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MONTHLY REPORT • ECONOMIC AND FINANCIAL MARKET OUTLOOK

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ECONOMIC & FINANCIAL ENVIRONMENT

FINANCIAL MARKETS

Which emerging central banks will have to follow in the Fed's footsteps?

INTERNATIONAL ECONOMY

Emerging debt and currency mismatch: a combination to watch closely

EUROPEAN UNION

The productivity gap between the euro area and the US: a sectoral analysis

SPANISH ECONOMY

The Spanish stock exchange compared with Europe's: time to make up lost ground?

DOSSIER: EDUCATION: MORE CRUCIAL THAN EVER

Education and economic growth

The pillars of education: a modern view

Beyond qualifications: the challenge of career-long continued training

Teaching to learn: education in the era of technological change

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ECONOMIC AND FINANCIAL
MARKET OUTLOOK**
May 2017

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INDEX

1 EDITORIAL

3 EXECUTIVE SUMMARY

4 FORECASTS

6 FINANCIAL MARKETS

9 *Which emerging central banks will have to follow in the Fed's footsteps?*

10 *The health of the US corporate sector, a crucial factor for financial stability*

12 INTERNATIONAL ECONOMY

15 *Emerging debt and currency mismatch: a combination to watch closely*

16 *Growth is speeding up in the emerging countries, but not inflation*

18 EUROPEAN UNION

21 *What economy is awaiting the next President of France?*

22 *The productivity gap between the euro area and the US: a sectoral analysis*

24 SPANISH ECONOMY

27 *Correcting the budget deficit; mission possible*

28 *Dissecting the improvement in the current account*

29 *The Spanish stock exchange compared with Europe's: time to make up lost ground?*

32 DOSSIER: EDUCATION: MORE CRUCIAL THAN EVER

32 *Education and economic growth*
Clàudia Canals

34 *The pillars of education: a modern view*
Javier García-Arenas

36 *Beyond qualifications: the challenge of career-long continued training*
Anna Campos

38 *Teaching to learn: education in the era of technological change*
Adrià Morron Salmeron

A good education

Public policies aimed at reducing poverty and inequality often face a dilemma between equity and efficiency. But a good education policy has ample potential to improve a workforce's productivity and also promote social mobility by giving young children equal opportunities in early education. It is therefore a powerful tool to transform society, if not the most important.

An education system needs to be of good quality to make the most of all its potential. Particularly at a time such as the present, when we must adapt to a digital revolution that is transforming the productive system and consequently the skills and abilities demanded by the labour market. It is important what, how and when people learn.

A 21st-century education system cannot teach the same as the last century. It must especially teach people how to learn. Many studies have stressed the importance not only of cognitive skills such as language, communication, information processing, numeracy and logic, but also non-cognitive or soft skills such as the power of concentration and planning, perseverance, self-control and interpersonal relations. Knowledge needs to be passed on but so do approaches to working, organising oneself and learning. And also values.

Regarding how to learn, there are many different myths regarding the best way to teach. For instance, available evidence suggests that variables such as class size and the amount of resources devoted to the system (in both cases within certain limits) do not affect the quality of education to any great extent. By far the most important factor for a successful education system is teacher quality. Those countries with the best systems, such as Singapore, Finland and Korea, can attract and retain the best talent by offering attractive careers, continued training and social prestige for the teaching profession. Parents are also important, especially in terms of the time devoted to their children in activities such as reading and talking. A good work-life balance is therefore essential for them to have such time available.

Lastly, regarding the when, several research studies have shown the importance of investing in children's education from birth up to five years of age to ensure equal opportunities. The first five years of learning have a huge influence on children's potential as students and adults. The Nobel prize-winner for Economics, James Heckman, has estimated that investing in the most disadvantaged segments of the population at this age has a return of between 7% and 10%. Few public investments can offer better.

These are just some of the things we know. But the quest for excellence in education must be an ongoing process supported by painstaking research. Constant innovation and evaluation are required. The most successful countries approach education like the field of medicine: pilot tests are carried out to evaluate innovations (in the what, how and when) and changes proven to be effective are adopted. This is the best way to adapt to continual change. In education, resistance to change or unwarranted change has a huge cost in terms of equity and efficiency. A cost we can ill afford.

Enric Fernández
Chief Economist
30 April 2017

CHRONOLOGY

APRIL 2017

- 16 Turkey ratifies its proposed constitutional reform in a referendum.
- 19 The British parliament votes in favour of an early general election on 8 June.

MARCH 2017

- 1 The European Commission presents its White Paper on the future of Europe, proposing five possible scenarios for the EU-27 in 2025.
- 16 The Federal Reserve raises the fed funds rate by 25 bp to 0.75%-1%.
- 29 The UK triggers article 50 of the Lisbon Treaty to begin negotiations to leave the EU.

JANUARY 2017

- 23 Donald Trump signs an executive order formally withdrawing the US from the Trans-Pacific Partnership (TPP).

DECEMBER 2016

- 4 Italy holds a referendum, resulting in the rejection of the proposed constitutional reform. The Prime Minister, Matteo Renzi, resigns and is replaced by Paolo Gentiloni.
- 8 The ECB prolongs QE up to December 2017 and reduces its monthly asset purchases from 80 to 60 billion euros as from April.
- 14 The US Federal Reserve raises the fed funds rate by 25 bps to 0.50%-0.75%.
- 22 The Italian bank, Monte dei Paschi di Siena, fails in its attempt to increase its capital by 5 billion euros and the Italian government creates a 20 billion bailout fund to prop up the country's banking sector.

NOVEMBER 2016

- 8 Donald Trump is elected President of the US.
- 30 OPEC members reach an agreement to cut oil production to 32.5 million barrels a day.

OCTOBER 2016

- 29 Mariano Rajoy is sworn in as President of the Spanish government.

AGENDA

MAY 2017

- 3 GDP of the euro area (Q1).
Fed Open Market Committee.
- 4 Registration with Social Security and registered unemployment (April).
- 5 Industrial production index (March).
- 19 Loans, deposits and NPL ratio (March).
Japan's GDP (Q1).
- 23 International trade (March).
- 25 Quarterly national accounts (Q1).
- 30 State budget execution (April).
Economic sentiment index of the euro area (May).
CPI flash estimate (May).
- 31 Balance of payments (March).

JUNE 2017

- 2 Registration with Social Security and registered unemployment (May).
- 7 Industrial production index (April).
- 8 Governing Council of the European Central Bank.
- 14 Fed Open Market Committee.
- 16 Quarterly labour cost survey (Q1).
- 19 Loans, deposits and NPL ratio (April).
- 20 International trade (April).
- 22 European Council.
- 27 State budget execution (May).
- 29 Economic sentiment index of the euro area (June).
Flash CPI (June).
- 30 Household savings rate (Q1).
Balance of payments (April).
Net international investment position (Q1).

