for exports of goods used in the calculation of the trade balance and the indicator for exports of goods and services by large firms rose on average in July and August. Moreover, new industrial export orders have continued to recover. To sum up, it is estimated that exports of goods and non-tourist services grew at quarter-on-quarter rates of around 2.1% (1.5% YoY) and 0.6% (8.6% YoY) respectively.

Though continued growth in tourism was expected in 3Q14, the available figures show that the industry in fact performed even better than expected. Thus, the number of tourists entering Spain grew by 2.6% QoQ swda. Furthermore, actual spending by tourists in Spain is estimated to have increased by 1.4% swda, after contracting by 0.8% QoQ swda in 2Q14. In this light, further growth in non-resident consumer spending in Spain may be expected (see Figure 3.12).

2014(f)



The current information to date therefore suggest a slowdown in exports of services and points to a moderate new expansion in exports of goods, which would translate into a rise of 1.6% QoQ (2.7% YoY) in total exports during 3Q14.

Meanwhile, total imports continued on the path of recovery in the third quarter (1.2% QoQ; 3.0% YoY), albeit at a somewhat slower pace than in the preceding quarter because domestic demand was less dynamic. Overall, net exports made a positive contribution to quarterly growth (0.2pp) at the close of **3Q14** as a result of the factors described above, following the average negative contribution (-0.3pp) seen in the first half of the year. As a consequence, the current account balance will recover part of the surplus lost in the first half of the year, chalking up a cumulative balance of EUR1.819bn in the 12 months to August.

Labour market figures, steadily upwards

Discounting seasonal changes, average Social Security affiliation grew for the fourth quarter running, while recorded unemployment has fallen for five consecutive quarters. However, the recovery in the labour market slowed in 3Q14, in line with developments in the wider economy. As a result, the number of people affiliated to the Social Security system increased by five decimal points between July and September, just one decimal point less than in 2Q14, although the fall in registered unemployment slowed to -0.7% QoQ from -1.9% in the previous quarter (see Figure 3.13). Finally, hiring hardly changed in the third quarter after a 4.2% QoQ increase in 2Q14. Given that only permanent contracts increased, the percentage of temporary contracts fell by 0.1pp to 91.8% swda.

The Spanish Labour Force Survey (EPA) for 3Q14 confirmed the slowdown in the rate of job creation. Employment rose by 151,000 people between July and September. Half of this increase was due to seasonal factors, despite the poor performance of hiring by in the primary sector. Growth in employment was the result of an increase in the number of private sector workers (154,900), comprising both wage earners (two-thirds of the total) and the self-employed (one-third). Meanwhile, the public sector shed 3,900 employees after increases in the last two quarters. While the percentage of temporary contracts increased by seven decimal points to 24.6%, the ratio remained stable at around 24.0% after discounting for favourable seasonality in the period.

The working population fell by 44,200 people, which was largely caused by the decline in the number of immigrants (51,100 people), at the same time as the occupation rate rose, resulting in **a 0.8 point fall in the unemployment rate to 23.7%** (see Figure 3.14). Crucially, the quarterly drop in the unemployment rate was the largest in any third quarter since 2005. In fact, the fall in unemployment was significant even after adjusting for seasonality (-0.5 points to 24.1%).



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Ongoing containment of prices and costs

Both the headline and core inflation rates moderated in the third quarter of the year to an average of around -0.3% YoY in the case of the former and 0.0% YoY for the latter⁸. This price containment has continued in a context of low European inflation and recovery in Spain's price competitiveness. BBVA Research estimates suggest that **the inflation gap with the eurozone measured in terms of the trend component was favourable to Spain, standing at around -0.8pp** (see Figure 3.15)⁹. Based on the distribution of swda consumer price data, 7.8% of the sub-classes contained in the Spanish CPI displayed negative monthly rates throughout last year, compared to 3.9% of sub-classes in Europe as a whole (see Figure 3.16).

^{8:} The interim CPI indicator confirmed a 1% drop in fuel prices. Our estimates suggest that underlying prices remained unchanged. For further details, see: https://www.bbvaresearch.com/wp-content/uploads/2014/07/IPCA_jul14_maq.pdf

^{9:} For further details of the calculation of trend inflation using the trimmed means technique, see Box one of the Spain Outlook report for the first quarter of 2014, available at: https://www.bbvaresearch.com/wp-content/uploads/migrados/1402_Situacion_Espana_tcm346-423173.pdf



Low inflation continued to help contain wage demands in the third quarter. The average wage rises increased by around 0.5% YoY between July and September in multi-year collective bargaining review processes, and by around 0.6% in collective agreements signed during the current year, which affect only 1,137,000 workers. This increase matches the maximum limit established in the II Agreement for Jobs and Collective Bargaining¹⁰ for the whole of 2014 (see Figure 3.17). As shown in Figure 3.18, the wage moderation displayed since the labour market reform came into force in 1Q12 has provided cumulative gains of 2.5% in cost competiveness with regard to the eurozone.



Annual data include collective agreements made after December of each year which provide for reviews under a wage guarantee clause. (*) Provisional data. The 2013 figure is not comparable with prior years. See:

http://www.empleo.gob.es/estadisticas/cct/CCT13DicAv/ANE/Resum en_CCT_diciembre_13.htm.

Source: BBVA Research based on Ministry of Employment and Social Security data





Source: BBVA Research based on Eurostat data

10: In accordance with the II Agreement for Jobs and Collective Bargaining for 2012-14, if the increase in GDP was less than 1% in 2013, the wage rises agreed for 2014 will not exceed 0.6%.

Despite stalling in August, new retail lending has continued to grow

Figures for new loans granted stalled in August compared to the previous months in terms of growth rates for new home loans (-3.4% YoY), family consumer loans (-6.1% YoY), loans to small business (5.5% YoY for loans of up to EUR1mn, used as a proxy for SMEs), but they performed better than in June for other types of family lending (13.6% YoY) and loans to large businesses (-9.5% YoY for loans of more than EUR1mn).

Based on the cumulative figures for the first eight months of 2014 after smoothing inherent statistical volatility, however, we may observe that new lending operations with large businesses have actually fallen by -18.1% compared to the same period of the prior year, a phenomenon which is partly explained by easier access to other sources of financing and partly by the necessary deleveraging in certain overindebted sectors. **New lending to small businesses has continued to perform well**, growing by 6.6% compared to the cumulative total for the same period of the prior year, which reflects the banks' commitment to small and medium-sized enterprises. **New lending to households continues to show signs of strength this year**. The cumulative increase in new consumer loans to August was 15.8% and home loans are up by a cumulative 17.7%, compared to levels showed by both variables of close to 20% at the end of the first six months. Finally, the improvement in other new lending to households, which began in the early part of the year, has continued and the latest cumulative total shows slight increase of 0.7%.

Despite the absence of any clear recovery in the total number of new loans (cumulative fall of 7.1% in the first eight months of the year due to the significant impact of new loans to large businesses), **retail lending operations** (loans to families and SMEs) grew at a cumulative rate of 8.1%. In this light continued **optimism appears justified**, although without forgetting the need for further deleveraging of the existing credit stock.



Source: BBVA Research based on Bank of Spain data

Scenario for 2014-15: growth supported by internal and external factors

As mentioned in the introduction, changes in the economic outlook in the eurozone have meant a downward revision of figures for growth in trade flows and, therefore, in the Spanish economy as a whole (see Figure 3.20). The economy will grow by around 1.3% in 2014, accelerating to 2.0% in 2015, 0.3pp below the forecast made in the previous issue of this publication. As argued in Box 1 of this report, one percentage point less growth in the European economy has traditionally had an equivalent impact on Spain's GDP.

However, the recovery should still be supported by both external and internal factors. The world economy will continue to expand, and together with the depreciation of the euro this will allow a robust increase in Spanish exports. At the domestic level, the recovery in the fundamentals, progress with the correction of imbalances, the drop in the oil price and the stimuli provided by fiscal and monetary policy will all underpin rising domestic demand (see Figure 3.1).



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Source: BBVA Research

Table 3.1 Spain: macroeconomic forecasts

(% YoY unless otherwise indicated)	1Q14	2Q14	3Q14 (e)	2013	2014 (f)	2015 (f)
Domestic Final Consumption Expenditure	1.2	2.0	1.8	-2.4	1.8	1.5
Private FCE	1.7	2.4	2.4	-2.3	2.1	1.8
General Government FCE	-0.2	1.1	0.1	-2.9	1.0	0.9
Gross Capital Formation	-1.3	1.4	1.5	-3.7	0.7	4.2
Gross Fixed Capital Formation	-1.2	1.2	1.2	-3.8	0.6	4.3
Changes in Inventory (*)	0.0	0.0	0.1	0.0	0.0	0.0
Domestic Demand (*)	0.7	1.9	1.7	-2.7	1.6	2.0
Exports	7.4	1.7	2.7	4.3	3.7	5.3
Imports	8.6	3.9	3.2	-0.5	4.8	5.5
Net exports (*)	-0.2	-0.7	-0.1	1.4	-0.3	0.1
Real GDP at MP	0.5	1.2	1.6	-1.2	1.3	2.0
Nominal GDP at MP	-0.1	0.8	1.6	-0.6	1.2	3.4
Pro-memory						
Total Employment (LFS)	-0.5	1.1	1.6	-2.8	1.0	1.8
Unemployment Rate (% Act. Pop.)	25.9	24.5	23.7	26.1	24.4	23.1
Total Employment (FTE)	-0.4	0.8	1.2	-3.3	0.8	1.5

(*) Contributions to growth.

(e): estimated; (f): forecast.

Source: BBVA Research based on INE and Bank of Spain data

Although the new shocks will not halt recovery, it is clear that there can be no room for complacency. Growth in the Spanish economy is still conditioned by structural adjustments, among other factors. In this regard, the expected cyclical improvement must not be allowed to slow the correction of

imbalances. If they are to achieve medium- and long-term improvements in the economic outlook, both Spain and Europe as a whole must work on supply-side policies. While the stabilising effects of monetary policy has been positive, it is nonetheless necessary to make further progress towards banking union in Europe.

In any event, potential upside risks also exists. In recent weeks, adjustments in the oil price have lowered the price of Brent crude to around USD85 per barrel, a little over 20% below the average price for 2013. Despite the uncertainty surrounding the nature of the fluctuations seen, the available information suggests that they are more likely to reflect a supply-side rather than a demand-side shock. If this is the case, and if the downward drift in the market for crude persists, it will provide some relief for industry and, therefore, should help to drive growth. According to BBVA Research estimates¹¹, if the phenomenon is due to a relative increase in the oil supply, a temporary (twelve-month) fall of 20% in the price could have a positive impact of around 1.0pp on GDP over the coming year. Meanwhile, if the change becomes permanent, it could induce an increase in GDP of around 1.2pp (see Figures 3.21 and 3.22).

