

**MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK** 

NUMBER 387 | FEBRUARY 2015



# ECONOMIC & FINANCIAL ENVIRONMENT

FINANCIAL MARKETS
Financial derivative trading in crude oil: victim or executioner?

INTERNATIONAL ECONOMY Strong dollar - fragile emerging debt?

EUROPEAN UNION Greece: a new post-Troika phase?

SPANISH ECONOMY
Spain's export sector: pros and cons

# DOSSIER: INFLATION EXPECTATIONS

Falling inflation and the risk of deflation

Measuring inflation expectations: the devil is in the detail

Growth without inflation: what does the Phillips curve tell us?

*Inflation: merely a monetary phenomenon?* 



### MONTHLY REPORT -ECONOMIC AND FINANCIAL MARKET OUTLOOK

February 2015

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EDITORIAL MR02

## Deflation, inflation and the dilemma of monetary policy

One of the most surprising aspects of the current economic situation is the simultaneous occurrence of very low inflation, almost deflation, and unusually expansionary monetary policies. This is an anomalous situation both from a theoretical and an empirical point of view.

From a conceptual approach, inflation theories suggest that, after the ultra-expansionary monetary policies implemented by the main central banks, we should be witnessing strong growth in prices or at least an upturn in inflation expectations. In empirical terms, the correlation between the creation of money in excess of actual economic growth and rising prices has been extensively documented for several years. So how can we explain the extraordinary situation that we are currently experiencing?

One initial explanation would be that western economies are going through a totally unusual situation after suffering the Great Recession, the largest economic contraction since the Great Depression of the last century. According to this view, the existence of a huge output gap, the difference between an economy's potential and effective aggregate demand, would explain why inflation is so weak, something which would presumably be temporary.

Another view that partly complements the previous one emphasizes that the extremely adverse impact of the Great Recession on financial intermediaries and markets has weakened the channel for monetary transmission to such an extent that the huge expansion in central bank balances has not actually resulted in an increased supply of money or credit in the economy.

A third, somewhat more complex view claims that, if we analyse the phenomenon over a longer timeframe, the simultaneous presence of very low inflation and expansionary monetary policies is not contradictory. According to this thesis, the current situation is actually the result of many years of excessively lax monetary policy. Such policies encouraged an excessive economic growth, fuelling demand based on credit and debt which did not result in inflation due to the combination of several factors: the downward pressure on prices for consumer goods as a result of market globalisation, the anti-inflationary credibility achieved by central banks and the fact that a significant proportion of the liquidity was directed at real estate and financial asset markets, leading to repeated speculative bubbles in these markets.

According to this theory, a long period of lax policies have resulted in a huge expansion in potential output and excessive debt among economic agents. Both factors are pushing down inflation today. Moreover, the aggressive interest rate cuts carried out whenever an asset bubble burst resulted in economic contraction and ended up leading monetary policy into a dead end, with official interest rates almost at zero and no other alternative than to expand the balance sheets of central banks by directly buying assets in the markets.

Whatever the case, dear reader, the aim of the Dossier in this *Monthly Report* is to provide its own modest contribution to this important debate with a detailed examination of these and other alternative explanations. With the firm belief that thorough, systematic analysis is crucial to achieving a proper diagnosis of one of the key dilemmas facing economic policy today.

**Jordi Gual** Chief Economist 31 January 2015 CHRONOLOGY AND AGENDA MRO2

### **CHRONOLOGY**

### **JANUARY 2015**

22 The European Central Bank announces the enlargement of its asset purchase programme to 60 billion euros a month, including both public and private debt. This programme will continue until September 2016 but might be extended if inflation is still well below 2%. It also cut the TLTRO interest rate from 0.15% to 0.05%.

25 Syriza wins the general election in Greece and plans to renegotiate the country's debt and austerity policies.

#### **DECEMBER 2014**

- 16 Russia's central bank raises the official interest rate by 6.5 pps to 17% to slow down the rouble's depreciation.
- 24 Shinzo Abe is re-elected as Japan's Prime Minister.
- 29 Early elections are called in Greece.

#### **NOVEMBER 2014**

- 1 The Federal Reserve's third asset purchase programme (QE3) comes to an end. From now on, it will only reinvest capital from the bonds maturing in its portfolio.
- 21 The ECB starts its asset-backed security purchase programme.

#### **OCTOBER 2014**

- **20** The ECB starts its **third covered bond purchase programme**.
- 26 The ECB and EBA publish the results from the stress tests carried out on 130 European banks. 25 banks failed in total, with a capital deficit of 24.6 million euros at year-end 2013. This exercise was the precursor to the start of the Single Supervisory Mechanism in November.

### **SEPTEMBER 2014**

4 The ECB reduces the Refirate to 0.05% and the deposit facility rate to -0.20%. It also announces a programme to buy up asset-backed securities (ABS) and covered bonds.

### **JULY 2014**

15 The sixth BRICS summit establishes the ground rules of the New Development Bank for development projects and the creation of a Contingent Reserve Arrangement allocated 100 billion dollars.

### **AGENDA**

### **FEBRUARY 2015**

- 3 Registration with Social Security and registered unemployment (January).
- 6 Industrial production index (December).
- 12 European Council.
- 13 Flash GDP of the euro area (Q4).
- 16 Flash GDP of Japan (Q4).
- 18 Loans, deposits and NPL ratio (December). International trade (December).
- 26 Quarterly national accounts (Q4). Economic sentiment index of the euro area (February).
- **27** GDP flash estimate (February). Balance of payments (December).

### **MARCH 2015**

- **3** Registration with Social Security and registered unemployment (February).
- 5 Governing Council of the European Central Bank.
- 6 Industrial production index (January).
- 17 Quarterly labour cost survey (Q4).
- **18** Loans, deposits and NPL ratio (January). Fed Open Market Committee.
- 19 European Council.
- 20 International trade (January).
- 30 Flash CPI (March).
  - Economic sentiment index of the euro area (March). Household savings rate (Q4).
- 31 Balance of payments (January). Net international investment position (Q4). Fiscal balance (2014).

EXECUTIVE SUMMARY MR02

## Central banks take centre stage again

Activity is picking up worldwide but uncertainty is still high. In the January update of its forecasts, the International Monetary Fund recorded the stage at which the world economy finds itself: after growing by 3.3% in 2014, the Fund predicts two years of acceleration (3.5% in 2015 and 3.7% in 2016). Nonetheless, these figures are lower than the ones given in autumn and the downside risks are greater. Most economic analysts assume a similar scenario and the figures at the end of 2014 and beginning of 2015 seem to be confirming this scenario. In the first month of the year, stock markets were highly volatile and geopolitical uncertainty (Ukraine) and electoral uncertainty (Greece) got worse. But in the same month the leading economies closed 2014 reasonably on track for expansion: in Q4 the US grew by 2.5% year-on-year (barely lower than the figure in Q3) while China advanced over the same period by 7.3%, the same rate as the previous quarter.

Given this mixed bag, central banks have played a central part. Although the role played by central banks, with their ultra-expansionary monetary policies, has been significant since the 2008-2009 recession, a new phase of monetary activism began in the last few months of 2014. In November the Bank of Japan announced an ambitious bond purchase programme while in January it was the turn of the European Central Bank (ECB), which has enlarged its asset purchase programme. Specifically, monthly debt purchases will total 60 billion euros and will be made up of sovereign and also private debt. This is an ambitious measure, as can be seen both in its size (1.1 trillion euros) and its potentially long duration (in principle until September 2016 although it could be extended if necessary). In the case of the ECB, in addition to the relatively modest outcome of the extraordinary liquidity injections of previous months, the drop in inflation expectations has been decisive in its decision to make a move. Although the situation is not deflationary, at least in the strict sense of the term, the ECB wants to prevent such a risk from developing. But these are not the only central banks to take action. The Federal Reserve has spent several months adapting its message in the direction of confirming an interest rate hike in the near future, although also stating that it will have the necessary patience to wait until the right moment. Given this situation, and just a few days before the (already expected) announcement by the ECB, the Swiss central

bank decided to no longer peg the Swiss franc to the euro, sharply pushing up the value of the Swiss currency. Emerging central banks have also taken steps, each one attempting to handle the consequences of the monetary policies implemented by the large central banks and their own domestic circumstances: Russia cut its reference rate, abandoning previous attempts to contain the rouble's depreciation, Brazil tightened up its monetary policy in the face of inflationary pressure while India lowered its interest rates, taking advantage of the good performance by prices.

Europe is in the spotlight. For several months now the euro area's combination of a slow recovery and low inflation has stood out as a global risk factor. The ECB's strong monetary expansion should help to limit concerns thanks to its positive effects by reducing the risk premia of periphery countries and depreciating the euro. But in addition to its macroeconomic effects, the confirmation of QE has also occurred at a beneficial time as the political change in Greece had increased uncertainty, which the ECB has now helped to diminish. Although our diagnosis is that Greece's political about-turn does not have the contagion potential of 2011 or 2012, given the smaller presence of Greek debt on the balance sheets of private investors and the institutional progress made by the EMU in the last few years (in particular, European banking union), the confidence inspired by the ECB is certainly advantageous.

Spain registers its sixth consecutive quarter of expansion. The Spanish economy grew by 0.7% quarteron-quarter in Q4, 0.1 pps more than expected, and has now enjoyed one and a half years of positive growth. This performance is being supported by the recovery in domestic demand, resulting from good consumption and investment figures (probably including, and this is new, growth in investment in construction). The forecasts being given suggest that the recovery will improve in 2015 thanks to a favourable combination of temporary factors: the foreign sector, which had lagged somewhat in 2014, will benefit from the euro's depreciation caused by the ECB's monetary expansion and the sharp fall in oil prices will particularly benefit the Spanish economy as it has a relatively high dependence on energy. We can also expect one of the factors of concern, namely negative inflation rate, to get back to normal as oil stops dragging down inflation as from the second half of 2015.

### **FORECASTS**

Year-on-year (%) change, unless otherwise specified

### International economy

· ·										
	2013	2014	2015	2016	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3
GDP GROWTH										
Global <sup>1</sup>	3.2	3.2	3.5	3.7	3.2	3.1	3.2	3.5	3.6	3.6
Developed countries										
United States	2.2	2.4	3.5	2.7	2.6	2.7	2.5	3.9	3.6	3.1
Euro area	-0.4	0.8	1.3	1.8	0.8	0.8	0.7	0.8	1.2	1.5
Germany	0.2	1.5	1.5	1.9	1.4	1.2	1.1	0.8	1.4	1.8
France	0.4	0.4	0.8	1.3	0.0	0.4	0.4	0.6	0.9	0.9
Italy	-1.9	-0.4	0.5	1.2	-0.4	-0.5	-0.4	-0.1	0.3	0.7
Spain	-1.2	1.4	2.3	2.1	1.3	1.6	2.0	2.2	2.4	2.4
Japan	1.6	0.3	1.2	1.1	-0.3	-1.2	0.3	-0.7	1.5	2.4
United Kingdom	1.7	2.6	2.3	2.1	2.6	2.6	2.7	2.6	2.3	2.1
Emerging countries										
China	7.7	7.4	7.0	6.6	7.5	7.3	7.3	7.3	7.2	6.8
India <sup>2</sup>	4.7	5.8	6.5	6.2	5.7	5.3	6.0	5.9	6.4	6.8
Indonesia	5.8	5.1	5.7	6.1	5.1	5.0	5.3	5.5	5.8	5.7
Brazil	2.5	0.3	1.0	2.2	-0.9	-0.2	0.2	0.4	1.1	1.1
Mexico	1.4	2.2	3.4	3.7	1.6	2.2	3.2	3.4	3.4	3.5
Chile	4.1	2.1	3.4	4.4	1.9	1.9	2.0	2.7	3.2	4.2
Russia	1.3	0.4	-3.3	-0.8	0.8	0.7	-0.6	-2.8	-3.5	-3.5
Turkey	4.1	2.8	3.4	4.6	2.2	1.7	2.5	2.9	3.1	3.4
Poland	1.6	3.3	3.4	3.9	3.4	3.4	2.8	3.0	3.3	3.5
South Africa	2.2	1.4	2.3	2.8	1.3	1.4	1.1	1.9	2.2	2.6
INFLATION										
Global <sup>1</sup>	3.7	3.4	3.0	3.7	3.7	3.5	3.1	2.8	2.8	2.9
Developed countries										
United States	1.5	1.6	0.5	2.5	2.1	1.8	1.2	0.2	-0.1	0.4
Euro area	1.4	0.4	0.5	1.6	0.6	0.4	0.2	-0.3	0.1	0.7
Germany	1.6	0.8	0.8	1.7	0.9	0.8	0.4	0.1	0.6	0.9
France	1.0	0.6	0.5	1.6	0.8	0.5	0.3	-0.1	0.2	0.6
Italy	1.3	0.2	0.4	1.6	0.4	-0.1	0.1	-0.2	0.1	0.5
Spain	1.4	-0.1	-0.3	2.0	0.2	-0.3	-0.5	-1.3	-0.8	-0.1
Japan <sup>3</sup>	0.4	2.7	1.4	2.2	3.6	3.3	2.5	2.2	0.3	1.0
United Kingdom	2.6	1.5	1.0	1.9	1.7	1.5	0.9	0.3	0.6	1.1
Emerging countries										
China	2.6	2.0	1.8	2.5	2.2	2.0	1.5	1.8	2.1	2.1
India <sup>4</sup>	6.3	3.9	0.4	5.7	5.8	3.9	0.6	0.3	-0.3	-1.1
Indonesia	6.4	6.9	8.1	5.8	7.1	4.5	8.4	8.2	9.0	8.4
Brazil	6.2	6.3	6.0	5.6	6.4	6.6	6.5	6.2	6.0	6.0
Mexico	3.8	4.0	3.5	3.1	3.6	4.1	4.2	3.7	3.9	3.3
Chile	2.1	4.1	3.3	4.3	4.5	4.7	4.0	3.5	3.4	4.4
Russia	6.8	7.8	9.4	5.6	7.6	7.7	9.6	10.5	9.0	9.0
Turkey	7.5	8.9	6.7	6.1	9.4	9.2	8.8	7.2	6.1	6.7
Poland	1.2	0.2	1.1	2.3	0.5	-0.1	-0.6	0.0	0.8	1.5
South Africa	5.8	6.0	3.9	6.1	6.5	5.9	5.6	3.3	3.6	3.6
Juli / IIII Cu	5.0	5.0	5.7	J. I	5.5	٥.,	5.0	3.5	5.0	5.0

**Notes:** 1. In purchasing power parity. 2. Annual figures represent the fiscal year and factor costs. 3. Takes into account the consumption tax hike introduced in April 2014. 4. Wholesale prices.

Forecasts



### Spanish economy

	2013	2014	2015	2016	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4
Macroeconomic aggregates											
Household consumption	-2.3	2.4	2.4	1.6	2.3	2.7	3.1	3.1	2.6	2.2	1.9
General government consumption	-2.9	0.7	0.1	-0.3	0.7	0.9	0.8	-0.2	0.1	0.1	0.5
Gross fixed capital formation	-3.7	2.8	5.2	4.6	3.2	3.1	4.3	5.4	5.0	5.3	5.2
Capital goods	5.6	12.0	9.2	6.0	12.7	9.5	10.5	10.5	8.8	9.1	8.2
Construction	-9.2	-2.8	2.7	3.6	-2.0	-1.2	0.2	2.5	2.5	2.7	3.0
Domestic demand (contr. Δ GDP)	-2.7	2.1	2.4	1.7	2.2	2.5	2.7	2.8	2.5	2.3	2.2
Exports of goods and services	4.3	4.6	5.9	5.0	1.5	4.6	6.1	7.3	7.1	4.6	4.6
Imports of goods and services	-0.4	7.8	6.8	4.1	4.8	8.2	9.3	10.0	8.2	4.6	4.4
Gross domestic product	-1.2	1.4	2.3	2.1	1.3	1.6	2.0	2.2	2.4	2.4	2.4
Other variables											
Employment	-3.2	0.9	2.2	1.9	0.8	1.4	2.2	2.5	2.2	2.2	1.9
Unemployment rate (% labour force)	26.1	24.4	22.9	21.7	24.5	23.7	23.7	24.1	22.7	22.2	22.4
Consumer price index	1.4	-0.1	-0.3	2.0	0.2	-0.3	-0.5	-1.3	-0.8	-0.1	1.1
Unit labour costs	-0.4	-0.5	0.0	1.2	-0.1	-0.4	-0.4	-0.1	-0.6	0.2	0.7
Current account balance (cum., % GDP) 1	1.4	0.1	0.7	0.6	0.3	0.0	0.1	0.2	0.4	0.5	0.7
Net lending or borrowing rest of the world (cum., % GDP) <sup>1</sup>	2.1	0.7	1.3	1.2	1.0	0.6	0.7	0.8	1.0	1.1	1.3
Fiscal balance (cum., % GDP) <sup>1</sup>	-6.8	-5.7	-4.8	-3.3	-6.3	-5.8					

### Financial markets

INTEREST RATES											
Dollar											
Fed Funds	0.25	0.25	0.29	0.88	0.25	0.25	0.25	0.25	0.25	0.25	0.42
3-month Libor	0.27	0.23	0.52	1.16	0.23	0.23	0.24	0.32	0.48	0.61	0.68
12-month Libor	0.68	0.56	1.01	1.68	0.54	0.56	0.57	0.74	0.94	1.10	1.25
2-year government bonds	0.30	0.44	0.97	1.77	0.40	0.50	0.52	0.59	0.87	1.11	1.31
10-year government bonds	2.33	2.53	2.38	3.26	2.61	2.49	2.27	1.95	2.23	2.49	2.84
Euro											
ECB Refi	0.54	0.16	0.05	0.05	0.22	0.12	0.05	0.05	0.05	0.05	0.05
3-month Euribor	0.22	0.21	0.05	0.06	0.30	0.16	0.08	0.05	0.05	0.05	0.05
12-month Euribor	0.54	0.48	0.32	0.36	0.57	0.44	0.33	0.31	0.32	0.32	0.32
2-year government bonds (Germany)	0.13	0.05	-0.12	0.05	0.10	-0.01	-0.04	-0.12	-0.12	-0.12	-0.12
10-year government bonds (Germany)	1.62	1.23	0.40	0.83	1.43	1.06	0.76	0.41	0.40	0.40	0.40
EXCHANGE RATES											
\$/euro	1.33	1.33	1.15	1.11	1.37	1.33	1.25	1.16	1.15	1.14	1.13
¥/euro	129.65	140.42	142.48	139.40	140.11	137.68	142.89	138.72	141.34	143.75	146.12
£/euro	0.85	0.81	0.77	0.77	0.82	0.80	0.79	0.78	0.77	0.77	0.77
OIL											
Brent (\$/barrel)	108.47	99.45	57.40	78.68	109.65	103.38	77.03	49.73	52.33	60.23	67.28
Brent (euros/barrel)	81.67	74.83	50.13	71.13	79.96	78.02	61.68	42.97	45.54	52.79	59.40

**Note:** 1. Four quarter cumulative.

Forecasts

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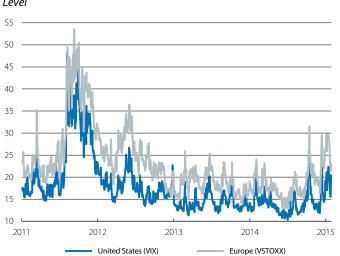
# FINANCIAL OUTLOOK · A start to the year affected by contrasts

The ECB dispels doubts regarding its monetary strategy but other questions still remain on the horizon. The start of 2015 has been dominated by volatility, mainly fed by three aspects. The first, oil prices falling even faster and their impact on global inflation expectations. The second, the uncertainty surrounding the outcome of Greece's elections. And the third concerns the defensive actions of several central banks given expectations of an imminent start to quantitative easing (QE) by the ECB. Nonetheless, this last question was successfully resolved towards the end of January: the ECB has launched an ambitious expansionary programme that includes the purchase of sovereign debt to avoid deflationary risks and boost the region's economic growth. Reinforcing the euro area's monetary conditions, which are already very lax, will provide a clear push for European risk asset prices. However, the many different sources of potential risk and growing divergence in monetary policy at a global level will keep volatility high.