Encouraging signs for the world economy

A promising start to the year. Activity and sentiment indicators for the first four months of the year suggest that world growth will consolidate its acceleration in 2017. The CaixaBank Research forecast for 2017 is 3.5%, 0.1 pp higher than the previous month and 0.4 pp above 2016's figure. Moreover, this positive trend seems to be relatively widespread, occurring in both the advanced and the emerging economies. However, most of the data supporting the scenario of acceleration are soft (based on consumer and company surveys) whereas the hard data (the effective growth indicators of Q1) have yet to be released. It therefore remains to be seen whether the latter will confirm the promising view described. The positive scenario has recently gone hand in hand with the financial markets' performance: after a brief risk-off period, stock markets rallied again in the second half of April, confirming that the constructive dynamics, based on confident growth expectations, have remained intact. In the emerging economies, the remarkable growth of the Chinese economy in Q1 (6.9% year-on-year) supports this optimistic outlook in spite of it owing to a fiscal stimulus that is unlikely to continue over the coming quarters.

The future is not without risk, however. Political risks have grabbed most of the headlines over the past few months. Although these are still present (protectionism, populism, uncertainty regarding the Trump administration's policies and geopolitical tensions), we should not ignore threats of a strictly economic nature. These include the rising level of global debt (China being a case in point due to its high corporate debt) and the impact of the Fed's expected interest rate hikes on those emerging economies that are more vulnerable to external factors.

The US takes its foot off the gas, but only temporarily. The US economy grew less than expected in Q1 (0.2% quarter-on-quarter), hindered by weaker private consumption. Nevertheless, we believe this is just a bad patch as the strong growth in investment and good activity and sentiment indicators in Q1 suggest that GDP growth will pick up again over the coming quarters. The fiscal situation has also changed somewhat. At the end of April, the Trump administration presented an outline of its ambitious tax reform which aims to simplify and lower tax rates (for instance, corporate tax would fall from 35% to 15%). But there are doubts regarding the ultimate extent of this fiscal stimulus since, if implemented, the reform would considerably increase the Federal budget deficit in spite of the elimination of most fiscal

deductions currently in place. Consequently, negotiations are bound to be intense and the Trump administration will probably have to make concessions.

Europe's economy is looking increasingly strong against the backdrop of changing political risks.

Most sentiment indicators point to the economic recovery consolidating as inflation gradually gets back to normal. But there are still political risks with two chief sources of uncertainty. The first one is Brexit, given that negotiations with the EU may lead to episodic bouts of financial volatility. The second are the elections in the euro area's core countries, although here the risks are shifting: Macron's likely victory in France and the fact that Germany's extreme right-wing is running out of steam will boost the European project. Nevertheless, uncertainty will quickly drift to Italy where parliamentary elections will be held in Q1 2018.

Q1 data confirm that the Spanish economy is thriving.

GDP growth accelerated to 0.8% quarter-on-quarter in the first three months of the year, 0.1 pp more than in the previous two quarters. According to available indicators, domestic demand is once again driving this expansion since it continues to be remarkably strong, although exports have also performed very well in the first few months of 2017. Temporary tailwinds (low interest rates and oil prices), in conjunction with structural reforms, are the drivers of the expansion of an economy that has already enjoyed three years in a row of sustained growth. Such a positive situation will result in notable economic growth, which CaixaBank Research places at 2.8% for 2017, and will also have positive effects on the labour market, with the creation of 430,000 new jobs this year. In spite of this improvement, however, the Spanish economy still needs to lower its unemployment rate. This rose by 0.2 pp in Q1 due to seasonal factors and now stands at a still-high 18.8%. The good shape of the Spanish economy is also having a strong influence on public finances. The favourable economic situation will help to reduce the budget deficit and, as a result, the target set for 2017, namely 3.1%, looks achievable.

FORECASTS

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

International economy

	2015	2016	2017	2018	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
GDP GROWTH										
Global	3.4	3.1	3.5	3.6	3.1	3.3	3.4	3.5	3.5	3.5
Developed countries	2.1	1.6	2.0	2.0	1.7	1.9	1.9	2.1	2.0	1.9
United States	2.6	1.6	2.2	2.4	1.7	2.0	1.9	2.3	2.2	2.3
Euro area	1.9	1.7	1.7	1.7	1.8	1.8	1.7	1.8	1.8	1.7
Germany	1.5	1.8	1.6	1.6	1.7	1.8	1.5	1.5	1.8	1.8
France	1.2	1.1	1.3	1.4	0.9	1.2	0.8	1.4	1.5	1.3
Italy	0.7	1.0	0.8	0.8	1.0	1.0	0.8	0.9	0.7	0.7
Portugal	1.6	1.4	1.5	1.4	1.7	2.0	2.0	2.0	1.3	0.9
Spain	3.2	3.2	2.8	2.4	3.2	3.0	3.0	2.8	2.8	2.7
Japan	1.2	1.0	1.1	0.8	1.1	1.6	1.4	1.2	1.1	0.9
United Kingdom	2.2	1.8	1.6	1.4	2.0	1.9	2.1	1.7	1.4	1.0
Emerging countries	4.1	4.2	4.5	4.8	4.1	4.3	4.5	4.5	4.6	4.6
China	6.9	6.7	6.6	6.1	6.7	6.8	6.9	6.6	6.5	6.4
India	7.5	7.5	7.3	7.7	7.4	7.0	7.1	7.1	7.4	7.7
Indonesia	4.9	5.0	5.1	5.6	5.0	4.9	5.0	5.0	5.2	5.2
Brazil	-3.8	-3.6	0.7	2.1	-2.9	-2.5	-1.0	0.3	1.5	2.1
Mexico	2.6	2.3	1.8	2.1	2.1	2.4	2.7	1.9	1.3	1.1
Chile	2.3	1.6	1.9	2.6	1.8	0.5	1.5	1.9	2.1	2.2
Russia	-2.8	-0.2	1.5	1.7	-0.4	0.3	1.0	1.2	1.6	1.9
Turkey	6.0	3.0	2.7	3.0	-1.3	3.5	2.5	2.7	2.8	2.9
Poland	3.9	2.7	3.3	3.1	2.2	2.9	3.4	3.4	3.4	3.1
South Africa	1.3	0.4	1.1	1.6	0.7	0.5	1.2	0.7	1.0	1.4
INFLATION										
Global	2.8	2.8	3.4	3.4	2.7	2.9	3.2	3.4	3.4	3.6
Developed countries	0.3	0.7	1.9	1.9	0.6	1.2	1.9	2.0	2.1	2.0
United States	0.1	1.3	2.3	2.3	1.1	1.8	2.5	2.2	2.3	2.2
Euro area	0.0	0.2	1.8	1.6	0.3	0.7	1.8	1.7	1.9	1.8
Germany	0.1	0.4	1.9	1.7	0.4	1.0	1.9	2.0	2.0	1.9
France	0.1	0.3	1.7	1.6	0.4	0.7	1.5	1.6	1.9	1.8
Italy	0.1	0.0	1.4	1.4	-0.1	0.2	1.4	1.6	1.5	1.4
Portugal	0.5	0.6	1.5	1.5	0.7	0.8	1.4	1.5	1.6	1.6
Spain	-0.5	-0.2	2.2	1.5	-0.2	1.0	2.7	2.4	2.2	1.7
Japan	0.8	-0.1	0.5	1.0	-0.5	0.3	0.3	0.3	0.8	0.5
United Kingdom	0.0	0.7	2.6	2.6	0.7	1.2	2.1	2.5	2.9	3.0
Emerging countries	4.7	4.4	4.5	4.5	4.3	4.1	4.2	4.5	4.4	4.9
China	1.4	2.0	2.1	2.3	1.7	2.2	1.4	2.3	1.9	2.7
India	4.9	4.9	4.8	5.2	5.2	3.7	3.5	3.7	4.9	6.8
Indonesia	6.4	3.5	4.0	5.0	3.0	3.3	3.6	4.4	3.8	4.0
Brazil	9.0	8.8	4.2	4.3	8.7	7.1	4.9	3.9	3.6	4.5
Mexico	2.7	2.8	5.2	3.6	2.8	3.2	5.0	5.5	5.4	5.0
Chile	4.3	4.0	3.2	3.3	3.8	3.3	3.0	3.1	3.2	3.3
Russia	15.5	7.1	4.7	4.9	6.8	5.7	4.6	4.3	5.0	5.0
Turkey	7.7	7.8	9.8	7.5	8.0	7.6	10.2	10.6	9.4	9.0
Poland	-0.9	-0.7	1.7	2.0	-0.8	0.2	2.1	1.5	1.5	1.8
South Africa	4.6	6.3	6.2	5.6	6.0	6.6	6.3	5.9	6.1	6.5