Figure 3.21

BBVA





Source: BBVA Research



Spain: impact of a temporary (twelve-month) fall of 20% in oil prices by type of shock (deviation from the base scenario)



Assuming that the temporary fall in the crude market is reflected in a reduction of 20% in the level of oil prices, and that this perturbation will dissipate after around one year, so that prices return to base scenario levels. Source: BBVA Research

Economic recovery has favoured a shift towards a more expansionary fiscal policy

In the short run, the tax cut proposed by the Spanish government¹² will provide a fillip for growth in 2015 and 2016, as the reform is expected to reduce significantly the effective average rate applied on the net Personal Income tax base, as explained in Box 2. Furthermore, this effect is anticipated without jeopardising the stability objective, thanks to the cyclical improvement expected in certain income and expense items, and in the wriggle room provided by a scenario of lower-than-budgeted interest rate payments. In this context, economic recovery and the lower cost of borrowing are expected to have positive effects on tax receipts and on the outlays represented by unemployment benefits and interest payments in 2014. In addition, policies to hold down public sector employment will continue to reduce the government's

^{11:} The estimates presented in this report were obtained on the basis of structural VAR in the oil market, which is identified with sign restrictions on impulse responses. For further details of the effects of the oil price on business and prices in the Spanish economy, see Box 1 of the Outlook Spain report for the second quarter of 2011, available at: https://www.bbvaresearch.com/wp-content/uploads/migrados/1105_Situacionespana_tcm346-256519.pdf 12: For an analysis of the impact of a cut in Personal Income Tax, see Box 2

wage bill. As a result, the deficit will fall to around 5.5% of GDP by the end of 2014, in line with the budgetary stability target established by the government.

Aside from tax cuts, neither the Draft State Budget for 2015 nor the Budget Plan presented by the Spanish government included any significant changes in fiscal policy. BBVA Research's forecasts suggest that the tax cuts will shrink the government's structural revenues, but this effect will be offset in the short run by the cyclical boost to tax revenues. Likewise, the fall in public spending will continue to benefit from the economic cycle (especially spending on social benefits and interest payments). Finally, minor adjustments are still being made to other expense items, a process that is more intense in the area of current than capital expenditures. Based on the policies announced to date, therefore, it is expected that the deficit for 2015 will be close to the stability objective (4.2% of GDP) (see Figure 3.23).

In this light, we foresee a smaller negative impact on growth from fiscal consolidation in 2014. Specifically, we envisage growth in public spending of 1.0% for the year as a whole. Meanwhile, the adjustment of investment in non-residential construction has ended, and a gradual recovery will set in over the rest of year. According to BBVA Research forecasts, the tight fiscal policy will be relaxed in 2015, which points to a new recovery in both public spending and investment in non-residential construction.





(f) forecast

Figure 3.23

Source: BBVA Research based on Ministry of Finance and INE data

Monetary policy will become more expansionary than envisaged three months ago

The ECB has reacted more aggressively than expected to the slowdown in the European economy. In particular, the ECB Governing Council (GC) opted at the monetary policy meeting held in early September to cut its principal reference rate by 10bp to 0.05%, an historic lower bound. Moreover, the GC decided to strengthen the package announced in June, and it has published details of its programme for the purchase of asset-backed securities (ABS) and secured bonds. These measures combined with earlier ones announced as part of its TLTRO programme of long-term refinancing operations to demonstrate the ECB's commitment to support growth in demand and credit, which has considerably lowered expectations for 10-year interest rates on Spanish bonds. In particular, BBVA Research forecasts an average 2% cost of long-term financing for 2015, more than 100bp below the rate expected just three months earlier. Moreover, the recent stress tests performed on the European financial system should help to reduce the existing fragmentation, which would especially benefit countries like Spain. In any event, it remains uncertain

how these policy measures will pass through to the cost of borrowing for firms and families, and to credit growth. In Box 3, we estimate that measures like the TLTRO programme could add between 0.2pp and 0.8pp to Spanish GDP growth depending on the scenario, but this would be a strictly short-term effect.

This policy mix will support growth in domestic demand in the short run

The outlook for household consumption hardly changed in the last quarter. The recovery in jobs and the reduction in Personal Income Tax in 2015 will allow a recovery in disposable incomes both this year and, above all, next. The expected increment in financial wealth, the absence of inflationary pressures, the outlook for historically low official interest rates, and the correction of saving will offset the deterioration of property wealth and the uncertainty associated with the end of the PIVE plan to incentivise vehicle purchases. It is expected that new consumer loans will continue to increase in the coming quarters in a context of deleveraging of existing debt.

In short, the slight improvement in the outlook for incomes and personal wealth in the last quarter suggests an **upward revision of almost two decimal points in private consumer spending to reach 2.1%**, while **downside risks affecting business call for a correction of two decimal points to lower the 2015 forecast to 1.8%**. In this regard, households are expected to continue spending more than would be justified by the fundamentals, explaining the lasting fall in the saving rate and pointing to a slowdown in spending in the medium term (see Figure 3.24).

Figure 3.24

BBVA

Spain: private consumption gap (difference between actual spending and spending explained by the fundamentals as a percentage of the latter)



Source: BBVA Research

The outlook for investment in machinery and equipment has also been revised down, mainly in view of poorer growth figures and expectations in the eurozone, which have reduced forecasts for an expansion of trade flows from the levels previously considered. However, final demand will continue to expand, and this will stimulate investment in industry. In this context, the accumulation of equity by business and the recent relaxation of monetary policy and measures to support the availability of credit implemented by the ECB will facilitate the financing of new investment projects. Overall, then, the growth outlook for this demand item is around 8.2% for 2014 and 6.5% for 2015, respectively 0.3pp and 0.8pp down on forecasts in the previous quarter.

Meanwhile, the outlook for investment in housing has remained practically unchanged with respect to the scenario described in the last edition of this report. As explained in Box 4, the housing sector is close to a turning point, as various fundamental factors which normally precede increases in residential investment have begun to display positive signs. For example, the reduction in interest rates¹³, rising financial wealth, declining uncertainty in the labour market, the stabilisation of prices and the increase in the number of new housing permits all suggest that an increase in expenditure on new homes has become more likely in recent quarters. In this light, growth of 4.9% in investment in the construction of housing is forecast for 2015, despite the expected 3.6% deterioration expected in 2014 (compared to -8.0% in 2013).

Turning to export forecasts, **the eurozone's anaemic growth is the main factor in the scenario with the capacity to hobble growth** in 2014-15. Despite the increasing diversification of the Spanish economy both in terms of products and geographically¹⁴, slack demand in the eurozone will have a negative impact on export potential, despite the foreseeable depreciation of the euro and the progress made with the price differential (see Figure 3.25)¹⁵. **On this basis, we have revised our forecasts for export growth down to 3.7% in 2014 and 5.3% in 2015**. However, the structural changes undergone by the Spanish export sector still point to very healthy growth over the course of these two years (4.5% YoY).

Figure 3.25

BBVA





Source: BBVA Research

In line with this scenario, **imports will also be affected by weaker exports**, and we have revised growth down to 4.8% YoY in 2014 and 5.5% YoY in 2015. However, robust domestic demand will offset a part of the deceleration caused by less dynamic exports. As a result, the contribution made by net exports to growth will temporarily turn negative in 2014 (-0.3pp), returning to positive values in 2015 (0.1pp). The above continues to pose a major challenge in terms of maintaining a positive current account balance, given the need for deleveraging of the Spanish economy's foreign debt. Overall, then, the ongoing structural

¹³ The ECB measures designed to increase liquidity in the real economy are not expected to have a significant impact on the property market. From a demand-side standpoint, much of the extra liquidity obtained (via TLTROs) cannot be used to swell banks' mortgage portfolios. Furthermore, the ECB will require minimum quality standards for purchase of mortgage-backed securities under the measures announced, and this will limit injections of liquidity through this channel, as most of quality mortgage-backed assets have already been placed by banks. Insofar as the ECB's measures might foster a reduction in mortgage spreads, the impact would be positive but in any event limited.

^{14:} An analysis of the productive and geographical diversification of the Spanish economy is provided in Box 3 of the Outlook Spain report for the first quarter of 2014, available at: https://www.bbvaresearch.com/wp-content/uploads/migrados/1402_Situacion_Espana_tcm346-423173.pdf 15: For a discussion of the role of the real exchange rate on Spanish exports, see Box 4 for of the Outlook Spain report for the fourth quarter of 2012, available at: http://www.bbvaresearch.com/KETD/fbin/mult/1211_Situacionespana_tcm346-360814.pdf?ts=28102013

adjustment of the deficit, together with the smaller positive contribution from the cyclical component of the trade balance, will result in a current account surplus of 1.7% of GDP, smaller than could be wished¹⁶.

Labour market imbalances persist despite the improvement as the economy picks up

In line with the performance of the economy as a whole, the outlook for recovery of the labour market has not changed significantly since the publication of the previous Outlook Spain report. Expected growth in the economy and the greater efficiency of the labour market will continue to increase the number of jobs in the private sector and reduce the rate of unemployment. It is expected that the number of people in work will increase by 1.0% in 2014, and that the unemployment rate will fall by 1.7 points to 24.4%. Job creation will accelerate to 1.8% in 2015, three decimal points less than forecast three months ago, but the fall in the unemployment rate (to 23.1%) will be less than predicted for 2014 given the less favourable trend in the working population.

The data for the first six months of the year reveal growth in the number of workers taken on under full-time contracts (see Figure 3.26). If this situation can be maintained in the coming months, the trend in full-time equivalent employment will be similar to that for total employment. According to BBVA Research forecasts (shown in Figure 3.27), the ratio of full-time equivalent to total jobs will continue to fall by just two decimal points to 87.3% by the end of 2015. Given the outlook for growth in the Spanish economy described above, the expected trend in full-time equivalent employment suggests a slowdown in apparent labour factor productivity gains (LFPG). Hence, the average increment in LFPG expected for 2014-15 will be around 0.5%, following the 2.0% increase achieved in 2013.





The Employment Activation Strategy is welcome, but there is room for improvement

Significant imbalances persist in the labour market despite the improved situation. Consequently, the approval of the Employment Activation Strategy for 2014-16¹⁷ is welcome. The strategy agreed with

Source: BBVA Research based on INE data

Source: BBVA Research based on INE data

^{16:} For further information on the recent trend and outlook for the current account balance in Spain, see the Economic Observatory titled Un análisis de la evolución y los determinantes del saldo por cuenta corriente en España, which is available at: http://www.bbvaresearch.com/KETD/fbin/mult/131028_Observatorio_Cuenta_Corriente_Espa_a_Esp_tcm346-407130.pdf?ts=2112014

the Autonomous Communities seeks to modernise Public Employment Agencies in order to foster active employment policies. It is structured around the six pillars of orientation, training, job opportunities, equality of opportunities in access to work, entrepreneurship and improvements in the institutional framework. The two target groups identified comprise the structural and the temporarily ("strategic") unemployed. In the case of the former, the scheme focuses on individual diagnosis of the situation of each job seeker, the design of a personalised itinerary, efforts to improve the fit between occupational training and labour market needs, efforts to foster labour market insertion of individuals in receipt of unemployment benefits, the promotion of functional, sector and geographical mobility, efforts to foster self-employment, a drive to improve coordination between Public Employment Agencies and collaboration between public and private institutions to achieve effective labour placement.