The Federal Reserve is on hold. The Fed's first meeting of the year provided few surprises. The institution stressed the US economy's solid growth, highlighting the strong improvement in the rate of job creation, household consumption and business investment. However, it also admitted that inflation is still very low due mainly to falling energy prices. Given this situation, the authority maintained the official rate at its current level (0%-0.25%) and noted that it will take into account the information obtained from various variables (global economic growth, inflation, the currency and international events) to determine how long ultra-lax conditions should last. In any case, the Fed repeated that it will be «patient» before starting monetary normalisation. In short, the Fed has opted not to hurry and is waiting before toughening up its discourse. In this respect, we expect the monetary authority to stick to its plan and therefore expect the first interest rate hike in November, in line with the consensus of investors.

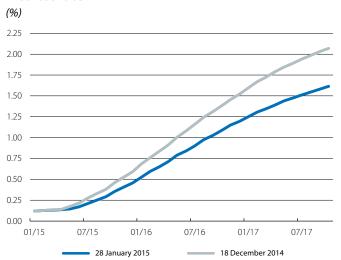
The ECB is keeping to the script and will start up its sovereign debt purchases (QE) as from March. Given the deterioration in inflation expectations and the limited effectiveness of the measures adopted so far, the ECB's Governing Council has enlarged its asset purchase programme. Specifically, monthly bond purchases will total 60 billion euros and will be made up of sovereign debt (government bonds, debt from national and European agencies) and private debt (already existing covered bond and ABS programmes). Of note among the positive aspects is the overall size of the programme (1.1 trillion euros) and the possibility to extend it beyond September 2016 if inflation fails to show any signs of moving towards its medium-term target (2%). One drawback is the high credit risk that must

# Implied volatility of the US and European stock markets Level



Source: "la Caixa" Research, based on Bloomberg data.

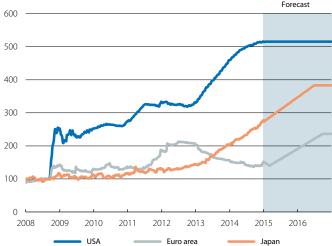
# USA: forwards for the Federal Reserve official interest rate



**Source:** "la Caixa" Research, based on Bloomberg data.

### Balance sheet of the main central banks

Index (September 2008 = 100)



Source: "la Caixa" Research, based on Bloomberg data

be assumed by national central banks (80% of the purchases of public and national agency debt). In the medium term, these expansionary measures should increase inflation expectations and improve both bank aggregates and activity.

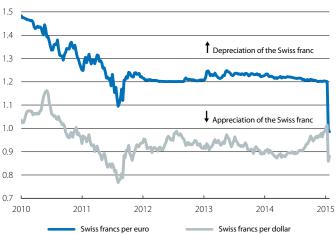
The Swiss central bank (SNB) has announced it will no longer peg the Swiss franc to the euro. The essential reason for this decision is the great difficulty the Swiss monetary authorities would face if they had a fixed minimum exchange rate (1.20 francs per euro) once QE is implemented in the EMU. This totally unexpected action by the SNB resulted in the franc appreciating by 13% and 10% against the euro and dollar respectively up to the end of January, and caused a large amount of volatility in foreign exchange markets. The SNB also cut the official deposit rate to -0.75% with the aim of imposing easier monetary conditions and attempting to contain the unfavourable effects of the franc's appreciation. The SNB is not the only monetary institution to cut interest rates. The central banks of Denmark and Canada have also followed suit: the first in order to contain the appreciation of its currency and the second because of disinflationary pressure.

Treasury bonds gain from global volatility. The effects of the Swiss central bank's action on foreign exchange markets, the threat of global deflation and uncertainty regarding the Greek elections resulted in a flight to quality in capital flows towards US debt. Aspects of a domestic nature, such as the absence of inflationary pressure via wages and the moderation in expectations of an interest rate hike by the Federal Reserve have also pushed down US sovereign yields. However, and with a view to the coming quarters, the good tone of US economic activity should help the yield on medium and long-term bonds to pick up.

The markets welcome the ECB's decisions. Although investors had been expecting some kind of action by the European authority since the end of December, the announcement of sovereign QE in the euro area, more aggressive than expected, has further pushed down bond yields, both for core and periphery countries. Yield on the German bund has fallen to an all-time low, below 0.4%. Similarly, and encouraged by uncertainty regarding the future policy of Greece, the short tranches of the public debt of some countries such as Germany, the Netherlands and France are offering negative yields. In the periphery, the impact of the announcement of the ECB's measures led to reductions in the internal rate of return throughout all tranches, narrowing spreads and flattening curves. Of note was the historical drop in yield on Spanish ten-year bonds to 1.38%. With regard to Greece, the coming to power of Syriza has revived investors' fears, leading to sharp rises in yields on Greek public debt and substantial losses on the Athens stock market. These losses have been further intensified by liquidity tensions in the financial sector. However, it is important to note that this has not spread to the rest of Europe's periphery debt, thanks partly to the start-up of sovereign QE by the ECB.

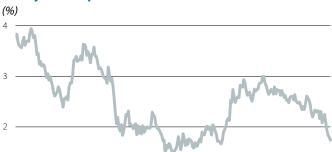
### Exchange rate of the Swiss franc against the euro and dollar

(Swiss francs)



Source: "la Caixa" Research, based on Bloombera data

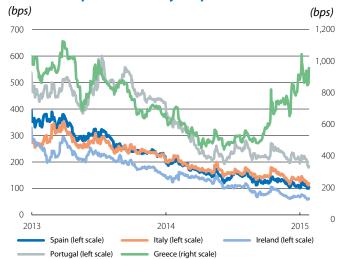
### USA: yield on public debt





Source: "la Caixa" Research, based on Bloomberg data.

### Euro area: spreads for 10-year public debt



Nota: Spread compared to the yield on the 10-year German bund. Source: "la Caixa" Research, based on Bloomberg data

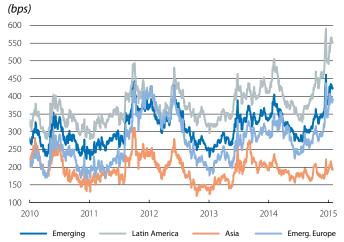
### Easy monetary conditions are spreading to the emerging

bloc. Falling commodity prices, especially oil, have reduced inflationary pressures at a global level and some emerging central banks have taken advantage of this situation, such as India which has surprisingly lowered its interest rates. The deterioration in Russia's macroeconomic and financial environment is starting to affect both its corporate and banking area. Growing tensions related to solvency and liquidity in the financial sector are a source of vulnerability for the Russian economy and might be aggravated by a downgrade of its sovereign rating. Given this scenario, Russia's central bank has unexpectedly lowered its official interest rate by 200 bps to 15%. The case of Brazil, however, is an exception to this situation of interest rate cuts, raising its official interest rate by 50 bps to 12.25%.

The ECB's measures give a boost to equity. The start of the year has been affected by an increase in the frequency and scope of episodes of volatility. The sharp fall in the price of crude, the unexpected actions of some central banks, the slowdown in the Chinese economy and threat of global deflation were arguments enough to reduce investor confidence, who switched to safer assets such as public debt. However, the trend in the main stock market indices, and European indices in particular, picked up after the ECB announced the enlargement and duration of its asset purchase programme. In short, these factors have pushed the corporate earnings season of 2014 Q4 into the background. S&P 500 firms as a whole have performed well so far, although less than in previous years due to the decrease in earnings of energy firms and the effect of the dollar's appreciation. On the other hand, for the euro area we expect the enlargement of the ECB's balance sheet and the depreciation of the euro will act as important levers to improve corporate earnings.

The depreciation of the euro intensifies. The announcement of the ECB's monetary expansion increased the depreciation of the euro against the main currencies. The European currency reached 1.11 dollars, its lowest value in 11 years although it rebound a few days later, reaching around 1.14 dollars. The divergence between the ECB and Fed's monetary policies suggest that the euro will tend to continue its depreciation this year, although contained expectations of the normalisation of US interest rates may reverse this trend from time to time. With regard to commodities, the price of a barrel of Brent oil has continued to fall, reaching around 50 dollars. Falling copper prices are another significant reference, the price being pushed down by more moderate prospects for world growth.

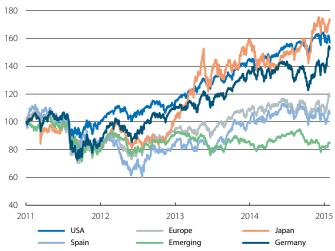
### Spreads of emerging sovereign bonds \*



**Note:** \* Compared with a basket of US bonds. **Source:** "Ia Caixa" Research, based on Bloomberg data.

### Trends in the main international stock markets

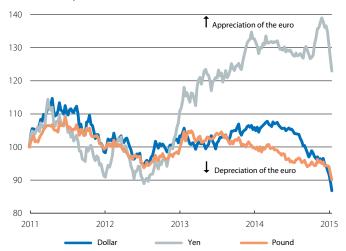
*Index (January 2011 = 100)* 



**Source:** "la Caixa" Research, based on Bloomberg data.

## Exchange rate of different currencies against the euro

Index (January 2011 = 100)



Source: "la Caixa" Research, based on Bloomberg data.

# **FOCUS** · **Financial derivative trading in crude oil: victim or executioner?**

The financial community will remember 2014 as the year in which, against all expectations, oil prices underwent one of the biggest slumps since the financial crisis erupted in 2008. After plummeting by 46% in 2014, the price of crude has fallen by a further 15% since the start of the year. Although there is broad consensus regarding the factors that lie behind this situation (oversupply, a fall in the demand forecast, OPEC's strategy), there are other, more controversial aspects. One area of debate in financial and academic circles is the effect of financial transactions in derivative markets on crude oil prices and their volatility, a discussion that has revived given the oil market's current situation.

In order to shed some light on the influence exercised by this phenomenon, namely the financialisation of crude oil, two important points need to be made. The first concerns the trends in speculative positions and in the price of crude, which very often run in parallel. During the last six months of 2014, net speculative positions in WTI oil fell by 35% to 312,000 contracts due to the closure of long positions and an increase in short. Over the same period, the drop in the price of a barrel of crude reached 50%, down to 53 dollars. Is there any causal relation between these two variables? Empirical evidence suggests there is not, arguing that many different common factors underlie the behaviour of both: expectations regarding the supply and demand for crude futures, world growth and the accumulation of oil reserves. This last point is reflected in the first graph: while the price of crude plummeted during the second half of 2014, net speculative positions remained stable. Secondly, it is useful to determine which flows are due purely to speculative strategies, which is very often a complex task. In this respect, although it is useful to assume that all non-commercial activity is speculative, this is actually not very accurate.

Although financial transactions may not have influenced the price of crude oil, they have certainly had an effect on its degree of volatility. This is because there have been more derivative transactions than usual, in turn due to the great uncertainty affecting the underlying fundamentals of oil. This can be seen in the third graph, which shows how the current number of put options with very low strike prices has shot up. Nonetheless, this volatility will probably calm down as the strategies of derivative operators increasingly take into account the new scenario of oil prices.

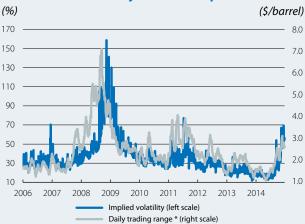
### **Crude oil: positioning of speculative agents \***



**Note:** \* Number of futures contracts and options on a barrel of WTI oil held by non-commercials.

**Source:** "la Caixa" Research, based on data from Bloomberg and the CFTC.

### Measures of volatility in crude oil prices



**Note:** \* Spread between the maximum and minimum price of a WTI barrel in one session. **Source:** "la Caixa" Research, based on Bloomberg data.

# WTI crude oil options: active contracts maturing in June 2015

#### (Thousands of contracts)



Source: "la Caixa" Research, based on Bloomberg data.

### **FOCUS** · A fair wind for Treasury funding in 2015

The conditions of the Spanish public debt market have improved considerably over the last year and the likelihood of this situation continuing has led the Treasury to design an ambitious funding strategy for 2015. There are two goals: to reduce the average cost of outstanding debt at the same time as lengthening its average maturity to ease the payback schedule; an objective that, given the interrelationship between both variables, is no mean feat.

In this respect Spain has unsatisfactory figures compared with the rest of the euro area countries: the average cost of its debt is among the highest and its average maturity one of the shortest. Only Portugal and Italy have similar values although we must remember that the figures for Ireland and Greece would be much worse without the official financial aid received as part of their bail-out programmes. Nevertheless, Spain has a lot of catching up to do compared with countries with more stable finances.

In principle, it is not easy to achieve the two goals set by the Treasury. Given the positive interest rate curve in relation to maturity, a policy to prioritise long-term issuances in order to increase the average maturity of a country's debt tends to increase the average cost of funding. This dilemma represents a crucial aspect in the financing policy of any Treasury. During the years of crisis, the Spanish Treasury decided to contain the average cost by accepting a reduction in the average maturity, concentrating new issuances in shorter tranches. In 2014, improved conditions in the sovereign debt market meant that the Treasury could alter its strategy and, given the choice between reducing the cost and lengthening the average maturity of its debt, it chose the latter. The relative weight of long-term issuances therefore increased again, taking the average maturity from 6.2 to 6.3 years. Fortunately for the Treasury, thanks to the fall in the curve of interest rates as a whole, this decision was compatible with a 0.2 pps reduction in the average cost (half what would have been achieved if the average maturity had remained constant).

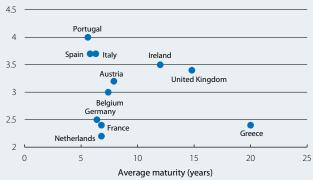
Several factors are responsible for this simultaneous improvement. Firstly, less tension in market funding conditions, significantly reducing sovereign yields for countries in general. Secondly, improvement in the Spanish economy and its impact on the risk premium. And thirdly, how the Treasury has managed its debt. Of particular note in this last aspect is the enlargement of the investor base via innovations such as issuing inflation-linked bonds and issuing debt through syndicated operations. All this has raised the share of debt held by foreigners (from 43.7% to 49.4%). Similarly, replacing debt maturing in 2015 with new debt at 10 years has helped to increase the average maturity.

With a view to 2015, all the evidence suggests that this favourable financial environment will continue. The ECB's announcement of a sovereign debt purchase programme will result in the acquisition of just over 50 billion euros of Spanish bonds in 2015 (almost 7% of the total outstanding debt between 2 and 30 years). All this should help to reduce the average cost of the debt managed by Spain's Treasury.

In other words, thanks to the current financial context the two goals set by the financing programme will benefit from a fair wind. However, it is necessary to continue such efficient management and thereby simultaneously increase the average maturity of public debt while also reducing its cost. The sails have been unfurled and there is a tail wind. But the Treasury still needs to keep a close eye on the rudder.

# Average cost and maturity of public debt of the main European countries \*

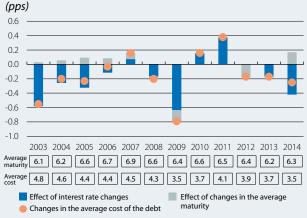
Average cost (%)



**Note:** \* Data refer to the country's public debt as a whole (including debt managed by the Treasury, loans and the debt of regional entities).