Forecasts

Spanish economy

	2015	2016	2017	2018	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Macroeconomic aggregates										
Household consumption	2.8	3.2	2.6	2.0	3.0	3.0	2.8	2.6	2.6	2.4
General government consumption	2.0	0.8	0.8	0.8	0.8	0.0	0.2	1.0	0.7	1.1
Gross fixed capital formation	6.0	3.1	3.6	3.5	2.6	2.2	3.2	2.8	4.0	4.4
Capital goods	8.9	5.1	3.9	3.3	4.3	2.7	3.8	2.9	3.9	5.0
Construction	4.9	1.9	3.3	3.5	1.6	1.9	2.8	2.8	3.7	4.0
Domestic demand (contr. Δ GDP)	3.3	2.8	2.4	2.0	2.5	2.2	2.3	2.4	2.5	2.5
Exports of goods and services	4.9	4.4	4.6	4.5	2.9	4.4	5.4	3.0	5.4	4.5
Imports of goods and services	5.6	3.3	3.6	3.6	1.0	2.3	3.6	1.9	5.0	4.1
Gross domestic product	3.2	3.2	2.8	2.4	3.2	3.0	3.0	2.8	2.8	2.7
Other variables										
Employment	3.0	2.9	2.4	2.1	2.9	2.7	2.3	2.2	2.1	2.4
Unemployment rate (% labour force)	22.1	19.6	17.7	16.3	18.9	18.6	18.8	17.9	17.0	17.0
Consumer price index	-0.5	-0.2	2.2	1.5	-0.2	1.0	2.7	2.4	2.2	1.7
Unit labour costs	0.2	-0.4	0.6	1.2	-0.3	-0.2	-0.1	0.4	0.8	1.2
Current account balance (cum., % GDP) ¹	1.4	2.0	1.8	1.6	1.8	2.0	2.1	2.1	2.0	2.0
Net lending or borrowing rest of the world (cum., % GDP) ¹	2.0	2.1	2.4	2.2	2.2	2.1	2.7	2.7	2.6	2.6
Fiscal balance (cum., % GDP) ²	-5.1	-4.3	-3.4	-2.4						

Financial markets

INTEREST RATES										
Dollar										
Fed Funds	0.26	0.51	1.15	1.94	0.50	0.55	0.83	1.08	1.17	1.50
3-month Libor	0.32	0.74	1.37	2.18	0.79	0.92	1.07	1.26	1.47	1.68
12-month Libor	0.79	1.37	1.98	2.63	1.46	1.62	1.75	1.89	2.07	2.23
2-year government bonds	0.67	0.84	1.56	2.63	0.72	1.00	1.23	1.41	1.68	1.91
10-year government bonds	2.13	1.84	2.65	3.41	1.56	2.13	2.44	2.51	2.74	2.90
Euro										
ECB Refi	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3-month Euribor	-0.02	-0.26	-0.32	-0.21	-0.30	-0.31	-0.33	-0.33	-0.31	-0.30
12-month Euribor	0.17	-0.03	-0.08	0.05	-0.05	-0.07	-0.10	-0.10	-0.07	-0.06
2-year government bonds (Germany)	-0.24	-0.58	-0.70	-0.29	-0.64	-0.71	-0.78	-0.79	-0.66	-0.58
10-year government bonds (Germany)	0.53	0.10	0.47	0.85	-0.12	0.11	0.34	0.37	0.53	0.62
EXCHANGE RATES										
\$/€	1.11	1.11	1.06	1.08	1.12	1.08	1.07	1.06	1.05	1.06
¥/€	134.33	120.30	119.98	124.26	114.26	117.96	121.05	118.01	119.07	121.80
£/€	0.73	0.82	0.86	0.85	0.85	0.87	0.86	0.85	0.86	0.87
OIL										
Brent (\$/barrel)	53.64	45.04	56.00	61.71	46.98	51.13	54.68	54.83	56.50	58.00
Brent (€/barrel)	48.33	40.73	52.85	57.33	42.09	47.46	51.35	51.50	53.65	54.89

Note: 1. Four quarter cumulative. 2. Cumulative over four quarters. Does not include aid to financial institutions.