The second target group comprises both those groups of the population who experience the greatest difficulty in achieving labour market insertion and the sectors with the best employment prospects. Key goals for 2014-16 consist of improving the employability of the young, the long-term unemployed, the beneficiaries of the PREPARA scheme and of persons over the age of 55, promotion of quality occupational training, efforts to strengthen the links between active and passive employment policies and incentives for entrepreneurship.

Short-term objectives will be set in Annual Employment Policy Plans (PAPE in the Spanish acronym). The 2014 PAPE approved at the end of September¹⁸ establishes the actions to be taken by each Autonomous Community over the course of the current year, including both priority measures given local conditions and measures applicable nationwide. Though 422 measures have been established, 97.1% of them specific regional measures, 86.6% of the budgeted EUR3.5bn is earmarked for training and job opportunities (especially premiums for hirings) (see Figure 3.28).

Unlike previous policies, the Employment Activation Strategy is a multi-year policy, reflecting an overall diagnosis of some of the main structural weaknesses affecting the Spanish labour market and a commitment to seek solutions. A further key factor is the identification of the most vulnerable collectives and the strategy's results orientation, which will condition the future share-out of PAPE budgets. In this regard, a series of specific indicators has been designed for each of the 33 structural and strategic objectives in order to assess compliance by the Autonomous Communities¹⁹, a feature which will require exhaustive monitoring of each activation programme. Finally, the strategy is the fruit of an agreement between the national and regional Public Employment Agencies, which should improve the chances of success.

The creation of a system to assess and improve coordination between employment agencies is a necessary but insufficient condition to enhance their effectiveness and efficiency. Given the size of the problem, it would in fact be necessary to increase the budget earmarked for activation programmes still further. While Spain's spending on active employment policies in relation to GDP has been above the average for the European Union during the crisis, the amount spent per jobseeker has actually been less. Figure 3.29 shows average AEP spending of EUR1,400 per jobseeker in Spain in 2008-12, 25.5% less than in the EU-15 and between a third and a quarter of the amount invested by the Netherlands and Denmark, the two paradigm economies in terms of flexible job security.

In the second place, it would be advisable to reorient a part of the funds applied to incentivise hiring towards actions that would improve the employability of workers, and especially of those who have lost their jobs as a result of structural adjustments. During the crisis, Spain has applied around a third of the AEP

¹⁷ Royal Decree 751/2914, of 5 September, approving the Spanish Employment Activation Strategy for 2014-16. Available at http://www.boe.es/boe/dias/2014/09/23/pdfs/BOE-A-2014-9623.pdf

^{18:} The Annual Employment Policy Plan for 2014 is available at: http://www.boe.es/boe/dias/2014/09/24/pdfs/BOE-A-2014-9666.pdf

^{19:} Results orientation began in 2013, and compliance with objective determined the distribution of 40% of the funds earmarked for the current year. The results obtained from the evaluation of the 2014 Plan will condition the distribution of 60% of funds in 2015. Also, a further 4 percentage points of financing will be granted to the regions obtaining the best results.

BBV/4

funding to incentivise hiring, while outlays on training, labour market integration and occupational recycling have been relatively small (see Figure 3.30). The Draft State Budget for 2015 once again insists on hiring incentives as the primary activation strategy. As a result, premiums make up 31.6% of the budget for job-creation policies.

In the third place, the unemployed should be the principal beneficiaries of training measures. Only 38.9% of the expenditure earmarked for training programmes in 2015 is actually aimed at the unemployed. Furthermore, training measures should be extended to ensure that they provide specific skills. The evidence indicates that unemployed participants tend to lump together in short, unspecialised training programmes. The latest available data²⁰ show that:

- One out of every five unemployed people who completed a training programme in 2013 was taught general training and management skills.
- Half of the unemployed people trained in 2013 attended courses with a duration of less than 200 hours, and only 21.2% completed a programme of 400 hours or more.

In order to improve the efficiency of job training, it would be advisable to improve evaluation processes, increase the competence of training providers and tighten up budget controls. In this light, we consider the main lines of the future reform of the occupational training system to be on the right track²¹. The adoption of the principle of free competition between training entities is particularly welcome, as are the development of an integrated training system to assure the traceability of actions and the creation of a specialist unit to control training programmes with the power to impose sanctions.

Finally, it would be desirable if successive annual employment plans could be approved earlier. The Autonomous Communities are informed six months in advance of the criteria and indicators that will be applied to assess their activation programmes, and this may condition the design of policies and limit their effectiveness.

Figure 3.28



Spain: actions and measures established in the Annual Employment Policy Plan for 2014

Source: BBVA Research based on Ministry of Employment and Social Security data

20: Annual Statistical Yearbook of the Ministry of Employment and Social Security, available at:

http://www.empleo.gob.es/estadisticas/ANUARIO2013/welcome.htm

^{21:} See:http://prensa.empleo.gob.es/WebPrensa/noticias/ministro/detalle/230





Source: BBVA Research based on Eurostat data

Source: BBVA Research based on Eurostat and OECD data

Inflation will gradually turn positive again

While it is expected that activity and employment will continue to recover gradually, the **high level of unemployment will contain the emergence of any demand-side inflationary pressures**. On the supply side, the process of recovering the competitiveness of the Spanish economy likewise does not suggest that any upward pressure on domestic prices is likely. However, **the foreseeable depreciation of the euro exchange rate will result in higher inflation affecting imported goods**, an effect which will in any event be only partially offset by lower-than-expected oil prices.

Inflationary expectations remain positive, although they are currently below their target levels, in both Europe and in Spain, a situation which has been helped by the measures which the ECB has taken since June to cut interest rates and support the availability of credit. Consequently, we maintain our forecast of price stagnation over the year (0.0% on average in 2014) followed by gradual, positive growth over the course of 2015 (average 1.0%) (see Figure 3.31). In this scenario, the inflation gap with the eurozone will continue to favour Spain in 2014 (averaging around +0.5pp) but will gradually close in 2015 (averaging 0.0%).



Source: BBVA Research based on NSI data and Consensus Forecast INC

Box 1. Which Autonomous Communities are most sensitive to the European cycle? An analysis using the BBVA-RVAR model

Introduction

BBVA

In the three decades before 2007 the Spanish economy enjoyed sustained growth averaging more than 2.5% per year. Despite this prolonged bonanza, the domestic economy was affected by numerous events which had consequences of varying intensity for each of the Autonomous Communities, not to mention the characteristics peculiar to each region (see Figure B.1.1).







This box seeks to quantify the impact of some of these events on growth and to explain some of the regional variations observable in Spain. This requires the use of special statistical tools to capture in detail the pattern of economic relationships between the different regions of the Spanish economy. To this end. we introduce а new multi-regional macroeconomic tool (BBVA-RVAR) in this paper, which will allow us, inter alia, to quantify the effects and transfer of shocks generated at both the European and national levels, as well as shocks arising within the individual Autonomous Communities themselves, based on the spatial/trade component across the regions.

This is particularly important in a scenario which is moving towards a deceleration of the eurozone economy as a whole, as explained in Section 2 of this publication. The results indicate that, in the short term, a fall of 1.0pp in European GDP translates into a drop of 0.9pp in Spanish GDP. Meanwhile, a correction of 10% in the euro/dollar exchange rate could add as much as 0.5pp to Spanish GDP growth. Finally, these elasticities are repeated for the majority of the Autonomous Communities, revealing in both cases that different levels of openness to trade may be responsible for variations in the average expected impacts at the regional level. Specifically, regions like Extremadura, La Rioja, Cantabria and Aragon would be the most seriously affected by a scenario of lower-than-expected growth in Europe, as the eurozone accounts for a higher share of their exports. Meanwhile, the Basque Country, Catalonia, Galicia and Navarre, all regions where exports account for more than 60% of GDP, stand to benefit the most from the current depreciation of the euro against the dollar.

The following sections provide a brief summary of the methodology utilised, and we shall then go on to present the results. The box concludes with some proposals regarding the factors which may underlie the varying responses observed in response to different economic shocks.

Methodology and overview of the literature

The model applied to analyse the interdependence of Spain's Autonomous Communities draws on recent advances in the methodology for the estimation of global macroeconomic models. More specifically it uses the methodological developments associated with the calculation of Global Vector Autoregressive (GVAR) models described by Pesaran, Schuermann and Weiner (2004) and Dees, Di Mauro, Pesaran and Smith (2005). The BBVA-RVAR is a Multiregional Vector Autoregressive model, calculated on a

quarterly basis²², which covers the 1980-2013 sample to capture the relationship between GDP growth and changes in the real exchange rate between each of Spain's Autonomous Communities and the EU, based on bilateral trade relations²³. The individual models are then combined in a consistent and cohesive manner, to generate forecasts and simulations for all of the variables simultaneously. Finally, the interaction of the Spanish economy as a whole is captured by aggregating the regional results²⁴.

The economic literature contains a wealth of information related to the analysis of transfers of global and national economic cycles²⁵, and in particular about the role of the US economy as the world's principal exporter of economic shocks. However, **analyses of this kind referring to the transfer of shocks across regions** (or at the intranational level) **are still few and far between**. Consequently, this study makes various contributions to the existing literature.

In the first place, we propose an adaptation of the global autoregressive models to permit analysis of regional economies in line with the work of Vansteenkiste (2006) on the US property market and of Ramajo et al. (2013) on capital flows in Spain. However, our study focuses on the principal macroeconomic variables (business and prices), maintaining the model proposed by Pesaran, Schuermann and Weiner (2004) and Pesaran et al. (2005) but adapted to a regional perspective.

The second distinctive characteristic of this study is that it uses matrices for **inter-regional trade in goods**²⁶ **as a basis to resolve the problem of over-identification** arising in the estimation of

models of this kind, rather than the spatial matrices employed in Vansteenkiste (2006) or the kind of ad hoc matrices prepared by Rajao et al. (2013). In line with Baxter and Kouparitsas (2004), we find that bilateral trade provides the most robust results.

In the third place, **the study obtains results using impulse response functions and adds a forecasting exercise**. Impulse response results can be obtained by means of orthogonalisation of the shock in question (OIRF) or using the generalised impulse response functions (GIRF)²⁷ proposed by Koop et al. (1996) and subsequently developed by Pesaran and Shin (1998) for VAR models. Meanwhile, forecasts may or may not be conditional upon different scenarios in the Spanish and/or European economy, which makes it possible to obtain risk scenarios at the level of the Autonomous Communities following the methodology proposed by Doan, Litterman and Sims (1984)²⁸.

Results

This section employs the BBVA-RVAR model to assess regional responses to different events. Specifically, we present two exercises which seek to quantify the impact of a deceleration of the economy in Europe and of the depreciation of the euro on the Spanish regions and on the national aggregate.