Source: "la Caixa" Research, based on estimates by the EC and the IMF.

# Contribution to the change in the average cost of Spanish Treasury debt



**Source:** "Ia Caixa" Research, based on data from the Treasury.

1. Any profit obtained by the ECB from interest payments will end up being distributed among the different public Treasuries in the euro area.



## **KEY INDICATORS**

### Interest rates (%)

	30-Jan	31-Dec	Monthly change (bps)	Year-to-date (bps)	Year-on-year change (bps)
Euro					
ECB Refi	0.05	0.05	0	0	-20
3-month Euribor	0.05	0.08	-2	-2	-24
1-year Euribor	0.27	0.33	-6	-6	-29
1-year government bonds (Germany)	-0.14	-0.06	-8	-8	-23
2-year government bonds (Germany)	-0.18	-0.10	-8	-8	-28
10-year government bonds (Germany)	0.30	0.54	-24	-24	-142
10-year government bonds (Spain)	1.42	1.61	-19	-19	-228
10-year spread (bps)	112	107	5	5	-86
Dollar					
Fed funds	0.25	0.25	0	0	0
3-month Libor	0.25	0.26	-1	-1	1
12-month Libor	0.62	0.63	-1	-1	5
1-year government bonds	0.14	0.21	-7	-7	6
2-year government bonds	0.45	0.66	-21	-21	11
10-year government bonds	1.64	2.17	-53	-53	-105

### Spreads corporate bonds (bps)

	30-Jan	31-Dec	Monthly change (bps)	Year-to-date (bps)	Year-on-year change (bps)
Itraxx Corporate	60	63	-3	-3	-21
Itraxx Financials Senior	68	67	1	1	-32
Itraxx Subordinated Financials	143	149	-6	-6	-3

### Exchange rates

	30-Jan	31-Dec	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
\$/euro	1.129	1.210	-6.7	-6.7	-16.7
¥/euro	132.650	144.850	-8.4	-8.4	-4.7
£/euro	0.750	0.777	-3.5	-3.5	-8.8
¥/\$	117.490	119.780	-1.9	-1.9	14.4

### **Commodities**

	30-Jan	31-Dec	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Index	422.5	437.8	-3.5	-3.5	-7.6
Brent (\$/barrel)	50.8	55.8	-8.9	-8.9	-53.2
Gold (\$/ounce)	1,283.8	1,184.9	8.3	8.3	3.2

### **Equity**

	30-Jan	31-Dec	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500	1,995.0	2,058.9	-3.1	-3.1	11.2
Eurostoxx 50	3,351.4	3,146.4	6.5	6.5	10.7
Ibex 35	10,403.3	10,279.5	1.2	1.2	4.4
Nikkei 225	17,674.4	17,450.8	1.3	1.3	17.8
MSCI Emerging	961.6	956.3	0.6	0.6	2.7
Nasdaq	4,635.2	4,736.1	-2.1	-2.1	12.4

### **ECONOMIC OUTLOOK · The United**

### **States leads the recovery**

The IMF expects the world economy to grow by 3.5% in 2015 and by 3.7% in 2016, more than the 3.3% growth in 2014 but, in both cases, 0.3 pps below October's forecast. The recovery in 2015 is being influenced by lower oil prices, encouraging greater growth especially in advanced economies. Nonetheless there is still a long list of downside risks, especially geopolitical and financial, including the normalisation of US monetary policy. Apart from the forecast for the US, which has been improved again, the downward revision has been widespread across all countries: relatively moderate in the euro area and Japan and larger in the emerging economies (whose growth forecast for 2015 has been reduced from 5.0% to 4.3%), while China and India are still expected to grow by more than 6% in spite of their downward revision. The biggest revision has been for oilexporting countries, especially Russia with a 2015 growth forecast that is now -3.0%.

### **UNITED STATES**

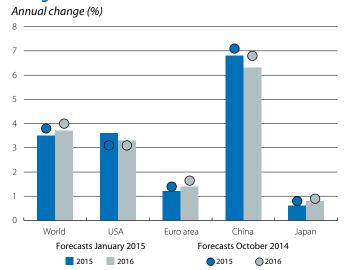
### GDP grew by a strong 0.7% quarter-on-quarter in 2014 Q4

thanks to the continued push by private consumption (boosted by low oil prices) and to the recovery in residential investment, offsetting the slight slowdown in non-residential investment and the reduction in public expenditure due to misalignments in the seasonally adjusted figure for military spending. Growth for the US economy for 2014 as a whole, affected by a weak Q1, is therefore 2.4%, 0.1 pps more than we expected. With a view to 2015, we have increased our forecast by 0.4 pps (to 3.5%), in line with the IMF forecasts (3.6%) and above the country's potential (which is around 2.2%). This higher forecast is supported by the better figures posted in Q4 and the price of crude oil, which we estimate will be somewhat cheaper in 2015 (specifically 20% lower than our January forecast). Moreover, the good tone of the US economy in 2015 will be helped by less fiscal adjustment and the continued recovery in the real estate sector. These factors offset the strength of the dollar, a certain slowdown in capital goods investment and wages whose growth is still disappointing.

# The latest business indicators confirm the strength of the US economy. The field study regularly produced by the Federal Reserve (Reige Book) continues to endorse the

Federal Reserve (Beige Book) continues to endorse the country's expansion. In spite of their slight decline in December, business sentiment indices (ISM) are also in line with healthy growth for the economy as a whole, at the level of 55.5 and 56.2 points for manufacturing and services, respectively. Household consumer spending (which accounts for 70% of GDP) has been vigorous in the last four months, with a lower savings rate (the rise in consumer spending exceeds that of disposable income).

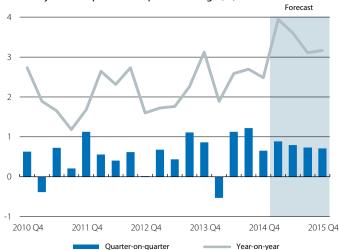
### IMF: growth forecasts for 2015 and 2016



Source: "la Caixa" Research, based on IMF data

#### **USA: GDP**

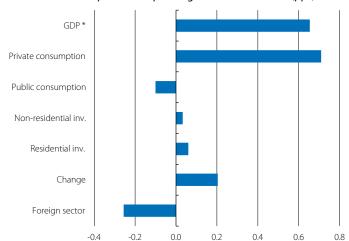
Year-on-year and quarter-on-quarter change (%)



Source: "la Caixa" Research, based on data from the Bureau of Economic Analysis.

#### USA: GDP

Contribution to quarter-on-quarter growth in GDP for Q4 (pps)



Note: \* Quarter-on-quarter change.

Source: "la Caixa" Research, based on data from the Bureau of Economic Analysis.

The strength of the labour market still does not generate wage pressures. 252,000 jobs were created in December, once again above the 200,000 figure that indicates a strong market. This brings the number of jobs created for the whole of 2014 to close to three million, doubling the historical average since 1980. The unemployment rate also fell by 0.2 pps to 5.6%, very close to the 5.0% of December 2007, at a time just before the start of the crisis. However, this undoubtedly positive trend has two downsides. The first is the continued stagnation of the participation rate (those in work and those looking for work) which fell slightly in December to 62.7% of the population aged over 16, far from the pre-crisis figure of 66%. A significant part of this difference is due to non-demographic factors, particularly the still high proportion of discouraged people who are difficult to relocate in the labour market. The second downside is the high degree of underemployment, in other words people forced to work part-time due to the current market situation but who would like to work full-time. The Bureau of Labor Statistics calculates a broad unemployment rate (called U6) which includes such underemployment and which, in December, stood at 11.2%, doubling the unemployment rate. The trend for this broad unemployment rate is also downwards but more slowly than the official unemployment rate, undoubtedly making any wage rises difficult.

Construction's contribution to GDP growth should increase in 2015. The crisis (and consequent loss of jobs) slowed up the formation of households, reducing demand for residential properties. This has created a considerable pool of households pending to be formed that should boost the real estate market in 2015 and 2016. The healthy figure of 1,089,000 housing starts (in annual terms) in December 2014 still has a lot of room for improvement as it is significantly below the average figure of one and a half million from the 2000-2007 period. This level could be reached as household formation gradually gets back to normal. One sign that this process is making headway is the fact that the share of vacant housing compared with all residential properties has now returned to levels prior to the bubble (3.5% in 2002).

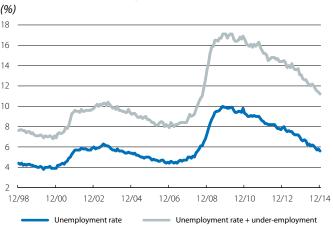
#### US inflation is slowing up in spite of strong activity.

December's CPI grew by 0.8% year-on-year, 0.5 pps below November's figure, due to the sharp decrease in the energy component, while core inflation (without food or energy) increased by 1.6% year-on-year, 0.1 pps below November's figure. It is therefore indicative that the Fed, at its January meeting, admitted that inflation had fallen substantially below its 2% target over the last few months. This, together with the lower forecast for oil in 2015, has led to a reduction in estimates for US inflation (from 1.0% on average to 0.5%).

### **JAPAN**

The Prime Minister, Shinzo Abe, has presented a record budget to revive the economy in 2015. Public expenditure will increase by 0.5% due to the cost of pensions, a sharp

# USA: unemployment rate and unemployment rate plus underemployment \*



**Note:** \* Unemployment rate (% of the labour force), unemployment rate + underemployment = U6 (including those working part-time involuntarily for economic reasons). **Source:** "la Caixa" Research, based on data from the Bureau of Labor Statistics.

### **USA: vacant real estate \***

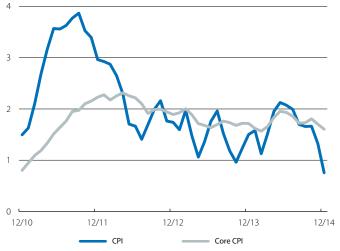
(% total residential properties)



**Note:** \* Vacant for sale or rental, excluding temporary properties. **Source:** "Ia Caixa" Research, based on data from the Department of Commerce.

#### **USA: CPI**

Year-on-year change (%)



**Source:** "la Caixa" Research, based on data from the Bureau of Labor Statistics.

increase in defence spending and a fiscal package worth 0.7% of GDP for low-income households and SMEs (precisely the sectors hardest hit by the weak yen). The government believes that a recovery in domestic demand is not compatible with further cuts. This is confirmed by household private consumption and consumer confidence being at low levels since the VAT hike last 1 April. Nevertheless, growth in tax revenue due to a larger contribution from VAT will help reduce the public deficit in 2015, while further assistance will come from the weak yen which, combined with falling oil prices, already led to a reduction in the trade deficit in December.

### Inflation is still far from the Bank of Japan's 2% target.

December's CPI grew by 2.4% year-on-year, 0.3% without the effect of the VAT hike, while the CPI without food (but with energy), the figure used by the BOJ as a benchmark, rose by 0.5% year-on-year discounting the VAT effect. On 26 January the BOJ lowered its inflation target for the 2015 tax year from 1.7% to 1.0%, introducing a downward bias to our inflation forecast for 2015 (1.4%).

### **EMERGING ECONOMIES**

### China is slowing down but we still expect a soft landing.

GDP grew by 7.3% year-on-year in 2014 Q4, bringing the annual figure to 7.4%, somewhat below our forecasts but a pleasant surprise for the consensus. This annual growth is the lowest since 1990, in line with the recent downward revision of the IMF's forecasts and the likely downward revision in the official growth rate (from 7.5% to 7%) in March. In line with the controlled slowdown pursued by the government and given the slight deviation from 2014's figures, we have revised downwards our growth forecasts for 2015 and 2016 by 0.2 and 0.1 pps respectively (to 7.0% and 6.6%). The latest activity indicators continue to point to a soft landing, with the industrial production index speeding up to 7.9% year-on-year in December and retail sales to 11.9%.

India benefits from cheap oil. Its central bank, which is following a strict monetary line, lowered its reference rate from 8.0% to 7.75% after several months of moderate inflation (5% in December), leaving the door open to further cuts. India's oil imports (when Brent was at 108 dollars/barrel) accounted for 5.3% of its GDP, double China's figure of 2.4%, and cheaper oil has therefore improved its macroeconomic situation, giving it room to manoeuvre and carry out reforms to push growth above 6.0%.

The prevailing tone is of disparity in the other benchmark emerging countries. Russia has entered an intense recession (we expect GDP to fall sharply in 2015) due to geopolitical uncertainty, falling oil prices and the rouble plummeting. In Brazil the new government has started off by announcing ambitious fiscal adjustment for 2015 equivalent to 1% of GDP. Such greater orthodoxy should help to restore investor confidence although it has forced us to lower our growth forecast for 2015 from 1.3% to 1.0%.

### **Japan: household consumption**

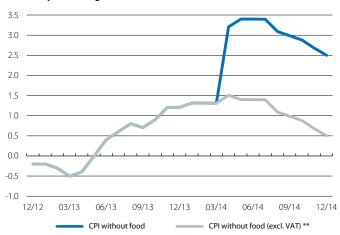
Year-on-year change in real terms (%)



Source: "Ia Caixa" Research, based on data from the Ministry of the Interior and Communication.

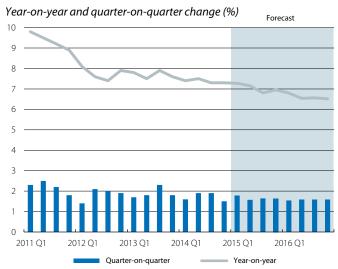
### Japan: CPI without food \*

Year-on-year change (%)



Notes: \* CPI without fresh food (but with energy), the BOJ's benchmark. Does not include the impact of the VAT hike in April 2014, from 5% to 8%. Source: "la Caixa" Research, based on data from the Ministry of the Interior and Communication.

### China: GDP



Source: "Ia Caixa" Research, based on data from the National Statistics Office of China.

## **FOCUS · Strong dollar - fragile emerging debt?**

One of the most remarkable macroeconomic developments in the last few months has been the substantial increase in the dollar's value, appreciating by more than 10% year-on-year compared with the basket of main currencies. As a result, many emerging currencies have lost value against the greenback, with countries such as Russia, Hungary, Poland, Colombia, Chile, Brazil and Mexico all seeing double digit depreciation. Given that the dollar's appreciation is occurring at a time when the volume of international debt (public and private debt held by non-residents) issued by many emerging countries is growing, and that such issuances are mostly in dollars, there is good reason for concern: might we be witnessing the run-up to an episode of financial stress caused by emerging countries finding it difficult to repay their debts?

In order to answer this question, first we need to contextualise the recent trend in international debt. Certainly this has grown substantially: according to data from the Bank for International Settlements, between 2010 and 2014 the outstanding balance of international debt (both public and private) for 15 benchmark emerging countries as a whole grew by 82%, around 20% annually on average. The international debt of developed countries remained almost stable over the same period. The question is therefore relevant.

However, when we look at a longer timescale and compare this with GDP (a more effective measure to determine a country's capacity to repay than absolute sums), it can be seen that although there has certainly been an upward trend in the international debt of the group of leading emerging countries over the last few years, this has not reached historically high levels. In fact, the levels in 2014 were below the long-term average of 1992-2014. And if we look at external debt rather than debt securities, a broader concept that also includes loans, credit and other liabilities in addition to debt securities, the conclusions remain the same: there has been clear growth since 2010 but the current levels cannot be considered excessive in historical terms.

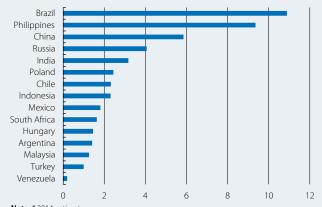
This conclusion is even more comprehensive when we analyse the differences between countries. Among the main emerging economies, seven countries have seen above average growth in external debt from 2010 to 2014: South Africa, Malaysia, Poland, Turkey, Chile, Mexico and Venezuela. However, of these, only the first two are at their highest levels of external debt since 1990. This disparity between countries is repeated when we look at the room to manoeuvre of those most affected by the accumulation of external debt. One typical way of tackling this question is to compare a country's

short-term external debt with its level of reserves. It should be noted that, in a situation of exchange range uncertainty and external financing, a country's reserves determine its ability to respond.

So when we compare the level of reserves with shortterm external debt, the only country whose reserves do not cover its short-term external debt is Venezuela. At the next level of risk are those countries whose reserves cover less than twice their external debt1: Turkey, Malaysia, Argentina, Hungary, South Africa and Mexico. Should we be concerned about these six countries? The likelihood of an episode of uncertainty occurring can be related to the quality of their macroeconomic fundamentals. In this respect, when their main imbalances are analysed (inflation, public deficit and current balance), we can see that South Africa has accumulated the most challenges (with excessive imbalances in the three variables mentioned). Some distance after it comes Turkey, with high inflation and a high current deficit, and therefore also relatively at risk. In the case of Argentina the main problem is inflation, which is high and has poor prospects, as well as a worrying upward trend in the country's public deficit (although the current levels are not alarming per se). The other members of the group seem to be more protected: Hungary and Malaysia have a current account surplus and do not suffer from any excessive inflationary tensions while Mexico's imbalances remained stable (and at levels that are not excessive for the country) in 2014.