Forecasts

FINANCIAL OUTLOOK · A clearer political panorama provides a lifeline

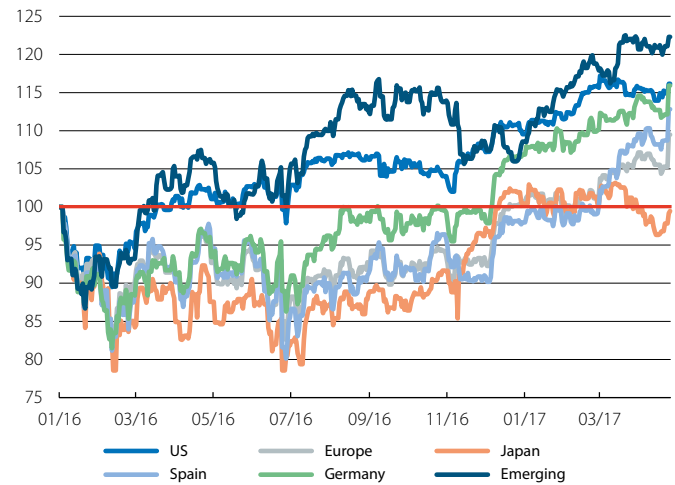
Political uncertainty sparked a period of risk-off that ended after the first round of France's presidential elections. As has tended to be the case in 2017, political risk continued to set the tone for financial markets in April. In the US, the new Trump administration had to withdraw its first proposal for healthcare reform at the end of March due to a lack of support. There are now doubts as to the new government's capacity to implement the changes it has promised. Such as tax reform, which aims to boost growth and business margins and has been widely anticipated by investors. In Europe, the announcement that the UK's general election would be held early, on 8 June, and especially the first round of France's presidential elections, kept investors on their toes. At a global level, geopolitical tension in Syria and North Korea stirred up the financial markets. A certain weakness in commodity prices also poured cold water on emerging risky assets. On the whole, all these factors led to risk-off trade in the first half of April, a repositioning of inflation expectations and investors going in search of a safe haven. This pushed up the price of gold and also of German and US bonds, reducing yields on their long-term sovereign debt. On the other hand, global equity posted moderate losses in the first part of April.

The stock markets then became more constructive in the second half of the month. Finally, as Macron and Le Pen went through to the second round of the French elections, the former in a stronger position than before, the risk-off caused by political tensions finally reversed. European stock markets rallied strongly, reversing most of the previous moves to safe havens. The yield on the US 10-year Treasury note made up a large proportion of the drop posted in April and the IRR for the German bund recovered the whole month's loss. The electoral outcome boosted the euro, appreciating by 1.85% against the dollar in the days following the election. But the markets' negative tone had already started to reverse as US macroeconomic data were published, and with the Federal Reserve's (Fed) interpretation of these in its Beige Book. These indicators still point to a market driven by global economic growth and inflation expectations on the up again. Pending more details, investors reacted with caution to the tax reform announced by Trump at the end of April.

Outbreaks of volatility gradually cool off as political threats fade. During most of April the volatility indices continued to rise, both in the US and European stock markets, due to uncertainty regarding economic policy in the US, the world's tense geopolitical situation and nervousness before France's elections. In Europe, the volatility index for the

Main international stock markets

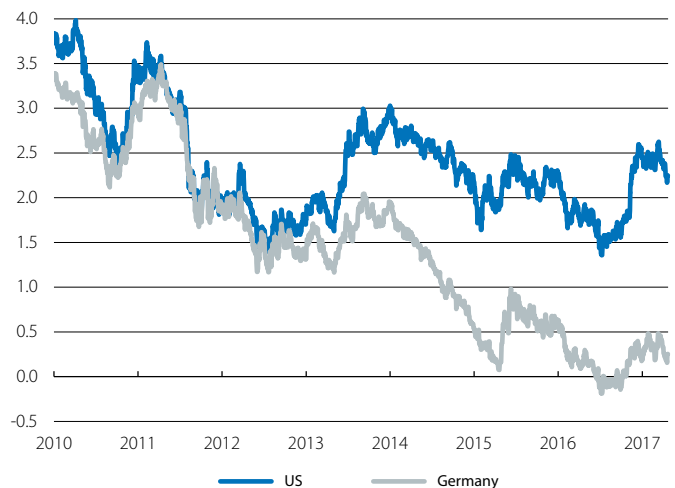
Index (100 = January 2016)



Source: CaixaBank Research, based on data from Bloomberg.

Yields on 10-year public debt

(%)

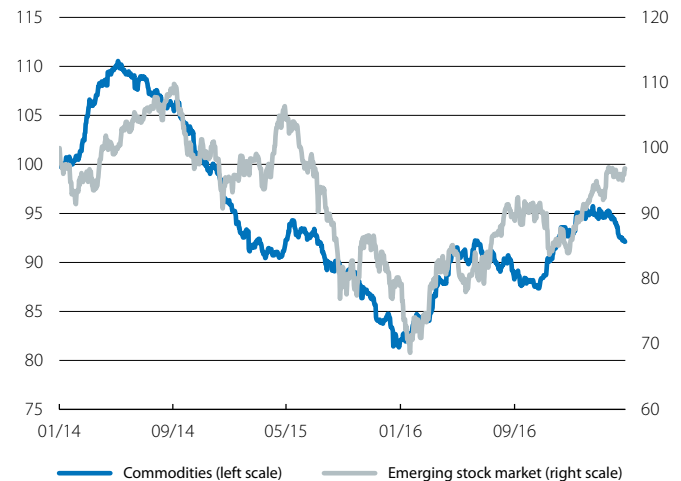


Source: CaixaBank Research, based on data from Bloomberg.

Emerging stock market and commodities

Index (100 = January 2014)

Index (100 = January 2014)



Source: CaixaBank Research, based on data from Bloomberg.

Eurostoxx 50 (VSTOXX), which had exceeded its pre-Trump level, then plummeted to levels from the beginning of the year with the outcome of the French elections. In the US, the VIX index also dropped to its lowest level this year, now at an all-time low.

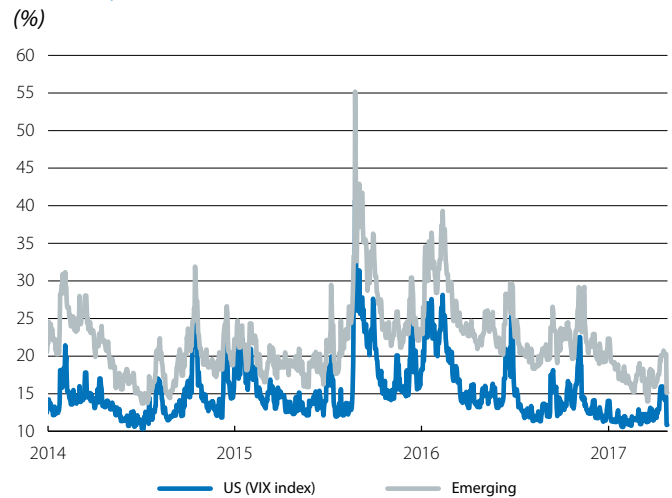
The Fed maintains its monetary policy normalisation plan despite the retreat in long-term yields. Behind the decrease in the US 10-year IRR lie factors such as inflows into US bonds as a safe haven asset, slightly weaker inflation figures (partly due to falling energy prices) and doubts as to whether reforms will actually be implemented and the extent of their impact. The interest rate futures market started to assume a pace of between two and three fed funds hikes before the end of 2018 instead of the three or four previously anticipated. But, in its Beige Book, the Fed noted that growth and wages were accelerating in various districts, which contributed to a positive reading of the macroeconomic data. This scenario has led the Fed to keep to its planned interest rate hikes, with two more announcements this year and another three in 2018, in line with the CaixaBank Research forecasts. Given this context, the Fed's forward guidance will be crucial, also regarding their balance sheet strategy and the reinvestment of maturing assets.