To begin with, Figure B.1.2 shows the cumulative annual impact on growth in the Spanish economy of a hypothetical scenario in which eurozone GDP grows by 1% less than expected. The elasticity of Spanish GDP to a change in the European scenario is close to one, with a confidence interval of between 0.3 and 1.7 (at 90%).

^{22:} Regional GDP statistics have been published annually by the Spanish National Institute of Statistics (INE) since 1980. In order to enhance the explanatory capacity of the model and capture short-term shocks, we disaggregate the time series using a dynamic factors model (DFM) as proposed by Camacho and Doménech (2010) for the MICA-BBVA model. For a more detailed discussion, see "MICA-BBVA: A Factor Model Of Economic and Financial Indicators for Short-term GDP Forecasting" available at https://www.bbvaresearch.com/en/publicaciones/mica-bbva-a-factor-model-of-economic-and-financial-indicators-for-short-term-dop-forecasting/

^{23:} This methodology was adopted in the construction of the global vector autoregressive (GVAR) models proposed by Hashen Pesaran, Til Schuermann and Scott Weiner (2004), as it resolves the problem of "over-parametisation" presented *a priori* by such models, and at the same time it provides a flexible framework which can be used for numerous different applications.

^{24:} For a more detailed discussion, see Cardoso-Lecourtois, Méndez-Marcano and Ruiz-Sánchez (2014): "BBVA-RVAR: A Multi-Regional Vector Autoregressive Model for Spain", Mimeo (to appear in BBVA Research Working Paper Series).

^{25:} For further details, see "Euro Area Policies: Spillover Report for the 2011 Article IV Consultation and Selected Issues, IMF Country Report No. 11/185 and Menzie D Chinn (2013): Global spillovers and domestic monetary policy, BIS Working Papers, No 436

^{26:} The data utilised are restricted to trade in goods given the lack of information on exports of services at the regional level. However, this raises the possibility of understatement in regions where the share of service exports is particularly significant.

^{27:} The generalised impulse response functions (GIRF) methodology proposed by Koop *et al.* (1996) provide an alternative to the orthogonalised impulse response functions described by Sims (1980). While OIRFs require computation of the impulse and responses with respect to a series of orthogonalised shocks, the GIRF method treats shocks as individual errors and integrates the effects of the other shocks by applying the observed distribution of all of them without requiring orthogonalisation. The result is that, unlike OIRFs, GIRFs are invariant to the ordering of the variables, providing an ideal framework to analyse shocks affecting the Spanish economy as a whole given the characteristics of the mode.

^{28:} The methodology proposed by Doan, Litterman and Sims (1984) provides a framework for the calculation of a maximum verisimilitude forecast, subject to a given scenario.

Figure B.1.2 Estimated effect on GDP after 4 quarters of a 1%



Source: BBVA Research

At the regional level, the scant geographical diversification of regions like Extremadura, La Rioja and Cantabria²⁹, their high level of dependence on Europe as the principal trade partner, and a range of second-round effects at the national level suggest that these Autonomous Communities would be exposed to higher relative impacts (see Figure B.1.3). At the other end of the scale, the trade relations of Castile and Leon and Galicia with Europe are intense, but at the same time they are highly conditioned by the production cycles of the automotive industry. Likewise, the positive shock from tourism experienced by the island regions in the recent recession in Europe suggests the possibility of understatement of this impact in the regions where the tourist industry is strongest.

Figure B.1.3

Share of regional exports to the eurozone and estimated effect on GDP after four quarters of a 1% reduction in eurozone economic growth



Source: BBVA Research based on Datacomex data *Excluding Galicia and Castile and Leon

In the second place, Figure B.1.4 shows the economic impact of a 10% depreciation in the value of the euro against the dollar. This scenario could provide a boost of around 0.5pp to national GDP in 2015, partially offsetting the slowdown in the European economy.



Estimated effect on GDP after four quarters of a 10% depreciation in the euro/dollar exchange rate



Source: BBVA Research

29: For a more detailed analysis, see Box 3 of the Outlook Spain report for 1Q14.

At the regional level, the effects would be felt most intensely in the Basque Country, Galicia, Catalonia and Navarre. To the extent that depreciation of the exchange rate implies gains in the price competitiveness of local goods (producing an upward bias in exports while reducing the attractiveness of imported products), these results would relate directly to the level of each region's openness to trade (see Figure B.1.5)³⁰. Hence, we may expect that the contribution of the exchange rate to demand for exports would be less intense in the economies of Extremadura, Asturias and the Balearic Islands, all regions which are less open to trade (in goods) than the average.

Figure B.1.5

BBVA

Openness to trade and estimated effect on GDP after four quarters of a 10% depreciation in the EUR/USD exchange rate



Source: BBVA Research base don Datacomex and INE data

Conclusions

This box presents a tool (BBVA-RVAR) which is able to capture regional interrelationships and quantify the transfer of both internal and external shocks throughout the Spanish economy. To this end, the BBVA-RVAR model is based on an adaptation of the existing literature on global autoregressive models to the area of regional analysis in the Spanish economy, while at the same time broadening the results obtained in terms of orthogonalisation of shocks and conditional forecasting in different scenarios.

Based on the results obtained from the exercises presented in this box, we find that 1) a scenario of slower economic growth in Europe is passed on to the national aggregate with an elasticity of close to one. In contrast, 2) depreciation of the euro would have a significant positive impact on the Spanish economy. Specifically, a fall of 10pp in the value of the euro against the dollar would have an impact of close to 0.5pp on GDP. At the regional level, 3) both events are significant for the majority of the Autonomous Communities. Furthermore, the degree of exposure to exports, and dependence on trade with the EU, result in a wide range of average expected impacts.

Bibliography

BBVA Research (2012): Spain Economic Outlook.Secondquarter2012:https://www.bbvaresearch.com/en/publicaciones/spain-economic-outlook-second-quarter-2012/

Baxter, Marianne & Kouparitsas, Michael A., 2005. "Determinants of business cycle co-movement: a robust analysis,"

Cardoso-Lecourtois, Méndez-Marcano & Ruiz-Sánchez (2014): "RVAR: A Multi-Regional Vector Autoregressive Model for Spain", Mimeo (to appear in BBVA Research Working Paper Series).

Clarida, Galí (1994), "Sources of real exchange rate fluctuations: how important are nominal shocks?"

Dees, Di Mauro, Pesaran & Smith, (2005) "Exploring the international linkages of the euro area: a Global VAR Analysis", ECB Working paper Series

Dewachter, Houssa, Toffano (2010), "Spatial Propagation of Macroeconomic Shocks in Europe"

Doan, Litterman & Sims (1984): "Forecasting and Conditional Projection Using Realistic Prior Distributions", Econometric Reviews, Vol.3, No.1.

Koop, Pesaran, Potter (1996): "Impulse response Analysis in Nonlinear Multivariative Models", Journal

30: Openness to trade may be defined as the ratio between the sum of exports and imports of foreign goods, and regional GDP...

of Econometrics.

BBVA

Pesaran, Shin (1998) "Generalised Impulse Response Analysis in Linear Multivariative Models", Economic Letters

Pesaran, Schuermann, Weiner (2004): "Modelling Regional Interdependencies Using a Global Error-Correcting Macroeconomic Model", Journal of Business and Economic Statistics, Vol.22, No. 2, 2004)

Ramajo, Marquez & Hewings (2013): "Does Regional Public Capital Crowd Out Regional Private Capital? A Multiregional Analysis for the Spanish Regions", Estadística Española, Vol. 55, No. 180.

Vansteenkiste (2007): "Regional Housing Market Spillovers in the US", ECB Working Paper Series No. 708.

Box 2. Impact of the Personal Income Tax reform³¹

In mid-2013 the Spanish government requested a group of experts to prepare a proposal for tax reform, to move towards a more transparent, efficient, neutral and progressive tax system that would also help to encourage economic growth. In June 2014 the government presented its proposals, which included some of the measures recommended by the group of experts. Nonetheless, it fell far short of the thoroughgoing reform that had been announced when the committee of wise men was entrusted with the task of designing a reform of the Spanish tax system.³² In the end, the tax reform proposed by the government addressed only some cuts in personal income tax (PIT) and corporate income tax (CIT).

The aim of this study is to assess the effects of some of the key proposals for changes to PIT. Insofar as our analysis does not include all of the changes to the tax, the overall impact of the reform may differ from the results presented here. Thus, our main conclusions may be summarised as follows:

- i. The measures announced represent a step towards a simpler, more transparent and more efficient tax. In particular, we consider the reduction in the number of tax bands to be positive, together with the elimination of some deductions, the cut in the top marginal tax rate, the restrictions placed on the use of the system of "modules" and the creation of a new long-term saving item.
- We believe that the government's proposal will reduce the taxation of labour. Specifically, it is estimated that the effective average rate of PIT will fall by around 1.4pp in 2015 and 0.8pp in 2016.
- iii. The system will become more progressive as a consequence of the reform. In 2010, the 64% of taxpayers declaring taxable income of less than

EUR12,000 contributed 14.4% of the total tax take, but in 2015 they will contribute 10%. Meanwhile, taxpayers declaring an income of more than EUR60,000 (3.8% of the total), who accounted for 33% of personal income tax receipts in 2010, will contribute around 36% in 2015.

iv. Finally, it is expected that the reduction in the average tax rate will entail a fall of approximately 13% in PIT receipts, all else being equal.

The fall in the effective average income tax rate resulting from the reform will boost private demand and activity from 2015 onwards. Specifically, it is estimated that the tax cuts will generate GDP growth of around 0.3%.³³ The improvement in the business cycle and the recovery in tax bases could offset the majority of the tax revenues lost. In principle, therefore, the cut in PIT should not endanger stability objectives in the short run. In the long-term, however, the absence of alternative measures to offset the tax cut gives grounds for uncertainty as to the government's capacity to control the deficit and reduce the volume of public debt.

Key aspects of the PIT reform

While substantial, the proposed reform of personal income tax maintains the existing structure, although it addresses most of the recommendations made by the working group of tax experts.³⁴

Raise the tax floors for medium-high incomes and cut tax rates on low income earners

Part of the reform measures aim to raise the tax floor, in order partially to offset the cuts in tax rates. This is the purpose, for example, of introducing a new category of deductible expenses for all employment income and of the changes made to the general

https://www.bbvaresearch.com/category/geografias/spa

34: A summary of the main PIT reform measures is provided in the Appendix.

³¹ This box is a summary of the Economic Watch report with the same title, which will shortly be available at

^{32:} The Council of Ministers resolved on 5 July 2013 to create a commission of experts to reform the Spanish tax system, beginning what the government billed as a "process to undertake legislative reform of the whole tax system to serve economic recovery and job creation at the appropriate moment".