# Emerging economies: ratio of reserves to short-term external debt \*

Number of times the reserves exceed short-term external debt



**Note:** \* 2014, estimate. **Source:** "la Caixa" Research, based on data from Oxford Economics

1. This is the threshold for sufficient capacity to respond to an external financing crisis. For example, it is equivalent to the amount of liquidity that would cover capital outflows similar to those in the 2008-2009 crisis, the last widespread episode of such characteristics in the emerging economies

# FOCUS · Has the deleveraging of US households come to an end?

US households embarked on an extensive deleveraging process during the economic and financial crisis that started in 2008. This, however, seems to have come to an end. US household debt rose by 78 billion dollars in 2014 Q3 and, far from this being a temporary phenomenon, the rise between 2013 Q3 and 2014 Q3 totals 430 billion dollars. This has been supported by a significant increase in mortgages as well as student and car loans.

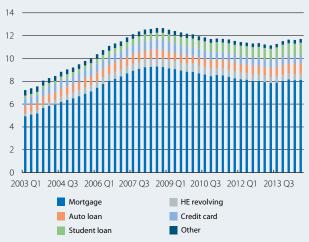
Although such absolute figures are revealing they do not always accurately show the degree of debt among households as they fail to reflect growth in the economy and therefore any increase in households' capacity to repay their debts. A more appropriate way of measuring the sustainability of household debt is via the ratio between their level of debt and gross disposable income. In this case the data show a slightly different picture. Although the ratio fell from 115% to 89% between 2008 and 2012, in line with the correction in absolute terms, since the beginning of 2013 it has remained stable at around 90%: precisely the same level as in the pre-crisis period.

Households' stock of gross assets is also a relevant factor in determining their capacity to repay debt. At present, at just over 95 billion dollars, the total gross assets of households are 16% above their pre-crisis levels. The strong recovery in the US economy, whose average GDP growth in real terms was around 2.2% annually from 2010 to 2014 (close to 4% in nominal terms), and the ultra-expansionary monetary policy implemented by the Fed have supported this significant improvement. An improvement that has been widespread throughout all kinds of assets but especially in financial ones, accounting for 70% of total assets. Financial assets in particular have grown by 48% since the minimum reached during the crisis. Along the same lines, the net wealth of US households has managed to set record highs in almost all guarters after its sharp drop in 2008 and, in terms of disposable personal income, this wealth is now approaching the peak reached at the end of 2006 (see the third graph). Nevertheless we need to bear in mind the fact that this financial wealth is likely to correct itself once the Fed withdraws the ultra-expansionary measures that supported such growth.

In short, US households are once again increasing their level of debt but from sustainable levels and at a rate in line with their rising income. Such a situation allows the US economy to face the gradually consolidating cycle of growth with optimism.

### USA: gross household debt by type

(Trillion dollars)



Source: "Ia Caixa" Research, based on data from the New York Fed.

### **USA:** gross household debt

(% of gross disposable personal income)



Source: "Ia Caixa" Research, based on data from the New York Fed.

#### USA: household net wealth

(% of gross disposable personal income)



**Note:** Also includes non-profit organisations as well as households. **Source:** "Ia Caixa" Research, based on data from the Fed (Flow of Funds).

### **KEY INDICATORS**

Year-on-year change (%), unless otherwise specified

### **UNITED STATES**

	2012	2013	2013 Q4	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14
Activity									
Real GDP	2.3	2.2	3.1	1.9	2.6	2.7	-	2.5	_
Retail sales (excluding cars and petrol)	4.2	3.6	3.5	2.3	4.1	4.4	4.5	5.0	4.3
Consumer confidence (value)	67.1	73.2	74.0	80.5	83.4	90.9	94.1	91.0	93.1
Industrial production	3.8	2.9	3.3	3.3	4.2	4.6	4.4	5.2	4.9
Manufacturing activity index (ISM) (value)	51.8	53.9	56.7	52.7	55.2	57.6	59.0	58.7	55.5
Housing starts (thousands)	784	930	1.025	925	985	1.030	1.092	1.043	1.089
Case-Shiller home price index (value)	141	158	165	170	171	170	171	173	
Unemployment rate (% lab. force)	8.1	7.4	7.0	6.6	6.2	6.1	5.7	5.8	5.6
Employment-population ratio (% pop. > 16 years)	58.6	58.6	58.5	58.9	58.9	59.0	59.2	59.2	59.2
Trade balance 1 (% GDP)	-3.3	-2.8	-2.8	-2.8	-2.9	-2.9	-2.8	-2.9	
Prices									
Consumer prices	2.1	1.5	1.2	1.4	2.1	1.8	1.7	1.3	0.8
Core consumer prices	2.1	1.8	1.7	1.6	1.9	1.8	1.8	1.7	1.6

Note: 1. Cumulative figure over last 12 months.

Source: "Ia Caixa" Research, based on data from the Department of Economic Analysis, Department of Labor, Federal Reserve, Standard & Poor's, ISM and Thomson Reuters Datastream.

### **JAPAN**

	2012	2013	2013 Q4	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14
Activity									
Real GDP	1.7	1.6	2.2	2.2	-0.3	-1.2	_		_
Consumer confidence (value)	40.0	43.6	41.7	38.8	39.1	40.9	38.9	37.7	38.8
Industrial production	0.2	-0.6	5.8	8.3	2.6	-1.1	-0.8	-1.6	-1.1
Business activity index (Tankan) (value)	-5.0	6.0	16.0	17.0	12.0	13.0	-	12.0	-
Unemployment rate (% lab. force)	4.3	4.0	3.9	3.6	3.6	3.6	3.5	3.5	3.4
Trade balance 1 (% GDP)	-1.4	-2.4	-2.4	-2.8	-2.9	-2.9	-2.8	-2.7	-2.6
Prices									
Consumer prices	0.0	0.4	1.4	1.5	3.6	3.3	2.9	2.4	2.4
Core consumer prices	-0.6	-0.2	0.5	0.6	2.3	2.3	2.1	2.1	2.1

**Note:** 1. Cumulative figure over last 12 months.

 $\textbf{Source: "} la\ Caixa"\ Research, based\ on\ data\ from\ the\ Communications\ Department,\ Bank\ of\ Japan\ and\ Thomson\ Reuters\ Datastream.$ 

### **CHINA**

	2013	2014	2013 Q4	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14
Activity									
Real GDP	7.7	7.4	7.7	7.4	7.5	7.3	-	7.3	-
Retail sales	13.1	10.3	13.5	11.9	12.3	11.9	11.5	11.7	11.9
Industrial production	9.9	9.8	10.0	8.7	8.9	8.0	7.7	7.2	7.9
PMI manufacturing (value)	50.8	50.7	51.3	50.3	50.7	51.3	50.8	50.3	50.1
Foreign sector									
Trade balance 1 (value)	258	380	258	232	253	320	335	356	380
Exports	7.8	6.1	7.4	-3.4	5.0	13.0	11.6	4.7	9.7
Imports	7.3	0.6	7.1	1.7	1.4	1.1	4.6	-6.7	-2.4
Prices									
Consumer prices	2.6	2.0	2.9	2.3	2.2	2.0	1.6	1.4	1.5
Official interest rate <sup>2</sup> (value)	6.00	5.60	6.00	6.00	6.00	6.00	6.00	5.60	5.60
Renminbi per dollar (value)	6.1	6.2	6.1	6.1	6.2	6.2	6.1	6.1	6.2

**Notes:** 1. Cumulative figure over last 12 months. Billion dollars. 2. End of period.

**Source:** "la Caixa" Research, based on data from the National Bureau of Statistics of China and Thomson Reuters Datastream.

# **SECONOMIC OUTLOOK · A crucial** start to the year for the euro area

The context of low inflation and uncertainty means that measures must be taken. The IMF predicts a scenario of a recovery at different speeds for the countries of the euro area, with the growth rate increasing from 0.8% in 2014 to 1.2% in 2015 and 1.4% in 2016. However, these forecasts are lower than its predictions three months earlier. In addition to this slow recovery is low inflation, unlikely to pick up even without the fall in oil prices. In this macroeconomic environment, the ECB has announced an important enlargement of the asset purchase programme it was carrying out in order to avoid the risk of deflation and promote growth.

The ECB will implement a quantitative easing programme of considerable size. The asset purchase programme has been extended to bonds issued by European governments, agencies and institutions. Asset purchases will total 60 billion euros a month and will take place from March 2015 to September 2016 (or until the inflation rate comes close to 2%). Total purchases will exceed 1.1 trillion euros and will be proportional to each country's share in the ECB's capital. The programme should reduce the risk premium of the periphery countries and cause the euro to depreciate, stimulating growth in the euro area. Business indicators for the euro area continue to register values in line with moderate activity although they started the year with a slight upswing. In January the composite PMI reached 52.2 points, its highest level for the last five months. Both the PMI index for services and manufacturing picked up. In Germany, the IFO (business climate index) and ZEW (index for investor and analyst expectations) improved for the third consecutive month. Demand indicators also looked more promising at the start of the year, in particular the consumer confidence index.

The drop in inflation expectations has pushed the ECB to act. In December, inflation stood at 0.2%, 0.5 pps less than the previous month, affected by the slump in oil prices. This negative figure for inflation in December is not the same as deflation (see the Dossier this month on inflation expectations) and it is important to stress that core inflation (without energy or unprocessed food) held steady at 0.7% for the third consecutive month. Nevertheless, risk of deflation is not neglegible as inflation expectations have continued to fall in the euro area. In such an environment, the start of the quantitative easing programme should boost inflation expectations. Just before Mario Draghi's announcement, these started to pick up again although we will have to wait to see whether the trend consolidates.

### Euro area: IMF forecasts

Year-on-year change (%)

		GDP forecast	t		ompared with 014 forecast
	2014	2015	2016	2015	2016
Euro area	0.8	1.2	1.4	▼0.2	▼ 0.3
Germany	1.5	1.3	1.5	<b>V</b> 0.2	▼ 0.3
France	0.4	0.9	1.3	▼ 0.1	▼ 0.2
Italy	-0.4	0.4	0.8	<b>V</b> 0.5	<b>V</b> 0.5
Spain	1.4	2.0	1.8	▲ 0.3	=

Source: "la Caixa" Research, based on IMF (WEO) data

### **Euro area: PMI activity indicators**



Source: "la Caixa" Research, based on Markit data

# Euro area: harmonised index of consumer prices and inflation expectations

Year-on-year change (%)



Note: \*5-year inflation swap.

Source: "la Caixa" Research, based on data from Eurostat and Bloomberg.

The quantitative easing programme will encourage the euro to depreciate further, boosting exports. The euro area's current account balance stood at 2.4% of GDP in November (cumulative over 12 months), maintaining the good tone shown during the year. One of the elements contributing the most to this progress is the increase in the goods surplus (due to the rise in exports) and, to a lesser extent, in services. Over the coming months, two factors will strengthen the current surplus. Firstly, the fall in oil prices will reduce the energy bill. Secondly, the mass purchase of assets will cause the euro to depreciate further. In fact, after the ECB announced its new measures, the exchange rate fell to 1.14 €/\$ and we expect it to remain at this level over the next few months and then begin to depreciate again once the Fed starts to raise interest rates at the end of the year.

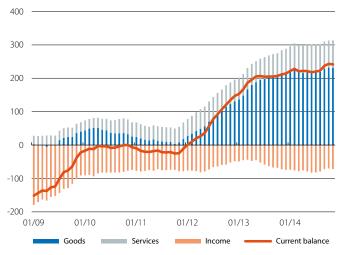
The improvement in activity will bolster the labour market's timid recovery in the euro area. In December the euro area's unemployment rate stood at 11.4%, 0.4 pps below its level one year ago. By country the decrease in unemployment in 2014 has been greater in the periphery and in the United Kingdom, while the labour market in France and Italy has deteriorated. At the start of this year the prospects for the labour market have improved: employment expectations in manufacturing and services have increased in all the countries of the euro area. Moreover, growth in activity in 2015, supported by lower oil prices, the ECB's programme and the euro's depreciation, will lead to improvements in the labour market.

Bank credit will support the recovery in 2015, boosted partly by the QE programme. January's bank lending survey shows that the criteria applied to approve loans in the euro area continued to ease in 2014 Q4, both for loans to nonfinancial firms and also for mortgages and consumer credit. This improvement was complemented with growing demand for credit in all categories in 2014 Q4. Moreover, the survey also shows that financial institutions expect demand to continue its recovery in the coming quarters. It is also interesting to note that disparities diminished between countries in granting credit to firms. Although the quantitative easing programme will have a greater impact on the exchange rate of the euro, it will also help to consolidate these existing trends in credit. The programme will increase the liquidity position of banks, making it easier for them to grant credit as well as improving conditions for companies and households.

Monetary policy must be complemented with structural reforms. The euro area's public deficit is gradually being corrected, falling from 7% in 2010 to 2.3% in 2014 Q3, so that a less restrictive fiscal policy can be implemented in 2015. In this respect the European Commission has temporarily lowered the deficit target by 0.5 pps for those countries carrying out far-reaching structural reforms (structural reform

### Euro area: current balance

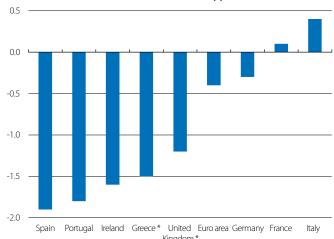
Cumulative over 12 months (billion euros)



Source: "la Caixa" Research, based on ECB data.

### **Unemployment rate**

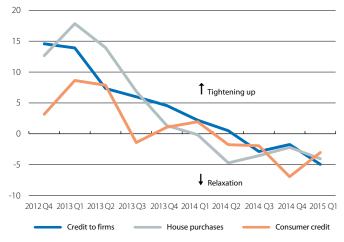
Difference December 2014-December 2013 (pps)



Note: \* Latest figure available, October 2014. Source: "Ia Caixa" Research, based on Eurostat data.

### Euro area: changes in criteria for granting credit

Banks tightening (+) or relaxing (-) conditions for granting loans (net %)



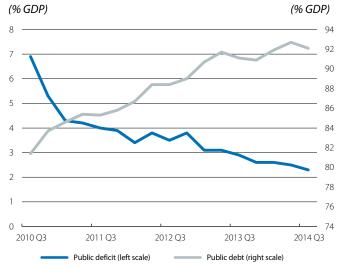
**Source:** "Ia Caixa" Research, based on data from the ECB (bank lending survey)

clause), a measure that could particularly benefit France and Italy. It has also confirmed that certain investments within the European Fund for Strategic Investments (the Juncker Plan) will not be taken into account when assessing whether a country has reached the public deficit target agreed with Brussels (although they will increase the country's level of debt). However, to achieve a sustained rate of growth in the euro area, countries must take advantage of the improved financial conditions of the ECB and of the Juncker Plan to carry out an ambitious agenda of structural reforms which substantially improve the growth capacity of their economies. This is particularly important in countries such as France and Italy which have a very limited potential growth rate.

Before the ECB's meeting, Switzerland's central bank took the surprising decision to no longer peg its currency to the euro, revealing the interdependence of monetary policies and their effects beyond the euro area's borders. The SNB's decision was mostly due to the difficulty in defending the Swiss franc against the European currency once quantitative expansion is underway. As a result, the Swiss franc appreciated considerably, directly affecting its economy, especially the banking sector and exports. The appreciation of the Swiss franc should not significantly affect emerging Europe even though these countries extensively make use of funding in foreign currencies. On the one hand, in the last few years they have reduced their financing in foreign currency and have undertaken measures to reduce their exposure. On the other, the region's high bank solvency should help them to absorb the effects of the depreciation of the main currencies in emerging Europe against the Swiss franc.

Syriza wins the elections in Greece, the first vote in a year containing important elections. This left-wing party fell just two seats short of an absolute majority and has formed a government in coalition with the nationalist right-wing party (ANEL). Both propose to carry out less fiscal adjustment and negotiate improved financing terms to pay back their debt. The first measures announced include raising the minimum wage to 751 euros, an increase in public hiring, free healthcare for anyone losing their job as well as other social measures for which they will need additional public funds. A long period of discussions has also started with the troika to renegotiate the debt, which look like being complicated (see the Focus «Greece: a new post-troika phase?»). 2015 will see several important elections in Europe, including the United Kingdom and Spain.

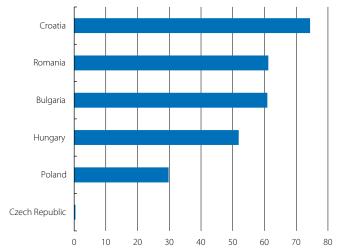
### Euro area: deficit and public debt



Source: "la Caixa" Research, based on Eurostat data.

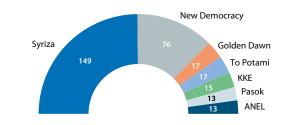
### **Emerging Europe: credit in foreign currencies**

(% of total credit)



Source: "la Caixa" Research, based on data from BERD (2014).

### **Greece: composition of the parliament** (Seats)



Source: "la Caixa" Research, based on data from the Greek Ministry of the Interior.

# FOCUS · Why do European public budgets sometimes miss their targets?

Coordination among the fiscal policies of European Union (EU) countries has improved over the last few years. Now the EU member states present their public budgets to the European Commission (EC) with enough time for the organisation to analyse them, offer recommendations and closely monitor their compliance. This has been very important for the current process of fiscal consolidation to be carried out in a relatively orderly fashion and in accordance with the principles agreed by the EU countries themselves. However, in many cases intense debate has ensued when a country has ended the year with a public deficit larger than budgeted. The fundamental reasons given tend to be the same: the deficit target has not been met because the economic conditions ended up being worse than expected or because the government in question did not execute its budget as planned. Below we analyse the importance of each of these arguments over the last few years.