As expected, the ECB keeps the parameters of its monetary policy intact. At its meeting last 27 April, the Governing Council stated that activity indicators for the euro area still point to the recovery becoming increasingly solid and that risks are still tilted to the downside, albeit to a lesser degree. On the other hand, the slow recovery in the labour market is keeping inflationary pressure subdued, at least for the time being. There is also political uncertainty, which warrants caution before carrying out any slight change in monetary policy. Some members of the Governing Council have repeated their support for a sequenced approach to monetary normalisation, with the ECB not raising interest rates until net asset purchases have ended. According to the CaixaBank Research forecasts, the first hike in the euro area's refi rate will occur mid-2019.

With the decrease in political risk, equity markets once again focus on economic fundamentals. With the corporate earnings season in its late stages, the data published seem to confirm expectations of higher profits this year. The constructive tone of the past few weeks has led to forecast upgrades. These tend to assign greater potential to the euro area and emerging markets than the US, which also has notably higher valuation ratios. The Eurostoxx once again outperformed the S&P 500 in monthly terms, with banks leading the gains thanks to their greater sensitivity to the current environment, both political and financial. Portfolio flows also provided an accurate reflection of investor expectations, with outflows of US funds continuing towards European equity.

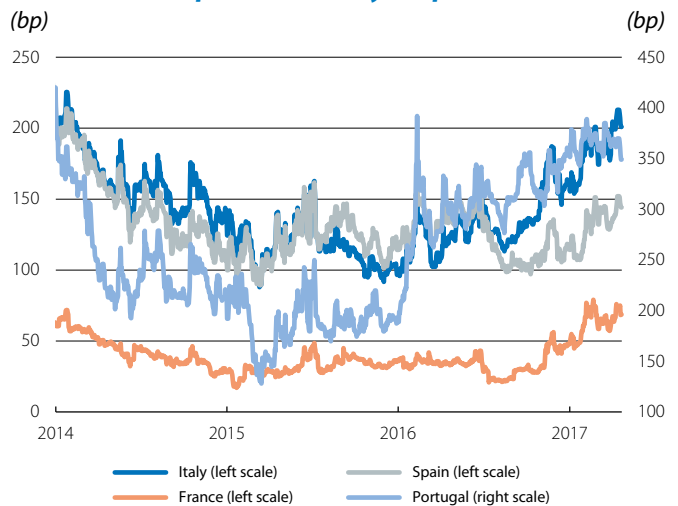
In a risk aversion climate, the appetite for bonds is pushing up the value of sovereign and corporate debt portfolios. In spite of a slight dip at the end of the month, global bond

US and emerging: implied stock market volatility



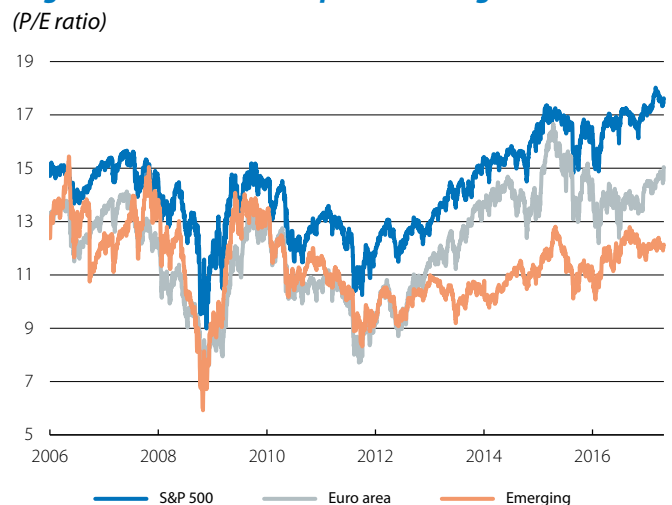
Source: CaixaBank Research, based on data from Bloomberg.

Euro area: risk premia on 10-year public debt



Source: CaixaBank Research, based on data from Bloomberg.

Regional stock markets: price/earnings ratio *



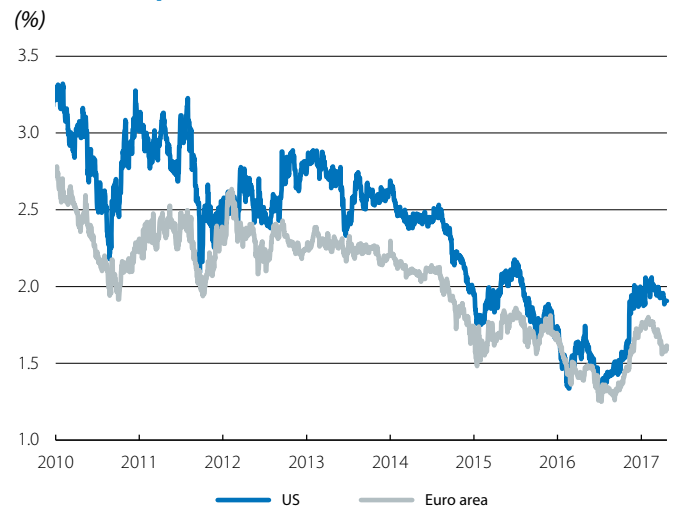
Note: * Earnings forward twelve months.

Source: CaixaBank Research, based on data from Bloomberg.

indices gained by around 1%. The largest gains were made by portfolios with longer maturities and in government debt rather than corporate debt portfolios. The drop in yields on long-term US Treasury bonds led to a slight increase in corporate spreads, especially in the high yield segment. In turn the readjustment of inflation expectations pushed down demand for inflation-protected bonds. In Europe, the drop in the yield on German 10-year bonds helped to push up sovereign risk premia during a large part of April. Corporate risk premia also picked up slightly but, as in the US, they are still quite level. We will have to wait and see how political uncertainty and the ECB's reduction in its rate of bond purchases will affect European corporate spreads.

The emerging markets also take a breather but continue to enjoy strong portfolio inflows, both in equity and bonds. The dollar's slight depreciation seems to have made the risk of emerging currencies quite attractive, pushing up demand for bonds in local currencies. But sovereign bonds are preferred over corporate, a sign that the market is concerned about the high levels of debt in the private sector. Should the positive trend continue in macroeconomic data and geopolitical tension diminish, emerging risky assets could further capitalise on their valuations, which are considerably lower than those of mature markets at present. Emerging currencies also remained relatively stable except for the South African rand and Turkish lira, the latter recovering slightly after a referendum ratifying the country's constitutional reform on 16 April. The Mexican peso performed particularly well, making up almost all the ground it lost after Trump's election. Lastly, the weakness in the main commodities also helps to explain the downturn in emerging stock markets. Continued growth in unconventional oil production has affected oil prices but drops have also spread to other commodities, such as industrial metals.