^{33:} See the Outlook Spain report for the third quarter of 2014, available at https://www.bbvaresearch.com/public-compuesta/situacion-espana-2/

^{35:} The reform provides a new allowable item of EUR2,000 in respect of "other expenses", which will be deducted from the gross earnings from work obtained by all taxpayers. It also raises the general reduction for the generation of earnings from provided by art. 20 of the Personal Income Tax Act (Law 35/2006; BOE-A-2006-2764) to EUR14,450.

reduction in employment income.³⁵ According to BBVA Research estimates, the combined impact of both of these measures will be to provide a larger tax cut for incomes of less than EUR15,900, while net earnings from work will be increased in higher income bands (see Figure B.2.1).

Figure B.2.1

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Source: BBVA Research based on Ministry of Finance and Official Journal of the Spanish State

The creation of a new item for long-term saving (long-term savings plans, or PALP in the Spanish acronym) expanding the treatment of pension plans to other saving instruments is welcomed. As well as extending the liquidity windows for this instrument, this measure should help foster long-term saving.

Another key aspect of the reform is **the increase in personal and household tax-free income, in line with the proposals made by the committee of experts.** In this regard, the government's proposal slightly raises the minimum exempt income per taxpayer (which the Lagares Commission considered was not yet completely outdated) and it provides for a significant increase in personal and household minimums (for children, dependent family members,

etc.).

Reduction in the number of tax bands to simplify the tax and make it more transparent and efficient

Continuing with the PIT structure, the reform provides for a significant cut in the tax scale, reducing the number of bands from the current seven to five, and setting the top marginal rate to 45% in 2016 compared with the current level of 52%.

With respect to the taxation of savings, the reform provides for three tax bands and sets the minimum tax rate at the same level as the minimum marginal rate in the general scale (19% in 2016). In any event, it would have been more appropriate to establish a single tax rate (equal to the minimum proposed) for the whole of the savings base, as the other bands impair the neutrality of the tax and introduce disincentives to increasing the capacity to save.

Impact of the Personal Income Tax reform

Based on the PIT figures contained in the 2010 Tax Administration Annual Report,³⁶ we have analysed the overall impact on effective average tax rates of: i) the changes made to the definition of net earnings from work and the applicable deductions; ii) the increase in personal and family minimums, and iii) the change in tax rates. In our analysis we kept the distribution of taxpayers, the structure of average incomes in each tax band, and the personal and family circumstances constant at the levels declared in 2010, because of the lack of updated information.³⁷

The effective average tax rate will fall by more than two points, and the tax will become more progressive

Based on average taxable income for 46 income bands observed in 2010, we calculated average earnings from work in accordance with the new reduction. The reductions existing in 2010 were applied to the new tax assessment basis. After obtaining the new net taxable income, the new

36: Available at http://www.minhap.gob.es/es-

ES/Estadistica%20e%20Informes/Informes%20y%20Memorias/Paginas/Memorias%20de%20Ia%20Administracion%20Tributaria.aspx

37: Updating this data could change the distribution of taxpayers per income band (job losses have particularly affected the lower income bands), which would affect the effective average tax rate.

minimum and family minimums were applied (while maintaining the current treatment)³⁸ and the total tax charge was recalculated on the basis of the new tax rates. Assuming that all factors except the deduction for maternity (which was removed in 2012) remain unchanged, the reform approved would cut the average effective tax rate by around 2.2pp to 16.6%, which is below the level observed in 2010 (see Figure B.2.2).

Figure B.2.2

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PIT: effective average tax rate applied to net taxable income

Source: BBVA Research based on Ministry of Finance data

Considering income bands in comparison with 2010, the reform presented by the Spanish government would reduce the average effective rates paid by taxpayers with incomes of less than EUR120,000, but would increase them for incomes above that figure. However, there would be a general reduction in all effective tax rates compared to the current situation, and this cut would be greater at higher income levels (see Figure B.2.3).

Hence,	we	may	conclude	that	the	tax	reform
measur	es	ana	lysed v	vill	incr	ease	the

progressivity of the tax compared to 2010, insofar as the reform will increase the tax payable by higher incomes and reduce it for lower incomes.



PIT: change in the effective average tax rate by income band (percentage points)



Source: BBVA Research based on Ministry of Finance data

The reform will result in a significant drop in tax revenues, all else being equal

In terms of its impact on tax receipts, the tax cut would represent an average reduction in the tax bill payable by the taxpayer of around EUR500 compared to the charge that would have been payable in 2014, in a scenario without changes in policy and which takes into consideration the expected economic recovery in 2015. Overall, **the PIT reform will reduce tax receipts by almost 13%** compared to 2014 (8.6% in 2015 and 4.7% in 2016), with the result that the revenues will be below their 2010 level (see Figure 2.4).

38: According to prevailing legislation in Spain, the exempt minimum income does not reduce the taxpayer's income, but rather the amount resulting from the application of the general tax scale to the personal and family minimums is deducted from the charge calculated on the application of the scale to net taxable income. For further details, see:

http://www.agenciatributaria.es/static_files/AEAT/DIT/Contenidos_Publicos/CAT/AYUWEB/Biblioteca_Virtual/Manuales_practicos/Renta/Manual_renta_patrimo nio_2013_es_es.pdf

Figure B.2.4 PIT: changes in the total tax charge (2010 = 100)



Source: BBVA Research based on Ministry of Finance data

Impact of the Personal Income Tax reform

Unless measures are implemented to offset the reduction in the tax charge proposed by the government, it could give rise to uncertainty in the future if the process of deficit and public debt reduction is not completed. The tax cut is possible in the short run thanks to the cyclical improvements observed in public revenues and expenses. Once these factors are absorbed, however, the situation of public finances will slow the pace at which the Spanish economy is able to address the necessary process of reducing government debt.

According to the recent budget plan for 2014-17, Spanish public debt will rise above 100% of GDP in 2015. To reduce it to levels in accord with the medium-term objective (below 60% in 2020) will require a significant effort. The Spanish economy already made a similar effort between 1998 and 2007, when public debt was reduced by almost 30pp of GDP. However, one third of this debt reduction was achieved thanks to the gap between the rate of nominal GDP growth (average 7.5%) and the nominal interest rate paid on public debt (average 5%) (see Figure B.2.5). It is unlikely that this situation will be repeated in the future. On one hand, nominal GDP will grow at a considerably slower rate than in the pre-crisis years, and on the other, the risk premium is not expected to remain much above its pre-crisis levels.

Figure B.2.5 Spain: year-on-year change in nominal GDP and implicit interest on public debt (%)



(f) Forecast

Source: BBVA Research based on Ministry of Finance data

In these circumstances, the government will need to generate continuous surpluses if it is to undertake the debt reduction process successfully. Given the absence of measures to offset the fall in tax receipts associated with the reform, further consolidation measures will become inevitable in the coming year if it is to accelerate the process of public debt reduction. In this regard, the government should argue for intelligent an consolidation that would minimise the impact on growth at the same time as offering its citizens certainty with regard to the instruments available to balance the public accounts.

Table B.2.1 Key PIT reform proposals

Reduction in tax rates over two years

General basis

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Progressive taxation in five bands

Minimum rate: 20% in 2015 and 19% in 2016

Maximum rate: 47% in 2015 and 45% in 2016

Savings basis: tax rate in three bands: 20%, 22% and 24% in 2015, and 19%, 21% and 23% in 2016

Increase in the personal and family minimums

Certain deductions to be restricted or removed: donations, home rentals, dividends etc.

Some new deductions have been created: investment in SMEs, large families, families with dependents etc.

Earnings from work

Limitation of the exemption of severance pay to EUR180,000 (bill: EUR2,000 per year worked) as of 1 August 2014. No retroactivity,

New deductible expense of EUR2,000.

Increase in the general reduction to EUR14,450.

Earnings from property investments

The 60% reduction in earnings from rents (bill: cut in the reduction for rental earnings to 50%). The 100% reduction for rentals to young people below the age of 30 has been removed.

Earnings from investments

Removal of the minimum exemption of EUR1,500

Cut in the reduction for one-off earnings to 30%

New Long-Term Saving Plan (PALP): exemption of earnings on amounts held in deposits or under financial contracts included in an individual long-term saving account (CIALP) or under an individual long-term life insurance policy (SIALP). Maximum contribution of EUR5,000 per annum.

Business activity:

1. The net turnover required for application of the direct calculation will be maintained at EUR600,000 as of 2016 (bill: limitation to EUR500,000) 2. New requirements will apply for application of the objective calculation method as of 2016.

Capital gains and losses:

Exemption of gains arising from the award of homes in settlement of debts.

Elimination of the restatement of amortisation coefficients. Exemption for people aged over 65 years, provided the gain is applied to set up an assured life annuity within a period of six months.

Reduction in the maximum reduction for contributions to pension plans to EUR8,000. A surrender condition has been added for the case of contributions made over ten years in the past.

The limit for exemption from the obligation to file PIT returns has been raised to EUR12,000.

Reduced withholding rate of 15% for earnings from professional activities: i) earnings of less than EUR15,000 in the previous year, and ii) earnings representing more than 75% of the taxpayer's total earnings.

SourceBBVA Research based on Ministry of Finance and Official Journal of the Spanish State

Box 3. Non-conventional ECB policies and credit supply: consequences for the Spanish economy

Introduction

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In its June meeting, the ECB's Governing Council (GC) brought in a set of nonconventional monetary policy measures (targeted longer-term refinancing operations or TLTROs) intended to boost credit for the nonfinancial private sector. This box examines the impact this policy might have on the Spanish economy, using as a benchmark the UK's experience with its programme to incentivise credit for families and non-financial corporations (Funding for Lending Scheme) which was implemented in 2012. For these purposes, a structural vector autoregressive model (SVAR) estimated, identified with sign has been restrictions, which allows the impact of shocks to the credit market to be separated out from others of a macroeconomic nature (for example increases in aggregate supply or demand).

The outcome of the analysis suggests that increasing the credit supply has a positive and statistically significant impact on activity and prices for the Spanish economy, though only in the short term. Thus, for example, a credit supply shock similar in terms of cadence and magnitude to that seen in the UK could increase economic growth by 0.5pp and core inflation by 0.2pp given a one-year horizon. Overall, these results are orientative and should be interpreted cautiously for several reasons. First, because the level of uncertainty the estimates reveal is high. Second, because the magnitude of the shock induced by the measures adopted by the ECB (liquidity that will be obtained and how much of it will be allocated for new credit) could differ from that seen in the UK. Finally, because the results actually observed will depend on the way in which credit demand accompanies the supply increase.

Methodological framework

The characteristics of the financial markets as the channel for liquidity in the economy are such that the price and volume of credit do not just react to the idiosyncratic decisions of that market (credit supply and demand shocks). In Spain, for example, these volumes and prices can shift due to changes in the official interest rates set by the ECB for the eurozone as a whole (conventional monetary supply shock), or due to changes in the cyclical and structural position of the domestic economy (aggregate supply and demand shocks)³⁹. Given these circumstances, a set of problems arises that are tied in with empirical identification of these shocks and estimating their impact on the real economy.