Member states often budget a larger fiscal adjustment than they end up carrying out in reality. As shown by an EC study, 1 between 1999 and 2014 the budgetary adjustment approved was 0.4 pps more than the adjustment actually carried out one year later, on average. This difference increases to 0.8 pps for adjustments planned two years ahead. This gap is largely because actual expenditure ends up being larger than planned.

Such deviation in budgeted spending is due both to errors in expenditure forecasts and also to discretionary spending incurred during the budget period. A breakdown of the deviation in various countries shows that, before 2008, most of the increase in unbudgeted spending was due to discretionary measures. However, as from 2008, the reason for such deviations is greater spending than forecasted, in particular an increase in unbudgeted social expenditure.

This unplanned increase in expenditure is not entirely innocent: many countries repeatedly overestimate their growth estimate when drawing up budgets. Growth forecasts for the year following the year in which public budgets are presented to the EC are, on average, 0.3 pps higher than the growth forecasts provided by other organisations such as the IMF for the same period.

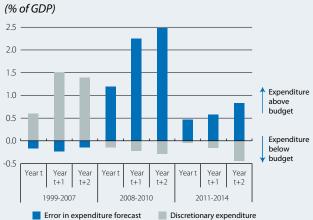
Thorough budget planning is therefore seen as essential in order to improve public finances. Independent fiscal institutions, established several years ago in some countries in Northern Europe but only recently set up

1. EC (2014), «Report on Public Finances in EMU 2014», European Economy Series 9/2014, Directorate-General for Economic and Financial Affairs, European Commission.

in Spain can be of some assistance in this task. Among other issues, these institutions analyse the macroeconomic forecasts of public budgets, the fiscal policies adopted and the cost of implementing the measures included, and they also attempt to monitor compliance of budget stability on the part of public administrations. One important aspect of their work is to make public accounts more transparent, as well as to offer recommendations regarding any possible problems, although the public administrations are ultimately responsible for taking any measures to resolve such difficulties.

Consequently, at the end of the day the public authorities are responsible for ensuring budgets are met as far as possible, and strong political commitment is required to implement the necessary changes in order to restore the state of public finances. This is the huge task facing European countries after several years of crisis.

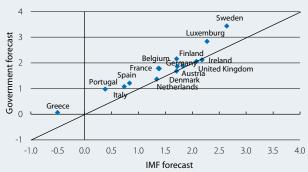
# Breakdown of the deviation in budgeted expenditure



**Source:** "la Caixa" Research, based on European Commission data.

# Comparison of the government's growth forecasts with the IMF's

(% of GDP)



**Note:** Average rate of GDP growth forecast by each country and by the IMF for the following year during 2010-2014.

Source: "la Caixa" Research, based on data from the European Commission and the IMF.

### FOCUS · Greece: a new post-Troika phase?

Greece is once again the focus of attention in Europe. After failing to elect a President, the previous government was forced to dissolve parliament and early elections were held. Syriza, the party winning the elections, is starting its tenure with the renegotiation of the country's debt and more flexible austerity measures as the main electoral promises it needs to keep. Let us take a look at the country's economic situation.

Since the start of the crisis in 2008, Greece's GDP had shrunk by 27%. This slump came to an end in mid-2014 when the economy started to grow again, a rise that the IMF expects to consolidate this year with 2.9% annual growth. The continuation of macroeconomic imbalances forged before the crisis forced the country to carry out far-reaching measures in different areas: from adjustments in its public accounts (the primary budget balance went from –10.5% of GDP in 2009 to a surplus of 0.8% in 2013) to gains in competitiveness (unit labour costs¹ have fallen by 14.3% since 2007), including corrections in external imbalances (the current account balance went from –11.2% of GDP to 0.7%). In spite of this progress, the country's huge economic depression pushed unemployment up to a peak of 27.8%.

The high level of public debt is still the main cause for concern as it is difficult to sustain. Although public debt reached 175% of GDP in 2013, close to 80% is held by official creditors (the IMF, EFSF and ECB) under advantageous terms. Firstly, in spite of the country's high levels of debt, its financing costs are relatively low. For example, the interest paid on the debt was 4.3% of GDP2 in 2014 but this cost was effectively 2.7% as the ECB returns any interest it receives on Greek debt to the country's Treasury. By way of comparison, the cost of Italy's debt is 4.7% of GDP and in Spain it is 3.3%, although both countries have a much lower level of public debt than Greece. Also, Greek debt has a long maturity, on average 16.5 years, far longer than the 6.3 years for Spanish public debt. In fact, most of the loans provided by official organisations do not need to be paid back until after 2023.

The new government therefore faces an extremely delicate economic and social situation, with significant repayments this year but favourable prospects in the medium term. The Greek economy started to grow three quarters ago and its aid programme agreed with the Troika offers financial terms that can help it to continue

1. Nominal unit labour costs compared with its 23 main trading partners. 2. This is due to the fact that official creditors accepted cuts in the interest rates on their loans to Greece.

taking measures to ensure a long-lasting reduction in unemployment and sustained growth in the medium and long term.

### **Main macroeconomic indicators**

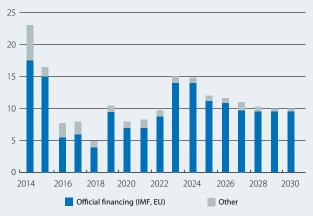
(% of GDP, unless otherwise specified)

	2013	2014	2015
Real GDP (% year-on-year change)	-3.9	0.6	2.9
Unemployment rate (% labour force)	27.3	25.8	23.8
Current account	0.7	0.7	0.1
Unit labour costs (% year-on-year change) *	-9.3	-3.4	-1.9
Fiscal balance	-3.2	-2.7	-1.9
Primary fiscal balance	0.8	1.5	3.0
Public debt	175.1	174.2	172.3

**Note:** \* Nominal unit labour costs compared with its 23 main trading partners. EC forecast. **Sources:** IMF and European Commission.

### **Maturities for Greek public debt**

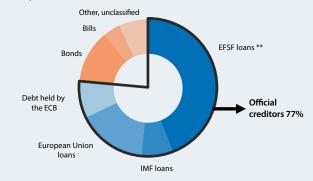
(Billion euros)



Source: "la Caixa" Research, based on IMF data.

# Breakdown of Greek public debt by creditor \*

Compared with total debt (%)



Notes: \* Data from October 2014. Total debt: 321 billion euros.

\*\* European Financial Stability Facility.

**Source:** "Ia Caixa" Research, based on data from J. P. Morgan., ECB, the IMF and the EFSF.

### **KEY INDICATORS**

### **Activity and employment indicators**

Values, unless otherwise specified

	2012	2013	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14	01/15
Retail sales (year-on-year change)	-1.6	-0.8	1.0	1.4	0.9	1.6	1.6		
Industrial production (year-on-year change)	-2.4	-0.7	1.3	1.0	0.5	0.8	-0.4		
Consumer confidence	-22.1	-18.6	-11.2	-7.7	-9.9	-11.1	-11.6	-10.9	-8.5
Economic sentiment	90.6	93.6	101.5	102.2	100.8	100.7	100.7	100.6	101.2
Manufacturing PMI	46.2	49.6	53.4	52.5	50.9	50.6	50.4	50.6	51.0
Services PMI	47.6	49.3	52.1	53.0	53.2	52.3	51.3	51.6	52.3
Labour market									
Employment (people) (year-on-year change)	-0.5	-0.8	0.0	0.4	0.6	-	0.6	-	-
Unemployment rate: euro area (% labour force)	11.3	12.0	11.8	11.6	11.5	11.5	11.4	11.3	
Germany (% labour force)	5.4	5.2	5.1	5.0	5.0	4.9	4.9	4.8	
France (% labour force)	9.8	10.3	10.1	10.1	10.3	10.2	10.3	10.3	
Italy (% labour force)	10.7	12.2	12.7	12.5	12.9	13.3	13.3	12.9	
Spain (% labour force)	24.8	26.1	25.3	24.7	24.1	23.9	23.8	23.7	

**Source:** "Ia Caixa" Research, based on data from the Eurostat, European Central Bank, European Commission and Markit.

### Foreign sector

Cumulative balance over the last 12 months as % of GDP of the last 4 quarters, unless otherwise specified

	2012	2013	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14
Current balance: euro area	1.6	2.2	2.3	2.2	2.4	2.5	2.5	
Germany	7.1	6.7	6.8	6.8	7.2	7.4	7.3	
France <sup>1</sup>	-1.5	-1.4	-1.5	-1.6	-1.2	-1.1	-1.0	
Italy	-0.5	1.0	1.3	1.3	1.6	1.7	1.7	
Spain	-0.3	1.4	1.1	0.3	0.0	-0.1	-0.1	
Nominal effective exchange rate <sup>2</sup> (value)	97.8	101.6	103.8	103.8	101.6	99.5	99.5	99.5

**Notes:** 1. Methodology changed as from 2014. 2. Weighted by flow of foreign trade. Higher figures indicate the currency has appreciated.

Source: "la Caixa" Research, based on data from the Eurostat, European Commission and national statistics institutes.

### Financing and deposits of non-financial sectors

Year-on-year change (%), unless otherwise specified

	2012	2013	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14
Private sector financing								
Credit to non-financial firms 1	-0.3	-2.3	-3.1	-2.5	-2.0	-1.6	-1.4	-1.0
Credit to households 1,2	1.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8
Interest rate on loans to non-financial firms 3 (%)	2.4	2.2	2.2	2.1	1.9	1.8	1.8	
Interest rate on loans to households for house purchases 4(%)	3.1	2.8	2.8	2.7	2.6	2.4	2.4	
Deposits								
On demand deposits	4.1	7.9	5.9	5.2	5.9	6.3	7.1	8.1
Other short-term deposits	2.0	0.0	-2.5	-2.0	-1.7	-2.1	-1.8	-2.6
Marketable instruments	0.5	-14.8	-12.7	-11.6	-6.0	-1.0	0.3	4.7
Interest rate on deposits up to 1 year from households (%)	2.8	2.0	1.6	1.4	1.3	1.1	1.1	

**Notes:** 1. Data adjusted for sales and securitization. 2. Including NPISH. 3. Loans of more than one million euros with a floating rate and an initial rate fixation period of up to one year. 4. Loans with a floating rate and an initial rate fixation period of up to one year.

**Source:** "Ia Caixa" Research, based on data from the European Central Bank.

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# **ECONOMIC OUTLOOK · Strong growth thanks to temporary factors**

GDP advanced by 0.7% quarter-on-quarter in 2014 Q4. The Spanish economy grew at a good pace, more than expected, accumulating six consecutive quarters of expansion. The year-on-year rate of change in GDP for 2014 as a whole was therefore 1.4%. Although the breakdown of GDP is still not available, the bulk of the evidence suggests that the driving force for growth is once more domestic demand, especially household consumption and investment in capital goods. The most recent figures also suggest that the change in trend in construction investment is consolidating.

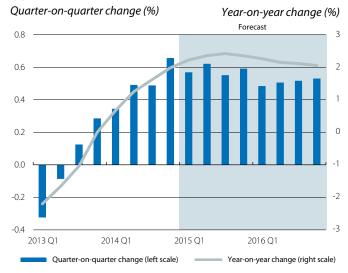
Improved growth prospects for GDP in 2015. The ECB's large-scale programme to purchase public and private debt could help to revive Europe's economy. For the time being, its impact has already been felt on the exchange rate with the euro depreciating by 6.8% in January against the dollar. This will boost the trend in exports and promote growth in Spain's economy over the coming quarters. There are, moreover, other elements that will also temporarily support the economic recovery this year: the fall in oil prices, which has already accumulated a 58.4% drop since June, will reduce the energy bill, increasing the disposable income of both households and companies and, in turn, encouraging consumption and investment. This has led us to revise upwards our GDP growth forecast for 2015 to 2.3% (previously 1.9%). In 2016, however, diminishing support from these factors will result in a certain slowdown in GDP growth, which will be in the range of 2.1%. These growth forecasts are similar to the ones provided by the IMF, which estimates growth of 2.0% and 1.8% for 2015 and 2016, respectively.

#### Confidence indicators point to a good start to the year.

Judging by the European Commission's economic sentiment index in January, economic activity has continued to improve considerably 2015 Q1. Specifically, this index stood at 106.6 points, more than two points above the average in 2014 Q4 and clearly above its historical average (100.7). Of the different factors that make up this index, of note is the sharp rise in consumer confidence, in line with the more favourable trend in the labour market. We therefore expect household expenditure to continue making a strong contribution to GDP growth throughout 2015.

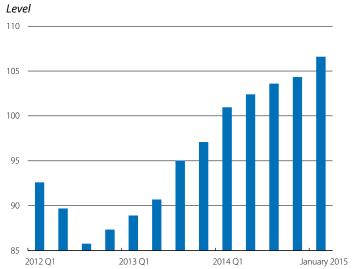
The drop in oil prices will support the recovery in the current account surplus in 2015. November's figures for goods exports were favourable as nominal exports grew by 3.2% year-on-year, thereby maintaining the upward trend that started in mid-2014. However, imports slowed down their rate of year-on-year growth to 2.0% (7.7% in October) due to the reduction in the bill for energy imports. This contributed to the slight improvement seen in the current account balance that

#### GDP



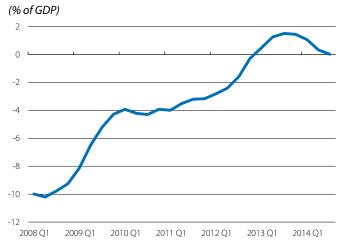
Source: "la Caixa" Research, based on INE data.

### **Economic sentiment index**



Source: "la Caixa" Research, based on European Commission data.

### **Current account balance \***



Note: \* Quarter-on-quarter data

Source: "la Caixa" Research, based on data from the Bank of Spain

month. However, it is crucial to continue policies to promote energy savings and efficiency and to encourage exports as the support provided for the current account by falling oil prices is bound to be temporary.

Tourism ended 2014 with a record number of international tourists. Exports of tourism services therefore continued to support the improvement in the current account balance. Specifically, Spain received almost 65 million tourists from other countries in 2014, 4.3 million more than in 2013. Most of the European countries increased their number of tourists to Spain except for Russia, which was down by 10% year-on-year. Moreover, with the recent depreciation of the euro, foreign tourist arrivals are likely to keep on growing. On the one hand, destinations outside the euro area will be more expensive for European tourists, boosting destinations such as Spain. On the other hand tourism is also likely to increase from outside the euro area over the next few months as the euro's depreciation will make most European destinations more competitive at an international level. This is therefore good news for the tourism industry.

Falling oil prices keep inflation in negative terrain. According to the flash figures provided by the INE, inflation shrank by 0.4 pps in January, pushed down by the drop in oil prices, reaching -1.4%. Given the outlook for oil prices, which are likely to remain low for the first half of the year and then gradually pick up, the inflation rate will still be negative for a few more months and the average inflation rate for 2015 will be -0.3%. Spain will end the year with inflation below the average rate predicted for the euro area, namely 0.5%, allowing it to continue making gains in competitiveness. However, in 2016 inflation will rise to 2.0% on average due particularly to the effect from the energy component levelling off.

The good figures from the labour market confirm the economy's recovery. In 2014 Q4, the number of employed grew more than expected, by 1.0% quarter-on-quarter seasonally adjusted. This means employment has now grown for five consecutive quarters. Apart from the services sector, rising employment is also consolidating in industry and construction, now posting three quarters of growth. 2014 therefore ended with net creation of jobs in all sectors except agriculture. The increase in employment in construction is yet another indication that the adjustment in the real estate sector is coming to an end while other real estate indicators are also showing signs of improvement. Cumulative house purchases over 12 months increased in November by 0.7% year-on-year, the first positive growth since 2013 Q3 and permits for new builds rose by 4.7% in October (cumulative over 12 months).

The improvement in activity could start to weaken the effect of discouragement. The sharp rise in the labour force in Q4, totalling 95,200 people and higher than expected, led to an increase in the participation rate of 0.3 pps, to 59.8%. Over the next year the economic recovery should slow up the downward trend in the labour force which, in the last two

### Foreign visitor arrivals

Number of tourists (millions)

Source: "Ia Caixa" Research, based on Frontur data

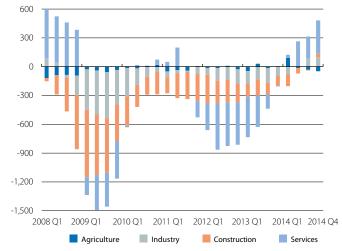
### CPI



Source: "la Caixa" Research, based on INE data.

### **Employment by sector**

Year-on-year change (thousands)



Source: "la Caixa" Research, based on INE data.

years, reduced the participation rate from its highest level of 60.4%, reached in 2012, to 59.6% in 2014. Nonetheless, unemployment increased slightly in spite of the rise in employment, so that the unemployment rate remained at 23.7% in Q4. Over the coming months, the upward trend in employment expectations in the different sectors suggests that the recovery in the labour market will continue to spread, albeit gradually, throughout all economic sectors. Of particular note are the improved employment expectations in industry, reaching levels they have not seen since summer 2007.

2014 will end with a public deficit very close to the target set of 5.5% of GDP. The general government's budget execution figures up to November show that the deficit target for 2014 might be met. Improved activity is helping the correction in the public deficit thanks particularly to higher tax revenue. Social Security revenue also grew, supported by increased employment while expenditure fell as a consequence of the drop in social benefits, mainly for unemployment. However, the autonomous communities will very probably end the year with a significant deviation from their target, although this will be offset by the good figures from central government, local government and Social Security.