Inflation expectations*: US and euro area

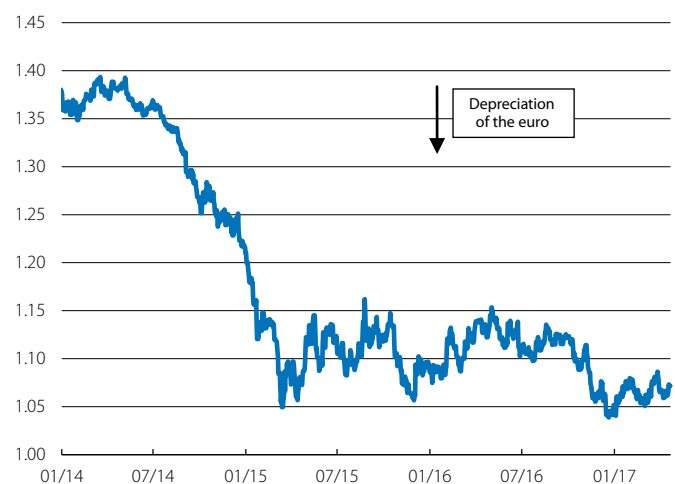


Note: * Inflation swap forward 5Y5Y.

Source: CaixaBank Research, based on data from Bloomberg.

Dollar-euro exchange rate

(Dollars per euro)

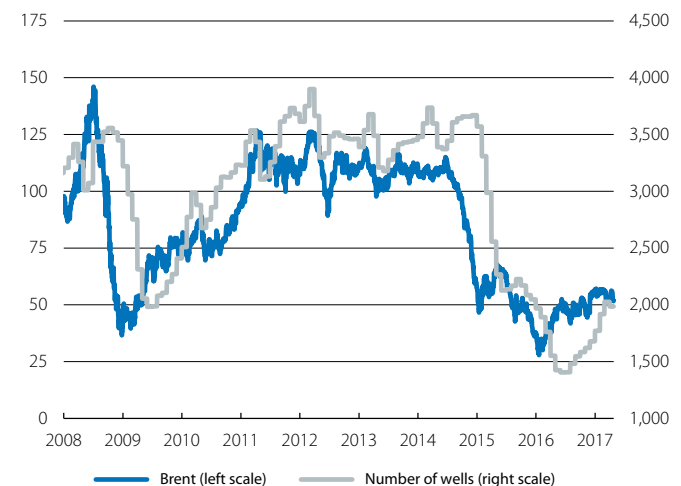


Source: CaixaBank Research, based on data from Bloomberg.

Oil prices and active wells

(Dollars per barrel)

(Number of active wells)



Source: CaixaBank Research, based on data from Bloomberg.

FOCUS · Which emerging central banks will have to follow in the Fed's footsteps?

With two hikes in just three months, the normalisation of the official interest rate of the US Federal Reserve (Fed) appears to be firmly on track. The crucial question is now whether emerging central banks will tend to mimic the decisions taken by the US central bank due to the implications these might have for emerging financial assets and for these countries' economies in general. But not all emerging countries are bound to follow the Fed down the path of normalisation.

After the various crises suffered in the 1980s and 90s, several emerging countries decided to carry out structural reforms aimed at making them less vulnerable to external shocks. Adopting a floating exchange rate was one of the key measures implemented from the end of the 1990s in many countries.

Emerging countries that want to boost their foreign trade can find a pegged exchange rate very useful as it reduces exchange rate uncertainty, making these countries more attractive for international investors. However, in order to maintain a fixed exchange rate, usually pegged with the dollar, central banks were forced to follow the course taken by the Fed, in some cases leading them to implement monetary conditions that were not entirely appropriate for their own economies.

Now, after many emerging countries have liberalised their exchange rates, there should be less pressure to follow the Fed. But several countries still tend to replicate US monetary policy. This pattern of behaviour can be seen in many of the countries with a current account deficit. They are more dependent on inflows of foreign capital and, consequently, although they may have a floating exchange rate, their respective central banks have gradually raised interest rates over the past few years to prevent any sharp depreciation in their currencies and ensure they can still attract international investors.

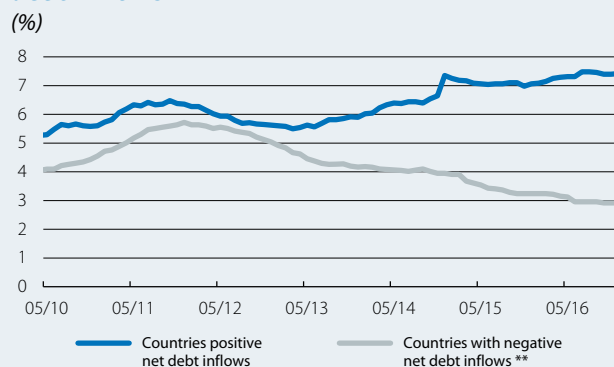
According to a study by the Federal Reserve Bank of Dallas,¹ this kind of action is particularly prevalent in emerging countries receiving debt-based net inflows of capital over the past few years. On the other hand, this is not the case of those countries whose capital inflows have focused on other kinds of investment, such as foreign direct investment. The reason: investment in debt, be it sovereign or corporate, is much more liquid and therefore much more sensitive to changes in investor sentiment. Foreign direct investment, however, tends to be made with an eye on the longer term.

1. Scott Davis, J. (2016), «Emerging-Market Debtor Nations Likely to Follow Fed Rate Boosts», Federal Reserve Bank of Dallas, Economic Letter.

According to the Dallas Federal Reserve's study, the central banks of emerging countries with positive net debt inflows in 2014 are more sensitive to a hike in the fed funds rate (see the second chart). For instance, it is estimated that, all things being equal, a 100 basis-point increase in the fed funds rate results in a 27 basis-point increase in Turkey's policy rate, a country that is highly dependent on debt-based capital inflows. At the other end of the spectrum, in Hungary, the same increase in the fed funds rate results in an increase in its policy rate of just 16 basis points.

We can therefore expect the central banks of countries such as Turkey, Russia and South Africa to raise their interest rates over the coming quarters as they have received significant amounts of debt investment in the past few years.