Using the methodology developed by Arias, Rubio-Ramírez & Waggoner (2013), this box gives the results of estimating a structural VAR for the Spanish economy identified with sign and zero restrictions, which makes it possible to solve the identification problem described earlier⁴⁰. For the case discussed here, the estimate takes into account quarterly growth of GDP, prices (core CPI) and the relative flow of credit (real credit to other resident sectors, or ORSs, in GDP percentage terms). Similarly, the real short-term interest rate has been used (threemonth Euribor deflated by the core CPI) and the ORS credit rate spread (the difference between

^{39:} Other authors include risk aversion shocks in their identification. Tamási & Világi (2011), for example, argue that this kind of shock can change financing conditions, as alterations to risk aversion modify the propensity of economic agents — both domestic and foreign — to take on indirect investments on national soil to the detriment of making them abroad. Identifying such shocks is done by placing restrictions on the monetary policy response and the nominal effective exchange rate. These identification restrictions, however, are not suited to the case of the Spanish economy, given that it is a member of the EMU, where the sole mandate of the ECB is price stability over the area as a whole.

^{40:} In their work the authors show that the penalty function method of Mountford & Uhlig (2009), up to now the most widespread for identifying structural shocks using sign and zero restrictions, brings material biases into estimates.

the nominal composite rate for these operations and three-month Euribor). The estimation period takes in the first quarter of 1992 up to the second quarter of 2014⁴¹.

Figure B.3.1 summarises the sign and zero restrictions imposed on the estimate model⁴². Going into greater detail, the restrictions discussed imply that:

- a) A positive aggregate demand shock exerts upward pressure on volumes and prices ofgoods and services exchanged, but does not immediately affect either relative credit volumes and prices or real interest rates.
- b) An aggregate supply shock materialises in increased activity and a reduction in prices, but there is no impact when it arises, neither on relative credit prices and volumes nor on real interest rates.

Both positive supply and credit demand shocks put upward pressure on the relative volume of fresh credit in circulation, although in the first case the credit interest rate spread tends to widen and in the second to narrow. It is additionally assumed that such shocks do not simultaneously affect real official interest rates.

 c) Only a positive monetary policy shock from the Spanish domestic standpoint is capable of instantly reducing the real short-term interest rate.

As may be seen in Figure B.3.1, the identification scheme implemented is agnostic with respect to the real economy's response to credit supply and demand shocks and to a conventional monetary supply shock (e.g. no restrictions are imposed). Similarly the model is agnostic as regards the shock impact of the conventional monetary supply shock on the credit market. The above is an important characteristic given that it guarantees that the results

obtained in this work have not been imposed by construction⁴³.

Standard response of the Spanish economy to credit supply shocks

Figures B.3.1 and B.3.2 summarise some of the main results drawn from the estimates made. Specifically, these results are confined to the response of the real economy to credit supply shocks⁴⁴. As can be observed, the estimated stimulus response functions suggest that increases in the relative credit supply have a positive impact on growth of both activity and prices in the economy. Nonetheless, the empirical evidence expressed in Figures B.3.1 and B.3.2 indicates that the degree of uncertainty is high, so the response from the real economy is statistically significant only in the short term.

Table B.3.1

Spain: year-on-year change in nominal GDP and implicit interest on public debt (%)

Shock / Variable	GDP	CPI (core)	Relative flow of credit	Credir financing rate spread	Three month Euribor (deflated)
1) Aggregate demand	(+)	(+)	0	0	0
2) Aggregate supply	(+)	(-)	0	0	0
 Relative demand of credit 			(+)	(+)	0
 Relative supply of credit 			(+)	(-)	0
5) Convential monetary policy					(-)

Source: BBVA Research based on Ministry of Finance data

^{41:} The official credit flow figures are only available from 2003. In this work, the figures have been extrapolated up to 1991 by using outstanding balances of credit stock and assuming an exogenous and static flow rule for repayments. Robustness tests indicate that the results set out in this paper do not change significantly when the seasonality assumptions for the repayment flow rule are relaxed.. 42: Shock orthogonality is also applied.

^{43:} Arias, Rubio-Ramírez & Waggoner (2013) show that, unlike the pre-existing methods, the proposed identification algorithm guarantees the agnostic feature regarding restriction-free variables.

^{44:} The results for the other identified shocks are available for interested readers upon request.

Figure B.3.1 GDP response to a credit supply shock (pp of the quarterly growth rate)



Response with a credit shock standard deviation equal to 3.0pp of the quarterly growth rate of the relative credit flow for r=0. Source: BBVA Research

Figure B.3.2 Response of core inflation to a credit supply shock (pp of the equivalent guarterly growth rate)



Response with a credit shock standard deviation equal to 3.0pp of the quarterly growth rate of the relative credit flow for r=0. Source: BBVA Research

Possible response by the Spanish economy to an increase in the credit supply induced by the ECB

As was mentioned at the beginning of this box, the non-conventional monetary policy measures recently taken by the ECB are intended to make credit more readily available for the private sector within the eurozone as a whole. Using this target as a reference point, in this exercise it has been considered that **these measures should prompt a standard credit supply shock**, with virtually constant risk-free rates (currently at the lower bound), which are accompanied by a gradual narrowing of the ORS credit rate spread.

Given that the implementation of this nonconventional monetary policy is the first experience within the single currency area, the target reduction of credit rate spreads is still uncertain. The closest experience in this regard in terms of type, geography and timing is represented by the mechanism set in train in the UK in mid-2012, designed to boost credit to families and non-financial companies (Funding for Lending Scheme). In its 2014 assessment⁴⁵, the Bank of England estimated that the programme should bring about a gradual narrowing of the funding rate spread of around 100bp within the space of 18 months.

Figures B.3.3 and B.3.4 show the impact that a credit supply increase similar in terms of cadence and magnitude to that seen in the UK would have on the Spanish economy. As can be seen, the results indicate that the **contribution of such a shock to the economy's annual growth could be around 0.5pp in the short term** (time horizon of one year). Likewise the **contribution to underlying inflation in the short term could be 0.2pp**. In both the medium and long term the effects are not statistically significant.

45: See the document "Developments in credit conditions since the launch of the Funding for Lending Scheme" available at: http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf.

Figure B.3.3

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Response of GDP to a credit supply shock characterised by a staggered narrowing in the rate spread equalling 100bp in 18 months (pp of the average annual rate)



Response with a credit shock standard deviation equal to 3.0pp of the quarterly growth rate of the relative credit flow for r=0 Source: BBVA Research

Figure B.3.4

Response of underlying inflation to a credit supply shock characterised by a staggered narrowing in the rate spread equalling 100bp in 18 months (pp of the average annual rate)



Response with a credit shock standard deviation equal to 3.0pp of the quarterly growth rate of the relative credit flow for r=0 Source: BBVA Research

Further considerations

The results obtained above are orientative and should be interpreted with caution. First, because, as described earlier, the uncertainty revealed by the estimates is high. So, for example, despite the fact that the short-term impacts are statistically significant (other than zero), they vary over a wide range (between 0.2pp and 0.8pp, centred on 0.5pp). Second, because the magnitude of the shock induced by the measures taken by the ECB is as yet uncertain and the simulation offered derives from an experience exogenous to the monetary union.

Third, because the **results of the ECB programme may depend to a great extent on future trends in credit demand.** The more productive and suitable in terms of risk are the new projects to be funded, the greater will be the effects upon growth.

Conclusions

Since early June, the ECB has opted in favour of using non-conventional monetary policy geared towards stimulating the overall credit supply in the currency area. This analysis provides an assessment of the potential impact which an increase in the credit supply induced by this policy could have on the Spanish economy. The results show that similar stimulation of the credit supply in terms of cadence and magnitude to that seen in the UK following implementation of its programme designed to incentivate credit to families and nonfinancial companies could boost economic growth in the short term by 0.5pp and increase underlying inflation by 0.2pp. All in all, these findings are by way of guidance, and should be interpreted with caution. First, because the uncertainty the estimates display is high. Second, because the shock induced by the measures taken by the ECB (liquidity that will be obtained and the proportion thereof used for fresh credit) could differ in magnitude and cadence from that seen in the UK. Finally, because the results actually seen will depend on how credit demand responds to the increased supply.

Bibliographic references

BBVA

Arias. J.E., J. Rubio-Ramirez & D.F. Waggoner (2013) "Inference Based on SVARs identified with Sign and Zero Restrictions: Theory and Applications. *Working Papers* 13/38, BBVA Research.

Bank of England (2014), "Developments in credit conditions since the launch of the Funding for Lending Scheme", *Inflation Report, May*, 14-15

Busch, U., M. Scharnagl & J. Scheithauer, (2010), "Loan Supply in Germany During the Financial Crisis", *Discussion Paper Series* 1 05/2010, Deutsche Bank.

Canova, F. & G. de Niccolo, (2002), "Monetary Disturbances Matter for Business Cycle Fluctuations in G-7", *Journal of Monetary Economics*, 49(6): 1131-1159.

Faust, J., (1998), "The Robustness of Identified VAR Conclusions about Money", *Carnegie Rochester Series in Public Policy*, 49: 207-244.

Halvorsen, J. & D. Jacobsen, (2009), "Are Bank lending Shocks Important for Economic Fluctuations", *Working Paper* 2009/27, Norges Bank. Helbling, T., R. Huidrom, M. Kose & C. Otrok, (2010), "Do Credit Shocks Matter? A Global Perspective", *Working Paper* 10/261, IMF.

Hristov, N., O. Hülsewig & T. Wollmershäuse (2012), "Loan Supply Shocks During the Financial Crisis: Evidence for the Euro Area", *Journal of International Money and Finance*, 31(3): 569–592.

Mountford, A., & H. Uhlig (2009). "What Are the Effects of Fiscal Policy Shocks?", *Journal of Applied Econometrics*, 24, 960-992.

Meeks, R., (2009), 'Credit Market Shocks: Evidence from Corporate Spreads and Defaults', *Working Paper* 0906, Federal Reserve Bank of Dallas.

Tamási, B. & B. Világi (2011), "Identification of credit supply shocks in a Bayesian SVAR model of the Hungarian economy." *MNB Working Papers* 2011/7, Magyar Nemzeti Bank.

Uhlig, H., (1999), "What are the Effects of Monetary Policy: Results from Agnostic Identification Approach", *Working Paper* 9928, Tilburg University.

Uhlig, H., (2005), "What are the Effects of Monetary Policy on output? Results from an agnostic identification procedure", *Journal of Monetary Economics*, 52(2): 381-419.

Box 4. Stylised facts about property investment

Over the last few months, the data have shown that activity in **the residential construction sector is approaching a turning point**, after more than six years of contraction. In this section we analyse the stylised facts of the property cycle in Spain, showing the existence of variables which normally lead, coincide with or follow the sector's recovery. Thus, phenomena such as the fall in interest rates, the recovery of financial wealth and the stabilisation of housing prices normally mark the prelude to a recovery in residential investment. In view of this, the likelihood of seeing growth in residential investment for the first time since the crisis began has increased considerably.