Private sector deleveraging continues, albeit slowly. The debt of households and non-financial firms fell once again in Q3: it now represents 72.4% and 109.7% of GDP and has accumulated a drop of 12 pps and of 24 pps respectively since the peak reached in 2010. But the process of reducing private debt has not ended, as seen in the substantial reduction still affecting the outstanding balance of credit (-6.9% year-onyear in December). Nevertheless, the pace of its descent slipped back 0.5 pps compared with the previous month and the rate was lower than expected. Moreover, the figures for new loans indicate that the recovery in credit is gradually building up steam. For 2014 as a whole, new loans granted to households to buy residential properties posted strong growth (23.5%) while loans to SMEs also increased (8.6%). However, new loans to large firms are still below the levels of 2013, partly because these companies have opted for other sources of financing. Bank balance sheets also continued to improve: the NPL ratio fell slightly in November to 12.98% thanks to the decrease in doubtful loans for the tenth consecutive month.

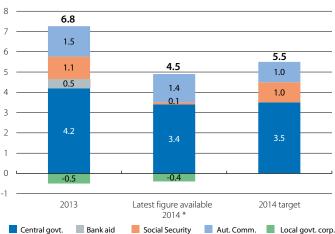
### Labour force and participation rate \*



**Note:** \*Labour force out of the total population aged over 16. **Source:** "la Caixa" Research, based on INE data.

### **Public administration budget**

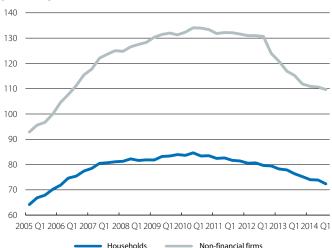
(% of GDP)



**Note:** \*Central government: November 2014; Autonomous Communities and Social Security: November 2014; Local government corporations: September 2014. **Source:** "la Caixa" Research, based on IGAE data.

### Private debt

(% of GDP)



**Source:** "Ia Caixa" Research, based on data from the Bank of Spain

## **FOCUS · On long-term unemployment in Spain**

The labour market provided some good news in 2014: the number of employees increased by 433,900, a figure that ended up exceeding the expectations of most analysts. The 2.0 pps drop in the unemployment rate also came as a pleasant surprise. The trends in the labour market are therefore encouraging but the aftermath of the intense recession over the last few years is still being felt.

The clearest example of this is the unemployment rate, which was still unacceptably high at 23.7% in 2014 Q4. Another consequence of this abnormal situation is the exceptional long-term unemployment rate, reaching 14.6% the same quarter. The actual share of long-term unemployed (LTU) out of the total unemployed is not particularly high in Spain, namely 53.4% in Q3 which is a similar rate to that of the EU-28 at 49.9% (according to Eurostat). However, given that the number of unemployed is very high in absolute terms, so is the number of long-term unemployed.

The first consequence of the rise in LTU is a large group of unemployed people who are not covered by the safety net for unemployment. This is designed to lessen the impact of temporary unemployment on a person's income while not discouraging people from looking for a new job. Under other economic conditions, such as those existing between 2002 and 2007, the average length of unemployment was around 12 months. Given this situation, with coverage lasting two and a half years if we take into account both the contributory unemployment benefit and the non-contributory unemployment allowance, it was enough to alleviate the situation in the vast majority of cases. In fact, both the duration and the size of the safety net existing in Spain are slightly higher, on average, than those of the EU-28 countries as a whole.

However, the exceptional severity and duration of the crisis over the last few years have meant that, in many cases, this safety net has not been enough. In fact, in 2014 Q4 the average duration of unemployment had increased to 23 months. We should note that, on 19 December 2014, the government passed the Employment Activation Scheme, granting a subsidy for six months to LTU who had already used up all their entitlement to unemployment protection provided they carry out the activation actions proposed by the employment services.

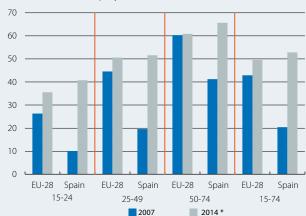
Another consequence of LTU, less evident but with important economic and personal repercussions, is the

decapitalisation involved both for the person him or herself and for the economy as a whole. The most manifest and worrying example is that someone becomes increasingly less likely to find another job over time. For example, according to estimates by De la Rica and Anghel (2014),<sup>3</sup> all things being equal, a person who has been unemployed for less than two years has a 50% greater chance of finding a job than a person who has been unemployed for more than two years.

Although the underlying trends in the labour market are encouraging, both the high unemployment rate and especially the large number of long-term unemployed mean that the fight against unemployment must continue.

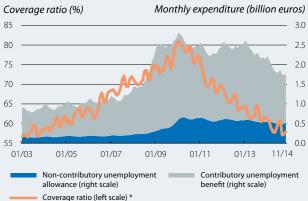
### Long-term unemployed by age group

Share of total unemployed (%)



**Note:** \* Average from 2014 Q1 to Q3. **Source:** "la Caixa" Research, based on Eurostat data.

### **Unemployment benefits**



**Note:** \* Quotient between the total number of people receiving unemployment benefit (including those receiving temporary agricultural allowances) and total registered unemployment (less the unemployed without a previous job and plus those receiving temporary agricultural allowances). **Source:** "la Caixa" Research, based on data from the Public State Employment Service.

3. See De la Rica, S. and Anghel, B. (2014), «Los parados de larga duración en España en la crisis actual», Documento de Trabajo 185/2014, Laboratorio de Alternativas.

<sup>1.</sup> The duration of unemployment is an approximate calculation based on the periods of time spent looking for employment, provided by the Spanish Statistics Institute (INE).

<sup>2.</sup> See «Unemployment Benefits in EU Member States», Employment, Social Affairs and Inclusion, July 2013 (European Commission).

## **FOCUS** · **Spain's export sector: pros and cons**

The resilience of Spanish exports has truly come to the fore over the last few years. After world trade plummeted in 2009 Spain was, together with Germany, among the first economies in the euro area able to make up the ground lost.

In particular, exports of goods rose on average by 4.8% year-on-year in nominal terms between 2007 and 2013 while in real terms this rise was 3.4% year-on-year. This good trend in Spanish exports also occurred in spite of the demand by our main trading partner, the euro area, being in decline. Undoubtedly the diversification of exports both in geographical and product terms was crucial to reviving Spain's export sector.

One clear indication of the Spanish economy's greater internationalisation is that variations in global foreign demand are leading to a larger increase in Spanish exports. This can be seen by means of a simple exercise that relates the increase in global demand with growth in Spanish exports before and after the recession (see the graph). According to this, with the rise in global demand over the last three years, the annual increase in Spanish exports of goods has been 0.8 pps higher than what would have been with the pre-crisis export model. The same logic can be applied to the period before the recession: between 2000 and 2008 the rise in foreign demand for goods resulted, on average, in an annual increase in exports of goods of 10.1%.1 However, with the pattern of exports observed between the years 2011-2013, exports would have increased by 11.5%, 1.4 pps more than with the pattern from the previous period.

Nevertheless, the 2014 trend in the export sector has raised some questions. In real terms exports of goods during the first three quarters of the year grew by 4.1% year-on-year on average, 0.2 pps below their growth in 2013. However, in nominal terms the rate of growth was considerably more modest: between January and November 2014, nominal exports of goods grew by 2.2% year-on-year, a figure far below the annual average prior to the crisis, namely 5.4%, and even lower than the already moderate figure of 3.6% from 2013. This slowdown in nominal exports is particularly due to the weakness of some regions such as Latin America, Africa and non-EU Europe, the destination for 20% of Spain's exports, although exports towards the euro area accelerated substantially: growing by close to 4%, 2.3 pps more than in 2013.

The disparity between real and nominal growth in exports is a consequence of the fall in the price of

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1. Spanish exports in nominal terms to the seven major destinations.

exports, particularly significant in capital and intermediary goods, and this phenomenon can be seen in most developed countries. In the US, for example, the fall in the price of exports stood at 3.2% in 2014.

In Spain, this fall in the price of exports represents a considerable setback, undermining the good performance by exports in real terms and making it especially difficult to consolidate current account surpluses, a goal the Spanish economy cannot abandon given its still high external debt. The growth capacity of Spain's export sector has surprised everyone over the last few years but the country cannot rest on its laurels. The slow and erratic recovery in the euro area means that it is wise not to count on its support and the price factor is proving to be very damaging. It is still of the utmost importance to continue working to improve the competitiveness of the Spanish economy.

# Sensitivity of Spanish exports to growth in global demand

Annual change in Spanish exports to large regions (%)

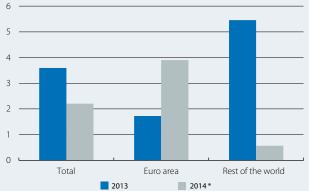


**Note:** Nominal exports and imports to seven large regions: euro area, rest of the EU, rest of Europe, North America, Latin America, Asia (except the Middle East) and Africa. 2009 and 2010 are not included.

Source: "la Caixa" Research, based on IMF data (DOTS).

### Spanish exports of goods by destination

Annual change (%)



**Notes:** Exports in nominal terms.

\* 2014 corresponds to the year-on-year change between January and November. **Source:** "Ia Caixa" Research, based on data from the Ministry of Finance and Competitiveness.

### **FOCUS** · **Investment in the recovery**

In the Spanish economy's current phase of recovery, growth in investment is less vigorous than in previous episodes (see the first graph). Although growth has been positive for the last five quarters in a row, it is still 42% lower than its highest level reached in 2007 Q4. A detailed analysis of the trend in investment by component and institutional sector provides a more encouraging picture, however.

Investment in construction was the component that shrank the most during the recession, with a cumulative drop of 50% compared with 2007's levels. This decline reflects the necessary adjustment in the sector after the real estate bubble burst. In fact, investment in construction was the last component to return to growth, posting its first positive quarter-on-quarter percentage change in 2014 Q2.

If we look at the trend in investment without construction, the recovery looks more similar to the previous recovery phase that started in 1994 Q1. Specifically, capital goods investment started to grow in 2013 Q1, two quarters before the recovery started in GDP, and since then it has accumulated growth of 23.3%. The third component within investment, namely products of intellectual copyright, maintained positive growth rates during the recession so their share of total investment has doubled, going from 7% in 2006 to 15% in 2014 Q3. These data underline the important shift occurring in the production model with construction losing share and intangible assets increasing theirs.<sup>1</sup>

A breakdown of investment by institutional sector also provides some good news. Corporate investment, generally the most productive, has performed the best: it has been growing since 2010 at an average quarterly rate of 0.5%. Household investment, which is mainly real estate, has undergone considerable adjustment, accumulating a 65% reduction since 2007, although it started to grow in 2014 Q2 and we expect it to gradually recover, supported by more stable house prices, job creation and the revival in mortgage loans. Lastly public administration investment, which offset the reduction in total investment during the first recession (2008-2009), fell sharply between 2011 and 2012. In fact, this is one of the government budget items that have adjusted the most in order to meet the public deficit targets, decreasing by 63% between 2010 and 2014. Nevertheless, the central government budget for 2015 predicts 4.8%

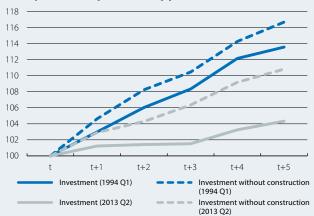
1. In spite of the great effort made to include investment in intangible assets in national accounts, a significant proportion is still not accounted for. See the Dossier: «National accounts in the digital era» in the November 2014 issue.

growth for this item, so we can expect public investment to also contribute to growth over the coming quarters.

An international comparison also provides interesting details when evaluating the adjustment carried out by investment. Specifically, in 2014 Q3 the relative weight of investment in GDP was 18.6% in Spain, a figure very similar to that of the euro area (19.4%) and to the United States (19.3%) and, in spite of the considerable correction undertaken, the relative weight of investment in construction out of all investment (48.4%) is now also comparable to that of the main advanced economies. Certainly Spain's adjustment in investment has been considerable but it now appears to have a more balanced composition. A good starting point to face this new cycle of growth with optimism.

### Investment during the recovery phase

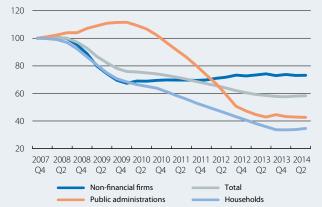
Index (100 = 1994 Q1 and 2013 Q2)



Source: "la Caixa" Research, based on INE data.

### Investment by institutional sector

Index (100 = 2007 Q4)



**Note:** Nominal investment.

Source: "Ia Caixa" Research, based on INE data.

### **KEY INDICATORS**

Year-on-year (%) change, unless otherwise specified

### **Activity indicators**

2012	2013	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14	01/15
-2.2	-2.1	-0.3	1.0	0.3	-1.4	-1.1	-2.5	
-6.6	-1.5	1.5	2.6	0.6	0.9	-0.1		
-17.5	-13.9	-9.1	-8.2	-5.7	-6.0	-4.0	-5.8	-4.5
43.8	48.5	52.5	53.4	53.1	52.6	54.7	53.8	
-42.7	-21.4	-8.9	14.4	26.5	15.6	-13.7		
-8.7	-2.4	-9.3	6.5	7.8	16.0	14.0		
2.0	5.8	8.1	7.8	7.6	7.8	2.9	5.6	
43.1	48.3	54.2	55.7	56.7	55.9	52.7	54.3	
-7.1	-3.7	-0.1	0.7	0.4	0.7	2.1	6.0	
-13.5	5.6	11.8	23.2	17.0	26.1	17.4	21.4	
-31.7	-25.3	-11.8	-6.1	-7.9	-10.0	-11.8	-7.1	-1.5
	-2.2 -6.6 -17.5 43.8 -42.7 -8.7 2.0 43.1 -7.1 -13.5	-2.2 -2.1 -6.6 -1.5 -17.5 -13.9 43.8 48.5 -42.7 -21.4 -8.7 -2.4 2.0 5.8 43.1 48.3 -7.1 -3.7 -13.5 5.6	-2.2     -2.1     -0.3       -6.6     -1.5     1.5       -17.5     -13.9     -9.1       43.8     48.5     52.5       -42.7     -21.4     -8.9       -8.7     -2.4     -9.3       2.0     5.8     8.1       43.1     48.3     54.2       -7.1     -3.7     -0.1       -13.5     5.6     11.8	-2.2     -2.1     -0.3     1.0       -6.6     -1.5     1.5     2.6       -17.5     -13.9     -9.1     -8.2       43.8     48.5     52.5     53.4       -42.7     -21.4     -8.9     14.4       -8.7     -2.4     -9.3     6.5       2.0     5.8     8.1     7.8       43.1     48.3     54.2     55.7       -7.1     -3.7     -0.1     0.7       -13.5     5.6     11.8     23.2	-2.2       -2.1       -0.3       1.0       0.3         -6.6       -1.5       1.5       2.6       0.6         -17.5       -13.9       -9.1       -8.2       -5.7         43.8       48.5       52.5       53.4       53.1         -42.7       -21.4       -8.9       14.4       26.5         -8.7       -2.4       -9.3       6.5       7.8         2.0       5.8       8.1       7.8       7.6         43.1       48.3       54.2       55.7       56.7         -7.1       -3.7       -0.1       0.7       0.4         -13.5       5.6       11.8       23.2       17.0	-2.2       -2.1       -0.3       1.0       0.3       -1.4         -6.6       -1.5       1.5       2.6       0.6       0.9         -17.5       -13.9       -9.1       -8.2       -5.7       -6.0         43.8       48.5       52.5       53.4       53.1       52.6         -42.7       -21.4       -8.9       14.4       26.5       15.6         -8.7       -2.4       -9.3       6.5       7.8       16.0         2.0       5.8       8.1       7.8       7.6       7.8         43.1       48.3       54.2       55.7       56.7       55.9         -7.1       -3.7       -0.1       0.7       0.4       0.7         -13.5       5.6       11.8       23.2       17.0       26.1	-2.2       -2.1       -0.3       1.0       0.3       -1.4       -1.1         -6.6       -1.5       1.5       2.6       0.6       0.9       -0.1         -17.5       -13.9       -9.1       -8.2       -5.7       -6.0       -4.0         43.8       48.5       52.5       53.4       53.1       52.6       54.7         -42.7       -21.4       -8.9       14.4       26.5       15.6       -13.7         -8.7       -2.4       -9.3       6.5       7.8       16.0       14.0         2.0       5.8       8.1       7.8       7.6       7.8       2.9         43.1       48.3       54.2       55.7       56.7       55.9       52.7         -7.1       -3.7       -0.1       0.7       0.4       0.7       2.1         -13.5       5.6       11.8       23.2       17.0       26.1       17.4	-2.2       -2.1       -0.3       1.0       0.3       -1.4       -1.1       -2.5         -6.6       -1.5       1.5       2.6       0.6       0.9       -0.1          -17.5       -13.9       -9.1       -8.2       -5.7       -6.0       -4.0       -5.8         43.8       48.5       52.5       53.4       53.1       52.6       54.7       53.8         -42.7       -21.4       -8.9       14.4       26.5       15.6       -13.7          -8.7       -2.4       -9.3       6.5       7.8       16.0       14.0          2.0       5.8       8.1       7.8       7.6       7.8       2.9       5.6         43.1       48.3       54.2       55.7       56.7       55.9       52.7       54.3         -7.1       -3.7       -0.1       0.7       0.4       0.7       2.1       6.0         -13.5       5.6       11.8       23.2       17.0       26.1       17.4       21.4

**Source:** "Ia Caixa" Research, based on data from the Ministry of Finance, Ministry of Public Works, INE, Markit and European Commission.