Emerging countries' policy rates by net debt inflows *

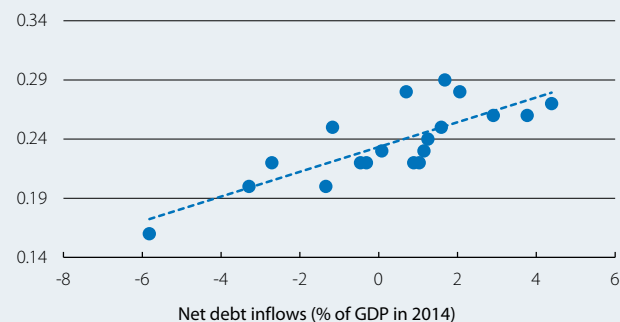


Notes: * Simple average of the official interest rate grouped by net debt inflow of capital (2014). ** Negative debt inflows indicate sales of capital.

Source: CaixaBank Research, based on data from Bloomberg and the Federal Reserve Bank of Dallas.

Impact of a fed funds hike on emerging interest rates *

Sensitivity coefficient of the emerging bank's policy rate



Note: * The vertical axis indicates the impact in basis points of a 100 basis-point rise in the fed funds rate on the emerging central bank's policy rate.

Source: CaixaBank Research, based on data from Bloomberg and the Federal Reserve Bank of Dallas.

FOCUS · The health of the US corporate sector, a crucial factor for financial stability

Last April the International Monetary Fund (IMF) published its latest Global Financial Stability Report. The report reviews the trends in the financial markets and the key threats to financial stability. In it, the IMF states that financial stability has improved owing largely to a reduction in macroeconomic risks resulting from the positive economic activity and confidence indicators which have been released over the past few months. But it also points out that the risks are still high. The IMF emphasizes the elevated political uncertainty for the advanced economies. For the emerging economies, the report stresses the potential impact of a tightening of global financial conditions as one of the main sources of risk.

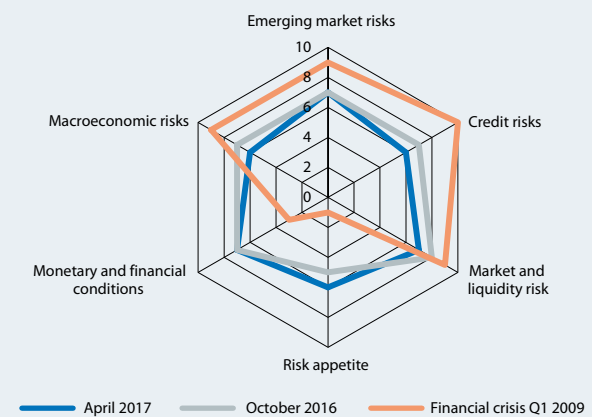
The IMF has also underlined the increasing vulnerability of the US corporate sector and the potential impact of some of the policies being considered by the Trump administration. Specifically, one of the measures mentioned in the report is the ambitious tax reform unveiled by President Trump during his electoral campaign, a first draft of which was presented at the end of April, notably the intention to cut the corporate tax from the current rate of 35% down to 15%. According to IMF estimates, all the fiscal policy measures planned by the Trump administration could considerably increase corporate earnings, providing a boost for capital expenditure.

But the IMF has also pointed out that the financial situation of the US corporate sector has deteriorated significantly over the past few years. This has been reflected in poorer asset quality, a rising share of rating downgrades in a number of industries and the elevated levels of leverage among S&P 500 firms, now close to a historic high. According to the IMF, all this points to a change in the US corporate earnings cycle, which might be heading for a slowdown. Such a slowdown, if it comes about, would occur in a context of increasing leverage and a higher level of debt servicing as a proportion of income which, in spite of low interest rates, is at its highest level since 2010.

Given this delicate environment, Trump's expansionary policies could actually have some unwelcome effects on the corporate sector. As the US economy is very close to full employment, a fiscal stimulus such as the one planned is likely to boost growth less than expected but might increase inflationary pressures. This, in turn, would force the Fed to raise the fed funds rate more quickly than expected, pushing up the cost of debt and thereby putting a significant number of companies under

pressure. The IMF estimates that around 20% of US firms currently have a low debt service capacity,¹ making them vulnerable to a sharper-than-expected tightening of financial conditions. This could lead to a substantial rise in corporate risk premiums. Nevertheless, it should be noted that a large number of the companies threatened by this situation come from just a few sectors, namely energy, real estate and utilities.

Global financial stability: risks and conditions



Source: CaixaBank Research, based on IMF data.

1. Debt service capacity is measured with the interest coverage ratio which is the ratio between earnings and interest expenses. Those companies with a ratio below two are in a vulnerable situation.

KEY INDICATORS

Interest rates (%)

	28-Apr	31-Mar	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Euro area					
ECB Refi	0.00	0.00	0	0.0	0.0
3-month Euribor	-0.33	-0.33	0	-1.0	-7.8
1-year Euribor	-0.12	-0.11	-1	-3.8	-10.8
1-year government bonds (Germany)	-0.73	-0.72	-1	7.1	-23.7
2-year government bonds (Germany)	-0.73	-0.74	1	3.6	-24.6
10-year government bonds (Germany)	0.32	0.33	-1	11.2	4.9
10-year government bonds (Spain)	1.65	1.67	-2	26.6	5.7
10-year spread (bps) ¹	133	134	-1	15.4	0.9
US					
Fed funds	1.00	1.00	0	25.0	50.0
3-month Libor	1.17	1.15	2	17.2	53.3
12-month Libor	1.77	1.80	-3	8.4	54.1
1-year government bonds	1.06	1.02	4	24.9	51.0
2-year government bonds	1.26	1.25	1	7.2	47.8
10-year government bonds	2.28	2.39	-11	-16.4	44.7

Spreads corporate bonds (bps)

	28-Apr	31-Mar	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	67	74	-8	-5.8	-6.2
Itraxx Financials Senior	74	89	-14	-19.1	-15.3
Itraxx Subordinated Financials	167	193	-25	-54.1	-34.3

Exchange rates

	28-Apr	31-Mar	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
\$/€	1.090	1.065	2.3	3.6	-4.9
¥/€	121.530	118.670	2.4	-1.2	-0.3
£/€	0.841	0.849	-0.8	-1.4	7.4
¥/\$	111.490	111.390	0.1	-4.7	4.7

Commodities

	28-Apr	31-Mar	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
CRB Commodity Index	424.5	431.0	-1.5	0.3	1.6
Brent (\$/barrel)	51.7	52.8	-2.1	-9.0	7.5
Gold (\$/ounce)	1,268.3	1,249.4	1.5	10.1	-1.9

Equity

	28-Apr	31-Mar	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	2,384.2	2,362.7	0.9	6.5	15.4
Eurostoxx 50 (euro area)	3,559.6	3,500.9	1.7	8.2	17.5
Ibex 35 (Spain)	10,715.8	10,462.9	2.4	14.6	18.7
Nikkei 225 (Japan)	19,196.7	18,909.3	1.5	0.9	15.2
MSCI Emerging	978.0	958.4	2.0	13.4	16.4
Nasdaq (USA)	6,047.6	5,911.7	2.3	12.3	26.6

Note: 1. Spread between the yields on Spanish and German 10-year bonds.