Nevertheless, the conditions in which the construction industry finds itself at the moment are unprecedented. In the last few years the property market has been conditioned by the glut of unsold⁴⁶ new homes, and continues to be so, while high levels of debt held by both developers and households have not gone away. The existence of these imbalances will condition the momentum of recovery, which is expected to be atypical and, in particular, slower than on other occasions.

We have conducted a brief review below of the literature on the stylised facts of economic cycles, emphasising the results about Spain, and particularly housing. Immediately afterwards, we describe the methodology used, show our results and debate the conclusions.

Overview of the literature

The analysis presented here is based on work carried out in the past to describe the characteristics of economic cycles. Thus, Kydland & Prescott (1982) and Backus, Kehoe & Kydland (1992) each document the features of the economic cycle in the USA and developed economies. Ortega (1998) does this for the Spanish economy using quarterly figures and, more recently, BBVA Research (2013) has analysed the stylised facts of the Spanish economic cycle since 1980, with particular attention, as well as the aggregate demand indicators, on the relationship between activity and saving, and the profitability of companies, as well as the role played by bank financing in creating and consolidating changing trends in economic activity. Focusing on the housing sector in particular, Álvarez & Cabrero (2010) estimate the cyclical components of the different items on the expenditure side of GDP, coming to the conclusion that the cycle of investment in residential construction has traditionally been a leading indicator in the GDP cycle.

As the literature shows, investment in housing tends to behave as a leading indicator for the economic cycle, something which does not only occur in Spain, but in other countries such as the United States (Leamer (2007)). For this reason, the variables most closely linked to actual home construction (such as new build permits) tend to lead not only the economic cycle but also residential investment, partly because of a time lag from the authorisation to build a home until it starts and, as such, until it is recorded in the national accounts.

The literature confirms that residential demand is more volatile than supply (Tse, Ho & Gansean (1998)), given the greater capacity of demand to withstand to withstand different shocks. Due to this resilience, demand tends to react more swiftly to changes⁴⁷ and tends to lead supply. We could reasonably expect prices to work as a mechanism that signals recovery, and that they will herald the change in the sector cycle.

The correlation of housing prices with demand does indeed tend to be positive and even slightly leading, since increases in prices today tend to bring increased sales in the immediate future (Díaz, A. & Jerez, B (2010)). This is attributable to two effects. First, when the expectation is that prices will go up, buyers are prepared to pay more for a home and,

45: At the end of 2013, the Ministry of Development put at 563,908 the number of new houses on the market, representing 2.2% of the housing stock. The absence of statistics prior to 2008 means that we cannot put this variable into a historical context. Since 2008 the stock of unsold new homes peaked in 2009, when official figures confirmed the existence of slightly more than 653,000 unsold homes, equivalent to 2.6% of housing stock. 46: In the case of Spain, this has been very apparent in the latest crisis. Whereas demand responded practically immediately to the financial turmoil of the summer of 2007, falling drastically, the huge traction of residential supply meant that, despite the shutdown of demand, many more houses than necessary continued to be completed, giving rise to the huge surplus of unsold new homes.

second, increased demand leads to reduced per capita supply of housing – due to the tardy response of supply – which results in upward pressure on prices.

Movements on the demand side also come on the back of changes in interest rates since, for example, a drop in the latter not only alleviates household borrowing conditions (Sastre & Fernández-Sánchez (2005)), but encourages the search on the part of investors for greater profitability in other assets such as equities and housing. This is simply a consequence of the way in which monetary policy works: falling interest rates drive risk-taking by investors. For a good number of them, investment in housing is the first step in this process, although the same mechanism also encourages recovery in financial wealth. This in turn serves as a support, by reducing uncertainty about saving in the private sector and increasing the value of disposable collateral for accessing credit. In short, variables such as interest rates, financial wealth and mortgage lending ought to herald the recovery of demand and, at some point, investment in the sector (Kau & Keenan (1980), Arcelus & Meltzer (1973), Brady (1973) and Fair (1975), among others).

The next section analyses the behaviour of variables described above with a view to checking whether they do in fact present a turning point before, during or after the recovery of housing investment.

Characteristics of the Spanish property cycle

This analysis uses quarterly data from 1980 to 2013^{48} , i a 33-year sample during which time, as Figure B.4.1 illustrates, investment in residential construction has gone through three different cycles; the first starting in the first quarter of 1980; the second starting in the third quarter of 1990 and the third which began in the final quarter of 2006. It is this final cycle which has shown the greatest correction.



^{*}Note: the cycle is taken as having begun when investment reaches its peak

Source: BBVA Research based on INE

Figure R.4.2

Spain: deviation from the trend (chained volume, base year 2008)



*Note: trend extracted based on Hodrick Prescott filter Source: BBVA Research based on INE

Table B.4.1 illustrates contemporary correlation (in period t) of investment in housing and the most representative variables which, according to the literature are affected in a property cycle, from the perspectives of both supply and demand⁴⁹. Likewise, we present the correlation of these variables' data in previous quarters (t-i) or subsequent ones (t+i) with property investment in t, so as to analyse whether

^{48:} The analysis was conducted with data available on the closing date of the report, using the Spanish National Accounts, taking 2008 as the base year. The National Statistics Institute will shortly start to publish its results using the new methodology standard approved in the European Union, the 2010 European System of National and Regional Accounts (ESA 2010), substituting the current standards, ESA 1995.

^{49:} Table B.4.1 illustrates the standard deviations of several variables from the trend, after filtering with a Hodrick Prescott filter.

they lead sector recovery or have their turning point after the recovery has begun.

As the literature predicts, **demand's greater capacity to react ought to put a good part of its fundamentals on the side of leading indicators for housing investment.** This is shown in several of the indicators collated in Table B.4.1. The interest rate, one of the factors underpinning the recovery of demand and one of the conditional fundamentals of activity in a sector with high leveraging such as property construction, shows a negative correlation with activity, reaching the greatest correlation with several quarters in advance. When there are lengthy periods of low interest rates, households look for alternative investments in other assets, such as equities and housing itself.

Thus, financial wealth also figures as a leading indicator for residential investment, with a positive, and relatively high, correlation. Another of the most important fundamentals for residential demand is employment, a variable which shows a relatively high correlation with investment but presents a certain lag, reaching its maximum correlation the following quarter, in line with GDP. As a result of residential demand rising before supply, the mortgage loan stock reaches its highest correlation one quarter in advance.

Table B.4.1 also illustrates how the price acts as a leading indicator for residential investment. A symptom of advance in demand gives way to a rise in prices in a relatively short space of time.

Finally, given the importance of foreign demand in the Spanish property market, it is helpful to include this variable in the analysis. The result reveals that foreign investment in property is positive and also appears to be relatively lagging. Although with a relatively low correlation, in the past foreigners seem to have reacted to the change in residential activity with some delay.

The key variables on the supply side show the expected relationship and thus, whether it is interest rates, new building permits or cement consumption, they all have a positive correlation with residential investment, reaching their highest point a quarter or two in advance.

In essence, the changes in the property cycle in the t period appear to adopt the following pattern:

- 1. Variation in interest rates in real terms.
- 2. Change in financial wealth and in the yield of alternative investments.
- 3. Change in the variables associated with supply: new building permits and cement consumption.
- 4. Variation in housing prices.
- 5. Change in the economy's performance and later in employment.
- 6. Variation in foreigners' property investments.

Conclusions

In this study we have analysed the characteristics of the Spanish property cycle, following a methodology used in economic literature. The first conclusion is **that property activity has traditionally anticipated economic recovery. However, this recovery is not following this pattern.** In particular, since 3Q13 when we saw the first positive GDP variation in Spain since the crisis began, housing investment has continued to fall, with an accumulated drop since then of 4.2%. The glut of housing, the high level of indebtedness in the private sector and the process of fragmentation in the European financial sector which has kept borrowing costs relatively high, are all delaying the execution of new property investment projects.

In any event, there are **several indicators which point to the sector reaching a turning point.** Since the second half of 2012, long-term interest rates, in real terms, have fallen by something over 300 basis points. At the same time, a more expansive monetary policy, the reduction in uncertainty and the recovery of the rest of the economy have led to an increase in households' financial wealth. Even employment, which tends to start recovering later than investment, has already had four quarters of growth. Furthermore, the demand by foreigners for housing has also been showing a virtually uninterrupted recovery since the end of 2010⁵⁰.

^{50:} The significant price correction shown by homes in areas demanded by this group and the diversification in origin of buyers towards countries outside the eurozone (which, as well as being less affected by the economic crisis, have made the most of exchange rate changes in their favour), may be underpinning the recovery so far.

Table R.4.1

BBVA

Spain: co-movements in housing investment in the short-term cycle, 1Q1980-4Q2013*

	Crossed quarterly correlation of residential investment with:										
Variable	X(t-8)	X(t-4)	X(t-3)	X(t-2)	X(t-1)	X(t)	X(t+1)	X(t+2)	X(t-3)	X(t+4)	
Real interest rate	-0.47	-0.34	-0.26	-0.16					0.18	0.20	
Real financial wealth		0.65	0.64	0.61	0.52	0.38	0.26	0.14	0.04	-0.01	
Building permits		0.72	0.73	0.68	0.59	0.50	0.36	0.22	0.09	-0.04	
Cement consumption		0.51	0.61	0.69	0.73	0.72	0.66	0.58	0.48	0.38	
House price		0.45	0.49	0.51	0.52	0.49	0.46	0.43	0.41	0.39	
Mortgage loans		0.41	0.48	0.51	0.52	0.49	0.44	0.40	0.34	0.27	
Unemployment		-0.51	-0.61	-0.69	-0.74	-0.74	-0.71	-0.63	-0.53	-0.41	
GDP		0.34	0.48	0.60	0.68	0.71	0.73	0.69	0.64	0.56	
In work		0.39	0.52	0.63	0.72	0.79	0.81	0.79	0.72	0.64	
Construction cost		-0.04	0.04	0.14	0.22	0.32	0.37	0.35	0.30	0.25	
Foreign investment in property		0.07	0.12	0.18	0.25	0.29	0.33	0.34	0.32	0.26	

* The variables are expressed as deviations from the trend, once filtered with a Hodrick-Prescott filter

Source: BBVA Research based on NSI

Figure R.4.4

Spain: variation in the key variables in the property cycle

Variable X	Variation since troughs (%)	Quarters since troughs	Trough quarter	Latest data available
Real interest rate*	-3.3	8	3Q12	3Q14
Real financial wealth	37.8	8	2Q12	4Q14
Building permits	15.5	4	2Q13	1Q15
Cement consumption	2.2	2	1Q14	2Q15
House price	-	-	2Q14	3Q15
Mortgage loans	-	-	2Q14	4Q15
Unemployment**	-10.1	6	1Q13	1Q16
GDP	1.2	4	2Q13	2Q16
In work	1.6	4	3Q13	3Q16
Construction cost	0.3	3	3Q13	4Q16
Foreign investment in property	71.4	16	1Q10	1Q17

* Note: Variation in pp from their highest levels until 3Q14 ** Note: Variation from their highest levels until 3Q14 Source: BBVA Research based on national sources

In consequence, housing sales have begun a timid recovery (according to notarial data, housing sales are growing at a monthly average of 1.1% (swda)). In response there has been a marked moderation in the fall of prices in recent quarters⁵¹, although for the moment we are not seeing price rises in global terms (but there have been increases in certain regions).