### **Employment indicators**

	2012	2013	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14
Registered as employed with Social Securi	ty <sup>1</sup>							
Employment by industry sector								
Manufacturing	-5.3	-4.3	-1.3	0.0	0.6	0.6	0.9	1.1
Construction	-17.0	-12.1	-5.3	-2.3	-0.5	0.5	1.6	2.6
Services	-1.7	-2.0	1.1	2.2	2.6	2.7	2.8	3.0
Employment by professional status								
Employees	-3.8	-3.8	0.1	1.4	1.9	1.9	2.5	2.6
Self-employed and others	-1.4	-0.6	1.4	2.3	2.5	2.6	2.5	2.4
TOTAL	-3.4	-3.2	0.4	1.5	2.0	2.0	2.5	2.6
Employment <sup>2</sup>	-4.3	-2.8	-0.5	1.1	1.6	_	2.5	-
Hiring contracts registered <sup>3</sup>								
Permanent	29.7	-14.2	6.8	24.0	21.5	24.7	25.1	19.2
Temporary	-4.0	6.4	19.4	14.2	11.1	6.2	10.5	6.4
TOTAL	-1.6	4.0	18.2	15.0	11.8	7.6	11.6	7.2
Unemployment claimant count <sup>3</sup>								
Under 25	4.5	-6.2	-9.4	-10.9	-5.5	-6.9	-7.8	-6.0
All aged 25 and over	11.7	3.7	-3.7	-5.9	-5.9	-5.8	-6.0	-5.3
TOTAL	10.9	2.7	-4.2	-6.4	-5.9	-5.9	-6.2	-5.4

 $\textbf{Notes:}\ 1.\ Mean\ monthly\ figures.\ \ 2.\ LFS\ estimate.\ \ 3.\ Public\ Employment\ Offices.$ 

**Source:** "Ia Caixa" Research, based on data from the Ministry of Employment and Social Security, INE and Public Employment Offices.

### **Prices**

	2012	2013	2014 Q1	2014 Q2	2014 Q3	10/14	11/14	12/14	01/15
General	2.4	1.4	0.0	0.2	-0.3	-0.1	-0.4	-1.0	-1.4
Core	1.6	1.5	0.1	0.1	0.0	-0.1	-0.1	0.0	
Unprocessed foods	2.3	3.6	0.7	-2.3	-4.1	1.7	1.2	-0.4	
Energy products	8.8	0.1	-1.0	2.4	-0.2	-1.1	-3.2	-8.5	

**Source:** "Ia Caixa" Research, based on data from the INE.

 SPANISH ECONOMY NRUZ

### Foreign sector

Cumulative balance over the last 12 months in billions of euros, unless otherwise specified

	2012	2013	2014 Q1	2014 Q2	2014 Q3	09/14	10/14	11/14
Trade of goods								
Exports (year-on-year change)	3.8	5.2	3.2	-2.0	4.8	9.6	4.1	3.2
Imports (year-on-year change)	-2.8	-1.3	7.0	3.7	7.3	7.5	7.7	2.0
Current balance	-3.0	15.1	11.2	3.5	0.1	0.1	-1.5	-0.8
Goods and services	16.5	35.7	33.6	29.0	26.7	26.7	25.6	25.5
Primary and secondary income	-19.4	-20.6	-22.4	-25.5	-26.6	-26.6	-27.0	-26.4
Net lending (+) / borrowing (–) capacity	2.3	22.0	18.3	9.9	6.0	6.0	4.2	4.9

**Source:** "Ia Caixa" Research, based on data from the Department of Customs and Special Taxes and Bank of Spain.

### **Public sector**

Percentage GDP, cumulative in the year, unless otherwise specified

	2012	2013	2014 Q1	2014 Q2	2014 Q3	09/14	10/14	11/14
Net lending (+) / borrowing (–) capacity	-10.1	-6.8	-0.6	-3.4	-3.7	-3.7	-	
Central government <sup>1</sup>	-7.9	-4.8	-0.9	-2.5	-3.1	-3.1	-2.9	-3.4
Autonomous regions	-1.8	-1.5	-0.3	-1.1	-1.2	-1.2	-1.3	-1.4
Local government	0.3	0.5	0.1	0.1	0.4	0.4	-	
Social Security	-0.9	-1.1	0.3	-0.2	0.0	0.0	0.0	-0.1
Public debt (% GDP)	84.4	92.1	94.9	96.4	96.8	96.8	_	•••

 $\textbf{Note:} \ 1. \ Includes \ measures \ related \ to \ bank \ restructuring \ but \ does \ not \ include \ other \ central \ government \ bodies.$ 

Source: "Ia Caixa" Research, based on data from the IGAE, Ministry of Taxation and Bank of Spain.

### Financing and deposits of non-financial sectors

Year-on-year change (%), unless otherwise specified

	2012	2013	2014 Q1	2014 Q2	2014 Q3	09/14	10/14	11/14	Balance 11/14 <sup>1</sup>
Financing of non-financial sectors <sup>2</sup>									
Private sector	-4.3	-8.2	-6.4	-5.5	-4.4	-4.3	-4.8	-4.4	1,727.9
Non-financial firms	-4.7	-10.6	-7.0	-5.7	-4.0	-4.0	-4.9	-4.2	970.7
Households <sup>3</sup>	-3.8	-5.0	-5.6	-5.2	-5.0	-4.7	-4.7	-4.7	757.2
General government <sup>4</sup>	15.0	16.8	8.5	6.6	5.9	6.1	6.2	6.8	1,023.1
TOTAL	0.6	-1.1	-1.5	-1.4	-0.9	-0.7	-1.0	-0.5	2,750.9
Liabilities of financial institutions due to	firms and hous	seholds							
Total deposits	-4.5	2.1	0.2	-0.8	-1.2	-1.4	-1.7	-1.9	1,163.6
On demand deposits	0.2	4.2	7.4	7.4	13.6	13.5	12.8	15.1	324.6
Savings deposits	-2.8	-0.1	3.8	5.9	6.9	7.1	6.4	6.4	216.5
Term deposits	-6.7	1.7	-3.6	-6.1	-9.4	-10.0	-10.2	-11.7	601.0
Deposits in foreign currency	-4.0	16.8	-1.1	0.1	0.3	0.5	6.1	8.7	21.4
Rest of liabilities <sup>5</sup>	-13.2	-16.8	-11.1	-8.3	-6.8	-10.7	-6.7	-8.1	117.6
TOTAL	-5.7	-0.2	-1.1	-1.6	-1.7	-2.3	-2.2	-2.5	1,281.1
NPL ratio (%) <sup>6</sup>	10.4	13.6	13.4	13.1	13.0	13.0	12.9	12.7	_
Coverage ratio (%)6	73.8	58.0	58.6	59.4	59.1	59.1	59.3	59.5	_

**Notes:** 1. Billion euros. 2. Resident in Spain. 3. Including NPISH. 4. Total liabilities (consolidated). Liabilities between different levels of government are deduced. 5. Aggregate balance according to supervision statements. Includes asset transfers, securitized financial liabilities, repos and subordinated deposits. 6. Data end of period.

**Source:** "Ia Caixa" Research, based on data from the Bank of Spain.

### INFLATION EXPECTATIONS

### Falling inflation and the risk of deflation

The latest inflation figures for the world's main economies are surprisingly low. In the euro area inflation fell to -0.2% in December, bringing the average for 2014 to 0.4%. In the United Kingdom, although the growth rate was surprisingly high in 2014, inflation

has followed a clearly downward trend, reaching 0.5% in December, its lowest figure for the last 15 years. The United States is in a similar situation. Just when it seemed that the economic recovery was finally starting to take hold in most advanced economies, the spectre of deflation has reappeared on the scene.

A scenario of falling prices is not, in itself, necessarily detrimental to economic activity. If the nominal cost of production factors, i.e. capital and labour, could adjust at the same rate as prices, economic activity would not be affected. This is not the case, however. Wages, for example, are often very difficult to lower. In such circumstances, if prices fell for a prolonged period, a lot of firms would find themselves in dire straits.

Similarly worrying are the possible consequences of a sustained drop in prices for the cost of capital: if prices fall and the nominal interest rate does not follow suit, the real

# Trend in inflation forecasts for 2015 2.0 1.5 1.0

Japan

United States

January 2015

January 2014 Source: "Ia Caixa" Research, based on data from the Consensus Forecast.

Euro area

interest rate rises. To offset a drop in prices and keep the real interest rate constant, the nominal interest rate has to be lowered. But how far can the nominal interest rate fall? Can it even reach negative figures?

0.0

This question has partly been answered by recent events. The ECB, for example, set the deposit facility interest rate at -0.10% in June 2014 and lowered it again in September to -0.20%; decisions which, until very recently, had seemed unimaginable. Other central banks have taken a similar path, such as in Switzerland and Denmark. Several bonds also have a negative interest rate. For example, German public debt with maturities of less than two years have been trading more or less continuously on the secondary market at a negative interest rate for the last six months.

In practice, therefore, interest rates already broke through the psychological barrier of 0% several months ago. However, the scenario that economists truly fear is one in which falling prices end up diminishing the expectations of households and firms regarding their future trend. In the case of households, for example, if they expect prices to continue falling, and the nominal interest rate does not follow suit, they will postpone their decisions to consume and invest as the real interest rate will rise and, therefore, also the return on their savings. In this scenario, however, the role played by the nominal interest rate could be limited since, as this falls, households would change the composition of their portfolio towards riskier assets to get better returns. Moreover, if the nominal interest rate ends up in negative terrain, this might increase the preference for cash, given that this would have a positive real interest rate (the purchasing power of a note or coin rises over time if prices fall), albeit entailing significant storage and security costs.

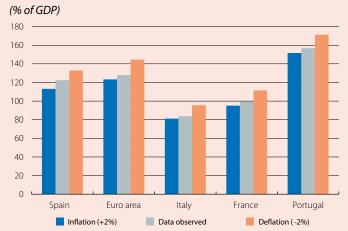
The dilemma facing firms would be similar. In a scenario with expectations of sustained falls in prices and in which the nominal interest rate is very close to zero or negative, firms will also tend to postpone investment decisions. All this would depress the economy and push prices down even further, which would result in the dreaded deflationary spiral.

There are significant signs, however, that lead us to believe the current situation in developed economies and the euro area in particular is not a precursor to deflation. Firstly, we should note that the drop in inflation occurring over the last few months is largely due to falling oil prices. In the euro area, for example, of the 0.6 pps reduction in the inflation rate between July 2014 and December 2014, the energy component had directly contributed to the tune of 0.5 pps. In fact, core inflation (without food and energy) has remained almost stable at 0.7% during the same period. Over the coming months, the indirect effects of lower oil prices are likely to materialise gradually, with falling prices for oil-intensive manufactured goods and transport services. According to the ECB's estimates, two thirds of the impact of the fall in oil prices can be seen in direct effects and one third via indirect effects. In any case, the downward pressure of oil prices on the inflation rate will gradually disappear over the next few months as the base effect dissipates.

Secondly, the dynamism seen in private consumption and investment in many advanced economies suggests that neither consumers nor companies have postponed decisions to consume or invest; quite the opposite, in fact. Albeit with significant differences between countries, it appears that favourable financing conditions are finally being used to implement consumption and investment decisions postponed during the recession.

Nonetheless, there are two reasons why the trend in inflation in those countries that still need to make macroeconomic adjustments needs to be monitored very closely, and with some trepidation. On the one hand, many of them have to improve their competitiveness to revive their export sector and thereby rebalance their external position. A context of low inflation, or disinflation, in their trading partners means that it is difficult to continue making gains in competitiveness by containing wages and prices (internal devaluation). The second reason is the deleveraging that is still being carried out by many developed countries. As can be seen in the second graph, the impact of a moderate inflation scenario, or deflation, on the trend in the debt to GDP ratio is significant. By way of example, if inflation in Spain had remained at 2% since 2010, the debt of non-financial firms to GDP would have ended 2014 at 113%, 9 pps below the actual figure. On the other hand, in a scenario with average inflation of –2%, the debt to GDP ratio would be 133%, 11 pps above the actual figure.

# Debt of non-financial firms in 2014 Q1 under different inflation scenarios



**Note:** The scenarios assume annual inflation (or deflation) of +2% (-2%) since 2010. **Source:** "la Caixa" Research, based on ECB data. Moreover, in these countries the lack of economic policy instruments to boost inflation is also a cause for concern. How can inflation remain so low with rock bottom interest rates and after injections of liquidity by the main central banks in developed countries? It is also surprising that, in numerous countries such as Germany, the United Kingdom and the United States, where unemployment appears to be close to its equilibrium rate and the output gap has almost closed, core inflation is still so low. These questions are analysed in detail in the articles «Inflation: merely a monetary phenomenon?» and «Growth without inflation: what does the Phillips curve tell us?», in this Dossier.

In short, many developed countries are keeping a close eye on inflation but, beyond the temporary effect of oil prices, economic logic invites us to conclude that it should start to pick up again. We need to remain cautious, however. The

effectiveness of the policies carried out to date has not been as hoped and a scenario of deflation, although unlikely, could have serious consequences.

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1. For more information see «Box 3: Indirect effects of oil price developments on Euro Area inflation», Monthly Bulletin, European Central Bank, Frankfurt am Main, December 2014.

### Measuring inflation expectations: the devil is in the detail

The expectations of economic agents regarding inflation constitute a key factor to how this variable behaves. For some time now both theoretical economists and monetary policymakers have devoted time and effort to studying this relationship in some detail. Ben Bernanke, who has performed both functions, summarised the issue when he said that «an essential prerequisite for controlling inflation is controlling inflation expectations». But achieving control involves at least four big challenges: understanding how inflation expectations interact with the rest of the relevant macroeconomic variables; identifying how they are formed; measuring how they evolve to determine whether they are as we would wish; and evaluating the policies a central bank might adopt to influence them. Below some points are presented regarding the third of these challenges.

Inflation expectations are important because of the powerful influence they have on the decisions taken by individuals. It therefore comes as no surprise that the desire or aim of monetary authorities whose mandate is to safeguard price stability is to keep inflation expectations anchored. In other words, fluctuations in inflation expectations over the medium to long term must be moderate and removed from any temporary shocks to current prices. Any significantly different behaviour to this would pose a serious threat to price stability and, as far as possible, would need to be corrected. Being able to measure inflation expectations is therefore of the utmost importance. However, some details are complex and capable of causing far-reaching errors.

### **Five-year inflation expectations**



**Notes:** \* Calculated based on inflation swaps at four and five years. Survey of Professional Forecasters

Source: "la Caixa" Research, based on data from Bloomberg and the ECB.

There are two types of measure, very different in nature: those based on surveys and those inferred from the prices of certain financial instruments. One of the main strengths of the former is that they directly provide the inflation expectations of those being surveyed, be they consumers, business people or economic-financial analysts. Consequently the data hardly need to be processed afterwards. The European Central Bank (ECB) systematically monitors several types of survey, the most important one being the quarterly survey on analysts. The historical and recent results are very interesting given the debate currently raging on the risk of deflation in the euro area (see the graph). Firstly, of note is the convergence in analysts' replies regarding the ECB's inflation target (close to but below 2%) over time, as well as its lower degree of fluctuation. This suggests that inflation expectations are considerably anchored and that the ECB's monetary policy is gradually gaining credibility. Secondly, volatility in inflation expectations falls as the horizon for the

forecast increases, which means that the impact of temporary shocks is noted in the short term but disappears over the long term. For example, the sharp fall in Europe's inflation over the last few months, driven by the notable slump in oil prices, has led analysts to lower their inflation forecast for 2015 from 1.2% in June 2014 to 0.3% in December. On the other hand, the long-term forecasts (five years' time) have only been lowered by 0.1 pps between these two dates, standing at 1.8% in December, very close to the ECB's target. This pattern can also be seen in similar surveys in the US.

There are three broad types of product that can be used to measure expectations via financial instruments: inflation-linked or I/L bonds, inflation swaps and inflation caps and floors. Due to its size and liquidity, the inflation-linked government bond market is the most important benchmark for analysing and evaluating the trend in inflation expectations among participants in the financial markets. This kind of asset, issued by an increasing number of governments, offers holders protection against purchasing power being eroded by inflation on the (nominal) return for any investment. This is achieved by updating the principal in line with the inflation recorded during the lifetime of the bond. Consequently, the spread between the yield on a nominal bond (nominal IRR) and that of an I/L bond (real IRR) with equal maturity and by the same issuer, the so-called break-even inflation rate (BEIR), provides an approximate indicator of the average inflation rate expected by investors over that period. An inflation swap is an instrument in which one of the parties undertakes to pay a fixed interest rate in exchange for receiving the average inflation

1. For a more detailed description of these instruments, see the Focus «Inflation expectations and financial instruments: a valuable duo» in the Monthly Report of April 2014.

rate observed during the lifetime of the swap. The fixed interest rate for a swap therefore indicates the average inflation expected over the lifetime of the swap, similar to the BEIR in the absence of arbitrage.