51: In the first half the fall in the real price was, taken as a quarterly average, 0.5%, compared to 1% QoQ drop in 2013 and a 2.4% QoQ fall in 2012r.

But it is not only the demand fundamentals which have started to grow. Supply-side factors are also starting to show signs of a change in trend, as wecan see in the number of building permits and the level of cement consumption.

In short, the behaviour of the variables tells us that residential investment ought to be growing already. Nevertheless, some factors not seen before in the sector - surplus residential supply and major business deleveraging procedures - will condition the momentum of the construction sector's recovery. The increasingly heterogeneous nature of the Spanish market, as a result, among other factors, of differing degrees of surplus and level of indebtedness, together with the pressure of foreign demand varying by geographical area, will mean that the sector will recover at different speeds. For this reason, although in several areas there is a change in residential investment, with major positive rates of growth, in others, the persistence of imbalances will make it hard to recharge the sector. As a result, we assume that on this occasion the recovery of housing investment, in overall terms, will be slow, which does not rule out that there will be high rates of growth, given the low point of departure.52

References

Backus, D., Kehoe, P. & Kydland, F. (1992), "International Real Business Cycles", *Journal of Political Economy*, 100, 745-775.

Ortega, E. (1998), "The Spanish Business Cycle and its Relationship to Europe", Bank of Spain, *Working Document No. 9819*.

Male, R. (2010), "Developing Country Business Cycles: Revisiting the Stylised Facts", *Queen Mary School of Economics and Finance Working Paper*, 664.

Álvarez, Luis J. & Cabrero, Alberto (2010), "Does housing really lead the business cycle?", *Working Document 1.024* Bank of Spain.

52: In 2Q14 housing investment in real terms stood at 1995 levels.

Álvarez, Luis J. & Cabrero, Alberto (2010), "La evolución cíclica de la inversión residencial: algunos hechos estilizados" *Economic Bulletin, Bank of Spain* June 2010

Sastre, Teresa & Fernández-Sánchez, José Luis (2005) "Un modelo empírico de las decisiones de gasto de las familias españolas" *Working Document 0529*, Bank of Spain

Leamer E. (2007) "Housing is the business cycle". NBER Working Document No. 13428

Díaz, A. & Jerez, B. (2010) "House prices, Sales, and Time on the market: a search-theoretic framework". *Working Document, Economic Series* 10-33, University of Carlos III, Madrid

Weaton W. (1999) "Real estate "cycles": some fundamentals". *Real Estate Economics*

Kau, J. & Keenan D. (1980) "The theory of housing and interest rates". *Journal of financial and quantitative analysis*

Nguyen, Q. (2010) "Housing investment: What makes it so volatile? Theory and evidence from OECD countries. *HKIMR Working Document No.23/2010*

4 Tables

Table 4.1

BBVA

Macroeconomic Forecasts: Gross Domestic Product

(YoY rate)	2011	2012	2013	2014	2015
United States	1.6	2.3	2.2	2.0	2.5
Eurozone	1.6	-0.6	-0.4	0.8	1.3
Germany	3.7	0.6	0.2	1.3	1.4
France	2.1	0.4	0.4	0.4	1.1
Italy	0.6	-2.4	-1.8	-0.3	0.8
Spain	-0.6	-2.1	-1.2	1.3	2.0
UK	1.1	0.3	1.7	3.1	2.7
Latin America *	4.1	2.6	2.4	0.9	1.8
Mexico	4.0	3.7	1.3	2.5	3.5
Brazil	2.7	1.0	2.5	0.2	1.3
EAGLES **	7.0	5.4	5.3	4.9	5.3
Turkey	8.8	2.1	4.1	2.5	3.9
Asia Pacific	6.1	5.2	5.2	5.0	5.2
Japan	-0.5	1.5	1.5	1.1	1.3
China	9.3	7.7	7.7	7.2	7.0
Asia (exc. China)	3.8	3.5	3.4	3.5	3.9
World	4.1	3.4	3.2	3.2	3.7

* Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela.
 ** Brazil, China, India, Indonesia, Mexico, Russia and Turkey.

Forecast closing date: 30 October 2014. Source: BBVA Research and IMF

Table 4.2

Macroeconomic Forecasts: 10-year government bond vield

(Annual average)		2011	2012	2013	2014	2015
United States		2.8	1.8	2.4	2.6	3.1
Germany		2.6	1.5	1.6	1.2	1.0

Forecast closing date: 30 October 2014. Source: BBVA Research and IMF

Table 4.3

Macroeconomic Forecasts: Exchange Rates)

(Annual average)	2011	2012	2013	2014	2015
EUR-USD	0.72	0.78	0.75	0.75	0.84
USD-EUR	1.39	1.29	1.33	1.33	1.19
GBP-USD	0.62	0.63	0.64	0.61	0.64
JPY-USD	79.8	79.8	97.6	104.7	115.3
CNY-USD	6.46	6.31	6.20	6.14	6.02

Forecast closing date: 30 October 2014.

Source: BBVA Research and IMF

Table 4 4

Macroeconomic Forecasts: Official Interest Rates

(End of period)	2011	2012	2013	2014	2015
United States	0.25	0.25	0.25	0.25	0.50
Eurozone	1.10	0.75	0.25	0.05	0.05
China	6.56	6.00	6.00	6.00	6.00

Forecast closing date: 30 October 2014. Source: BBVA Research and IMF

Table 4.5

BBVA

EMU: macroeconomic forecasts (YoY change, %, unless otherwise indicated)

	2011	2012	2013	2014	2015
Real GDP	1.7	-0.7	-0.4	0.8	1.3
Consumption					
Household consumption:	0.2	-1.3	-0.6	0.7	1.3
Public consumption	-0.2	-0.2	0.2	0.9	0.4
Gross fixed capital formation	1.5	-3.2	-2.4	0.6	1.8
Domestic demand (contribution to growth)	0.7	-2.1	-0.8	0.8	1.1
Exports	6.7	2.6	2.1	3.7	5.1
Imports	4.4	-1.0	1.2	4.1	5.2
Net exports (contribution to growth)	1.0	1.4	0.4	0.0	0.2
Labour Market					
Employment	0.4	-0.7	-0.8	0.5	0.6
Unemployment rate (% of labour force)	10.1	11.3	11.9	11.6	11.4
External Sector					
Current Account Balance (% GDP)	0.1	1.4	2.3	2.2	2.1
Budget Balance (%GPD)	-4.1	-3.6	-2.9	-2.8	-2.6
Prices and Costs					
CPI. % average	2.7	2.5	1.4	0.5	1.0
CPI Core. % average	1.7	1.8	1.3	0.9	1.0
Exchange rate					
USD (Annual average)	1.39	1.29	1.33	1.33	1.19
USD (End of the period)	1.32	1.31	1.37	1.23	1.20
Interest rate					
Official interest rate (Repo) (Annual average)	1.25	0.88	0.55	0.16	0.05
Official interest rate (Repo) (End of the period)	1.00	0.75	0.25	0.05	0.05

Forecast closing date: 30 October 2014. Source: BBVA Research Table 4.6

BBVA

Spain: macroeconomic forecasts (YoY change, %, unless otherwise indicated)

	2011	2012	2013	2014	2015
Activity					
Real GDP	-0.6	-2.1	-1.2	1.3	2.0
Private consumption	-2.0	-3.0	-2.3	2.1	1.8
Public consumption	-0.3	-3.7	-2.9	1.0	0.9
Gross fixed capital formation	-6.4	-8.3	-3.7	0.7	4.2
Domestic demand (contribution to growth)	-2.7	-4.3	-2.7	1.6	2.0
Exports	7.4	1.2	4.3	3.7	5.3
Imports	-0.8	-6.3	-0.5	4.8	5.5
Net exports (contribution to growth)	2.1	2.2	1.4	-0.3	0.1
Nominal GDP	-0.5	-1.9	-0.6	1.2	3.4
(EUR bn)	1075.1	1055.2	1049.2	1061.3	1097.0
Labour market					
Employment (LFS)	-1.6	-4.3	-2.8	1.0	1.8
Unemployment rate (% active pop.)	21.4	24.8	26.1	24.4	23.1
Employment QNA (full-time equivalent)	-2.6	-4.4	-3.3	0.8	1.5
Productivity	1.9	2.3	2.0	0.5	0.6
Prices and costs					
CPI (annual average)	3.2	2.4	1.4	0.0	1.0
CPI (end-of-period)	2.4	2.9	0.3	0.3	1.2
GDP deflator	0.1	0.2	0.7	-0.1	1.3
External sector					
Current account balance (% GDP)	-3.2	-0.3	1.4	1.2	2.1
Public sector					
Debt (% GDP)	69.2	84.4	92.1	98.2	99.8
Budget balance (% of GDP)	-8.9	-6.6	-6.3	-5.5	-4.2
	69.2	84.4	92.1	98.2	99.8

(*): Excluding financial aid to Spanish banks. Forecast closing date: 30 October 2014. Source: Official bodies and BBVA Research

Table 4.7 Spain: GDP growth by region (%)

BBVA

Autonomous Community	2011	2012	2013	2014	2015
Andalusia	0.2	-2.1	-1.5	1.3	1.8
Aragon	-0.2	-1.9	-1.2	1.3	2.2
Asturias	0.4	-2.1	-2.1	0.8	1.3
Balearic Islands	1.0	-0.8	-0.4	1.6	1.7
Canary Islands	0.4	-1.4	-0.4	2.1	2.2
Cantabria	-0.8	-0.9	-1.9	0.9	1.7
Castile-Leon	1.1	-2.0	-2.1	1.3	2.2
Castile-La Mancha	0.1	-3.1	-1.1	1.0	2.3
Catalonia	-0.4	-1.3	-0.8	1.3	1.8
Extremadura	-0.9	-2.8	-1.4	1.3	2.2
Galicia	-0.5	-0.9	-1.0	1.2	2.2
Madrid	0.7	-1.6	-1.2	1.7	2.5
Murcia	-1.0	-2.0	-1.7	0.7	2.3
Navarre	1.4	-1.6	-1.5	1.4	2.2
Basque Country	0.2	-1.3	-1.9	1.1	1.8
La Rioja	0.9	-2.0	-1.8	1.4	2.4
Valencia	-1.1	-1.6	-0.8	1.3	2.0
Spain	0.1	-1.6	-1.2	1.3	2.0

(f): forecast. Source: BBVA Research based on INE data

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