Comparatively, both ways of measuring inflation expectations have been equally successful at predicting the actual inflation rate (see the second graph). However, as they are dissimilar in nature, significant differences arise at certain moments. The current situation is a case in point. The main advantage of inflation measures contained in financial asset prices lies in the fact that these are observed on a very frequent basis: daily or from one day to another in most cases, as opposed to the monthly or quarterly frequency of surveys. Also of great importance is the availability of measures over different horizons, from one year to 30, at least in the main countries. On the other hand, the main drawback of the BEIR and the rest of the variables of financial origin lies in two interrelated factors:

# Comparison of the gap between two-year inflation expectations and actual inflation



**Notes:** \*Based on two-year European inflation swaps. \*\*Survey of Professional Forecasters. **Source:** "la Caixa" Research, based on data from Bloomberg and the ECB.

their greater volatility compared with survey-based measures and the distortion resulting from the presence of risk premia, making it difficult to calculate the «true» expected inflation. More specifically, in addition to a liquidity risk premium, there is also an inflation risk premium (IRP hereafter). This is essentially the compensation received by investors for the risk taken regarding possible deviations between the actual inflation rate and the inflation they expected. In this way, higher risk (greater deviation from expectations) leads to a higher IRP. This premium must therefore be taken into account before interpreting the level and fluctuations of the BEIR and inflation swap rates.<sup>3</sup>

The initial interpretation of inflation currently given by financial products as a whole (bonds, swaps and options) shows a striking trend: the decrease in long-term inflation expectations is appreciably greater than that observed in surveys, both in the euro area and the US. As seen in the first graph, in the fourth quarter of 2014 the euro area's inflation expectations for 2019 implied in inflation swaps had fallen to 1.2% compared with 1.8% from the survey of analysts at the same time. What can explain this divergence between market and survey-based measures? A large part of the answer lies in the IRP. In fact, over the last few quarters the IRP has shrunk considerably, falling below the average for the last decade in the US and the euro area (40 and 50 bps, respectively). It should also be noted that the influence exercised by this drop in the IRP on fluctuations in inflation expectations is greater over longer horizons. This last point is crucial in order to accurately judge the severity of the recent downward path observed in the BEIR and the contained rates in inflation swaps. It therefore seems that survey-based measures have a certain advantage within the current disinflationary context.

In short, both survey-based inflation measures and those inferred from the price of financial instruments are subject to limitations that must be taken into account. It is therefore of the utmost importance to adjust their interpretation to the prevailing economic situation at any given time as this will determine the effectiveness of the decisions taken by central banks and consequently their credibility.

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<sup>5.</sup> See García, J. A. and Werner, T., (2010), «Inflation Risks and Inflation Premia», European Central Bank Working Paper Series No. 1162. The authors argue that IRP fluctuations lie behind 88% of the volatility observed in the five-year BEIR of the euro area.



<sup>2.</sup> The inflation measures contained in financial asset prices also include a liquidity risk premium. However, empirical studies have shown that the size and importance of this premium has decreased considerably over the last few years, especially in the I/L bond market.

<sup>3.</sup> This would be the case when the probability functions of inflation expectations tend to concentrate around extreme values (such as deflation), associated with sharp fluctuations in the inflation risk premium.

<sup>4.</sup> See Hördahl, P. and Tristani, O., (2014), «Inflation Risk Premia in the Euro Area and the United States» International Journal of Central Banking.

### Growth without inflation: what does the Phillips curve tell us?

The economic prospects in this first part of 2015 are not entirely satisfactory in most advanced economies: although GDP growth is expected to be higher than last year, inflation has yet to show any signs of returning to an upward trend. Volatile factors such as the slump in oil prices are largely the cause of the recent fall in inflation but, even before the shock of oil, growth in prices did not seem to accompany the economic recovery. What are the reasons for this economic growth without inflation?

The theoretical framework normally used to analyse the dynamics in inflation over the short term is based on the Phillips curve, which relates an economy's inflation to its output gap (the gap between potential and actual production). According to this relationship, the rate of inflation will be stable when actual GDP is equal to potential GDP, while deviations in actual production from the potential figure tend to generate inflationary or deflationary pressure (production above or below its potential, respectively). The original version of this curve, proposed by the British economist William H. Phillips in 1958, relates growth in wages with the unemployment rate: the greater the under-utilisation of labour market resources (when the actual unemployment rate is higher than the structural unemployment rate), the fewer wage rises agreed between workers and companies.

According to the Phillips curve, therefore, the low inflation seen during this current phase of the recovery would be explained by an output gap that is still very large in most advanced economies. In other words, the intensity of the recession would have produced a much larger output gap than in other recessions. For example, in the case of the Spanish economy, although it has seen six consecutive quarters of GDP growth, the degree of under-utilisation of its production resources is still very high compared with the pre-crisis level, as reflected by the high unemployment rate, which would prevent pressure on prices and wages. Unfortunately, using the Phillips curve to predict the trend in prices depends crucially on the estimated potential output, which cannot be observed directly and whose measurement is subject to significant limitations. 1 Moreover, this estimate becomes even more uncertain after a recession, as it is difficult to distinguish between the effect of cyclical factors, such as under-utilised production resources, and structural factors such as a permanent reduction in an economy's output capacity.

Besides the output gap, other additional factors should be mentioned that can also keep inflation down during a recovery. One such factor is the difficulty in reducing nominal wages. Because of nominal rigidities, there was no extensive adjustment in wages during the recession and, consequently, any increases in the first few quarters of the recovery have been limited, as a means of compensating the lack of any previous reduction. An analysis by Daly and Hobijn (2015)<sup>2</sup> provides empirical evidence supporting this hypothesis for the US economy. Specifically, the authors show that growth in wages during the recovery across industries depends on the rigidity of wages during the recession. Those sectors where wages shrank the least in the recession in relation to the rise in unemployment are the ones in which wage growth has been most contained during the recovery. This would be the case, for example, of construction. However, those sectors where wages are more flexible and adjusted quickly to the drop in production are now seeing larger wage increases, as in the case of finance, insurance and real estate.

Nonetheless, it is important to note that inflation's lack of sensitivity to the economic cycle is not a new phenomenon. In fact, in most advanced economies inflation has remained notably stable since the 1980s, flattening out the Phillips curve (see the graph). This means that inflation responds less to changes in the output gap; i.e. it seems that price formation is less sensitive to the under-utilisation of inputs in the labour and product market. Economists attribute this flattening out to two fundamental transformations that have taken place over the last two decades: on the one hand, the anchoring of inflation expectations and, on the other, the impact of globalisation on prices.

Starting with the first, the anti-inflationary policies adopted by most central banks and greater confidence in their commitment to keep inflation low and stable have helped to keep inflation expectations anchored. This means that companies and workers do not respond to positive or negative surprises of inflation, so that wages and prices do not change so frequently. Firmly anchored inflation expectations therefore lead to smaller cyclical price fluctuations. Coibion and Gorodnichenko (2014)<sup>3</sup> have constructed a Phillips curve for the United States that relates the output gap with the inflation expectations of households, measured by Michigan University's Surveys of Consumers. This helps to explain the lack of deflationary pressure since 2009 as households' inflation expectations rose substantially from 2.5% in 2009 to 4% in 2014 while other measures of inflation

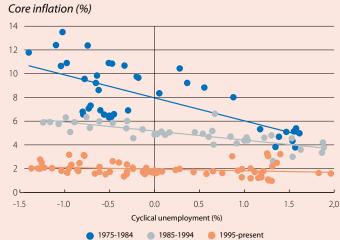
- 1. See the Dossier: «Potential GDP, a crucial but unclear concept» in the Monthly Report of May 2013.
- 2. Daly, M. and Hobijn, B. (2015), «Why Is Wage Growth So Slow?», Federal Reserve Bank of San Francisco Economic Letter 2015-01, 5 January.
- 3. Coibion O. and Gorodnichenko, Y. 2014. «Is the Phillips Curve alive and well after all? Inflation expectations and the missing disinflation.» American Economic Journal: Macroeconomics forthcoming.



expectations, such as those based on financial markets and on surveys of professional expectations, remained stuck at 2% over the same period. The authors show that the main factor behind this divergence in expectations is the price of oil, which households seem to respond to much more sharply. In other words, the increase in oil prices since 2009 would largely explain the trend in inflation after the Great Recession in the US. If the rise occurring in inflation expectations explains the lack of deflation in the recession, the reduction that has occurred recently might be a determining factor for the lack of inflation in the recovery.

Globalisation is the second factor that would explain why inflation is now less dependent on a country's domestic cyclical situation. The reduction in trade barriers and transport costs has led to the goods produced in one country being easier to replace by goods produced in another, so that the domestic price for these goods cannot differ too much from the price of similar goods produced abroad. Consequently, their price does

### Phillips curve for advanced economies



**Note:** Each dot represents the average inflation and cyclical unemployment in a quarter for advanced economies.

Source: "la Caixa" Research, based on IMF data.

not depend solely on the local output gap but also on the degree of resource utilisation at a global level. This effect can be analysed using a Phillips curve that includes the price index for imports as an additional explanatory variable. Estimates by the IMF<sup>4</sup> do not show any clear trend in the price of imports regarding domestic prices although, for some countries, there does seem to be an increase over time of the importance of imported inflation. Measurements of the global output gap can also be incorporated into the Phillips curve. Estimates by the BIS<sup>5</sup> show that the role played by the global output gap is increasingly important in explaining the dynamics of inflation.

In short, the low inflation in the recovery is a phenomenon which may seem surprising at first, especially given the huge injections of liquidity by central banks. However, it is less surprising when we analyse both the specific features of this crisis and the underlying structural factors that affect price dynamics at a global level. Consequently, in the short term we can expect inflation to remain low, also due to the shock from oil prices. In the medium term, however, as the economic recovery gains traction and output gaps close, inflation will return to levels much closer to the central banks' targets.

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<sup>4.</sup> International Monetary Fund (2013), «The Dog That Didn't Bark: Has Inflation Been Muzzled or Was It Just Sleeping?», Chapter 3 of the *World Economic Outlook*, April. 5. 84th Bank for International Settlements Annual Report, 2013/2014.



### Inflation: merely a monetary phenomenon?

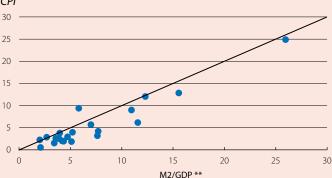
On 22 January 2015, Mario Draghi announced a considerable enlargement of the ECB's public and private bond purchase programme (QE) with the goal of anchoring inflation expectations in the medium term and reviving the economy, something that was unimaginable a year ago. With this announcement, the ECB joined the rest of the central banks such as the Federal Reserve, the Bank of Japan and the Bank of England that have been increasing their balance sheets by buying up assets for some time now. A large amount of liquidity has been injected into each country's economy through these expansionary monetary policies. However, inflation has continued to fall steadily and is now starting to jeopardise the anchoring of inflation expectations in the medium and long term. Given this unusual situation, some have even questioned one of the few laws in economics that had seemed resilient, known internationally thanks to a famous phrase by the economist Milton Friedman:

Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output.

This claim that inflation is a monetary phenomenon is based on the quantity theory of money, according to which prices vary in proportion to the money supply. This relationship is based on a mathematical identity, <sup>1</sup> according to which the value of transactions carried out in an economy (understood as nominal GDP) is equivalent to the amount of money circulating in that economy (understood as the amount of money in an economy multiplied by the number of times this changes hands; i.e. the velocity of money). If we assume that the velocity of money is constant, in an economy without economic growth the inflation rate equals the rate of growth in money. Therefore, if money supply increases, there will be more money chasing the same goods, so prices will go up. Similarly, if the rate of growth for economic activity and the quantity of money is the same, prices should remain constant.

# Long-term relationship between prices and money supply by country \*

Year-on-year change (%) (average 1984-2013) CPI



**Notes:** \*Each dot represents the average inflation and growth in money supply above GDP growth for advanced economies. \*\* M2 is a measurement of the money supply.

**Source:** "Ia Caixa" Research, based on data from the IFS.

Friedman's statement has been backed by empirical evidence, also showing a positive relationship between inflation and growth in excess money supply (growth in money supply above the real growth in GDP) for a large number of countries. This relationship is strong and robust in the long term but, the relationship between both variables may weaken temporarily in the short term due to factors such as price rigidity and the velocity of money not being constant. For example, a reduction in the velocity of money in circulation would be compatible with an increase in the money supply without putting pressure on prices.

Based on the above, both the theory and empirical evidence suggest that, if growth in the money supply is greater than the actual growth in GDP, this should push up inflation in the medium term. However, since the start of 2012, the relationship between both variables seems to have weakened to the point of almost disappearing. On the one hand, growth in money supply has accelerated more than GDP growth while, on the

other, core inflation<sup>2</sup> has continued to fall. Below we look at the main factors that lie behind this decoupling between monetary aggregates and prices in the last few years.

In this respect, an analysis of the effectiveness of monetary policy and specifically how it affects monetary aggregates is essential. In general terms, when a central bank offers liquidity to the banking system, either by offering long-term credit or by directly purchasing some of its assets, the monetary base increases. There is no automatic rise in the money supply, however. Traditionally banks would use the liquidity provided by central banks to increase the supply of credit and movements in money supply were therefore in line with those in the monetary base, ultimately leading to an increase in consumption and investment and thereby pushing up prices.

However, the considerable increase in the monetary base occurring over the last few years has not led to a similar increase in the money supply (see the table). The factors limiting the growth capacity for credit can be found both in its demand and supply.

<sup>1.</sup> M x V = P x Y or dM + dV = dP + dY. Where M is money supply (dM are the variations in this variable), V is the velocity of money circulation, P are prices and Y is GDP in real terms.

<sup>2.</sup> We have focused on core inflation to isolate the effect of falling oil prices over the last few months.

<sup>3.</sup> Monetary base is understood as the amount of liquidity provided by central banks, either in the form of currency in circulation or bank reserves deposited with the central bank.

<sup>4.</sup> The relationship between the monetary base and money supply is known as the money multiplier.

<sup>5.</sup> Money supply is understood as the currency in circulation plus currency in its most liquid form; i.e. bank deposits.

### Trend in monetary aggregates and prices

Year-on-year change (%)

	Monetary base	Money supply *	Core CPI
United States (average 2000-2007)	5.1	6.2	2.2
United States (average 2009-2013)	31.1	6.6	1.6
Euro area (average 2000-2007)	8.3	7.3	1.8
Euro area (average 2009-2013)	9.7	3.4	1.4

Note: \* Money supply measured via the M2 aggregate.

Source: "la Caixa" Research, based on data from the ECB, the Federal Reserve, Eurostat and the

Bureau of Economic Analysis.

Specifically, a significant part of demand was immersed in an extensive deleveraging process. Moreover, the healthier part of the private sector did not demand credit either, afflicted by a highly uncertain environment that encouraged them to save and postpone decisions to consume and invest. On the supply side, the adjustments banks have had to carry out in order to comply with the new banking regulations (Basel III), both in terms of solvency with higher capital ratios and also in terms of liquidity, have encouraged them to be very cautious when granting loans and to hold onto a considerable buffer of liquidity.

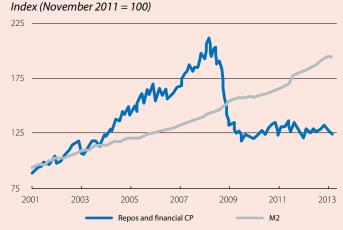
Given this scenario, many banks have opted to use the liquidity they have received to increase their reserves with the central bank and thereby maintain some room to manoeuvre to handle any upswings in financial tension or further regulatory requirements. With the remaining liquidity, investors looked for

a more attractive return-risk combination, either in other financial assets or in other economies that were growing. A lot of the liquidity provided by central banks has therefore ended up in the main emerging economies.

One last factor that should be taken into account is the growing importance of alternative sources of financing to deposits in the pre-crisis period. Traditionally, when financial brokerage was mainly through banks, their liabilities, in other words traditional monetary aggregates, were a good indicator of the quantity of money in the economy. However, this relationship has weakened with the expansion of the wholesale funding market. For example, in the US, when commercial banks used to sell asset-backed securities, they could lend again with the liquidity obtained. For their part, the vehicles set up to buy asset-backed securities were financed by issuing short-term financial debt (commercial paper), which is not included in monetary aggregates. In practice, therefore, there was an increase in credit without any increase in monetary aggregates.

Another paradigmatic case with similar results is provided by temporary sales of securities, also known as repurchase agreements or repos, used by banks to lend each other money using a security as a guarantee. As in the case of securitisation, this practice became an important source of liquidity that helped to increase the supply of credit. Moreover, in the US repos are not included in the traditional measurement of money supply either so that, also in this case, the resulting boost for credit did not lead to an increase in monetary aggregates. As can be seen in the corresponding graph, during the years of strong growth the volume of financial commercial paper and repos increased sharply but, after the crisis erupted, they plummeted and have yet to recover. The traditional measures of money supply shown in the table above therefore underestimate the liquidity available before the crisis and do not reflect its subsequent contraction. Although the expansion in the monetary base by the central banks aimed to replace this lack of liquidity, it has not been enough and, consequently, the pressure on prices is still low.

## **USA: trend in liabilities of the financial system**



Note: CP are commercial papers, M2 is the money supply Source: "la Caixa" Research, based on data from the Federal Reserve.

In short, although the relationship between prices and monetary aggregates seems to have dwindled this is partly due to temporary factors such as those related to the supply and demand for credit. Therefore, as the economic recovery takes hold, both are likely to synchronise again. It is more difficult to determine the role played by the greater integration of global financial markets although, judging by the last few years, central banks seem to find it very difficult to control the liquidity they inject as this is easily directed towards other economies. A lesson that should be borne in mind when evaluating the effectiveness of the measures recently announced by the ECB.

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6. See Singh, Manmohan and Stella, Peter (2012), «Money and Collateral», IMF Working Paper, and «Low inflation in a world of securitization», Economic Synopses, Federal Reserve of St. Louis, 2013.



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Financial activity	MILLION€
Customer funds	271,270
Receivable from customers	195,809
Profit atributable to Group	622
Commercial activity and resources	
Customers (million)	13.4
Staff	32,590
Branches in Spain	5,251
Self-service terminals	9,544
Community projects: budget for activities in 2015	MILLION €
Social	336
Science and environmental	56
Cultural	67
Educational and research	41
TOTAL BUDGET	500

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