ECONOMIC OUTLOOK · A promising start to the year

The first few months of 2017 have started strongly.

Economic activity indicators for Q1 2017 suggest the acceleration in global growth, observed since the second half of 2016, should continue. Although most of the data available to date are qualitative in nature; i.e. based on consumer and company surveys, according to the historical relationship between soft and hard data, world growth should reach 3.4% in Q1 2017, 0.2 pp higher than in Q4 2016. The recovery in growth is also quite synchronised, affecting both advanced and emerging economies. The good start to the year has been accompanied by a notable rise in global inflation, up by 0.4 pp between Q4 2016 and Q1 2017. This is largely the result of the base effect of energy prices (oil is now 16% higher than a year ago).

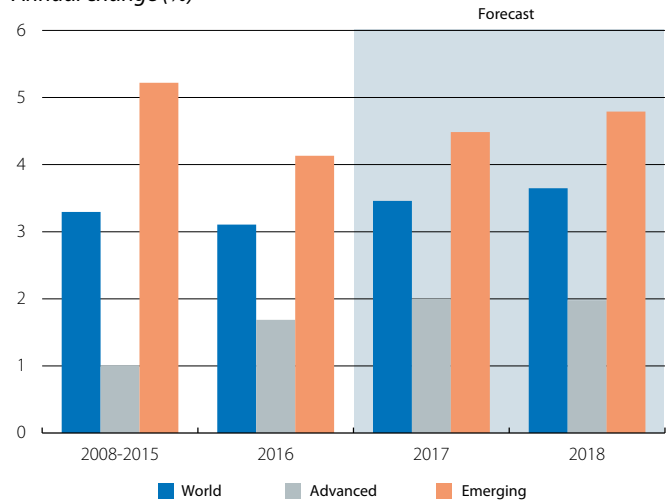
But the balance of risks still leans towards potentially less growth. In spite of the good start to the year, the future is not free from downside risks. Among those of a strictly economic nature are perhaps two potential threats: the rising level of debt in the world and the impact of tighter international financial conditions on those emerging economies more vulnerable to external factors. Political uncertainty also poses a threat (protectionism, populism and geopolitical risks). This two-sided diagnosis, combining a positive start to the year in growth terms but the presence of potentially high risks, is widely shared by analysts. For example, in its recent spring forecasts the IMF acknowledged the solid start to the year and raised its global growth forecast for 2017 (to 3.5%). According to the Fund, this is due to the advanced economies performing better than expected. Nevertheless, it has also upgraded its growth forecasts for emerging countries such as China and Russia. The downside risks noted by the IMF are those of a political nature, protectionism, the impact of the Fed's normalisation strategy on some emerging countries and China's debt.

UNITED STATES

A dip in growth in Q1 2017. In this quarter, GDP grew by 0.2% quarter-on-quarter compared with 0.5% in Q4 2016. In year-on-year terms, growth was 1.9%, similar to the previous figure of 2.0%. This loss of economic pace is mainly due to weaker private consumption and, to a lesser extent, a negative c. Investment increased strongly, however. For veteran observers, such a slowdown in growth is surprising as the monthly indicators available point to higher GDP growth. In fact, this paradox is due to two atypical circumstances, one in the US itself and the other more general in scope. The first is typical of the first quarter of every year in the US. As acknowledged by the country's statistics institute (BEA), the GDP series suffers from a seasonality problem which

World GDP

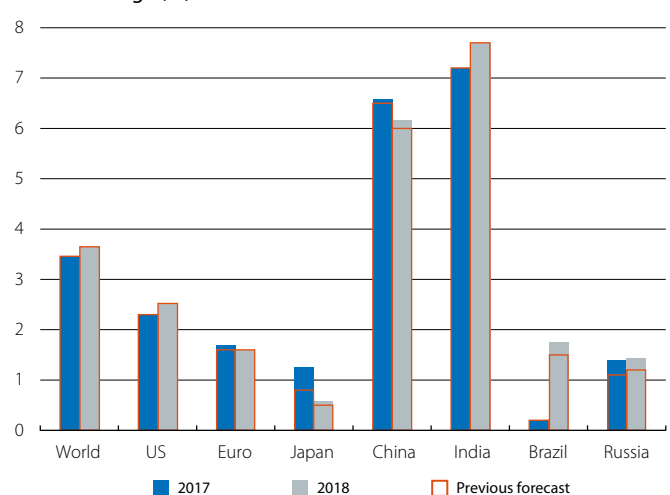
Annual change (%)



Source: CaixaBank Research.

IMF: GDP forecasts for 2017 and 2018

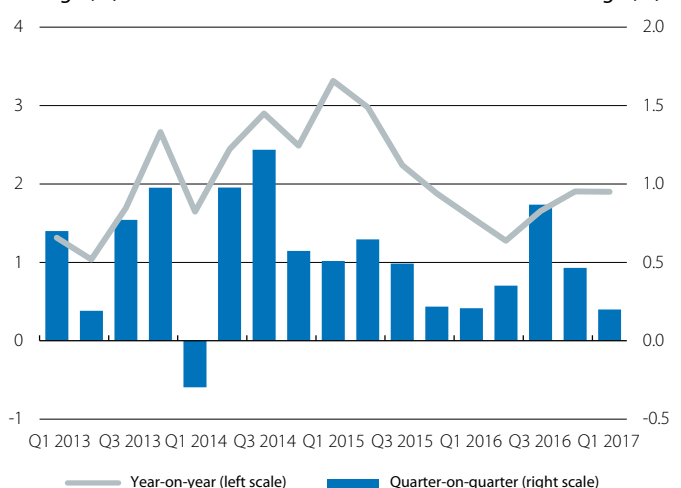
Annual change (%)



Source: CaixaBank Research, based on data from the IMF (WEO, April 2017).

US: GDP

Change (%)



Source: CaixaBank Research, based on BEA data.

makes it repeatedly lower in Q1 and higher in the next two quarters. But this seasonality glitch has been accompanied by another circumstance that sometimes occurs (and not just in the US), namely a discrepancy between sentiment data and real growth figures (known as the gap between hard and soft data). Soft indicators point to an upward trend that does not entirely coincide with actual GDP growth.

So what is the outlook for the coming quarters? In spite of the slowdown in growth seen in Q1, these atypical effects should fade over the next few quarters. CaixaBank Research expects growth to improve, essentially thanks to private consumption recovering from its dip, still supported by accommodative credit conditions and especially by a healthy labour market. In fact, 98,000 jobs were created in March. Although this figure is lower than in previous months, it is still significant given the mature phase of the US cycle. In fact, it is very close to the monthly job creation rate which the Fed Chairman, Janet Yellen, deems to be the equilibrium level under full employment. The unemployment rate fell slightly to 4.5% and wages rose by a considerable 2.7% year-on-year.

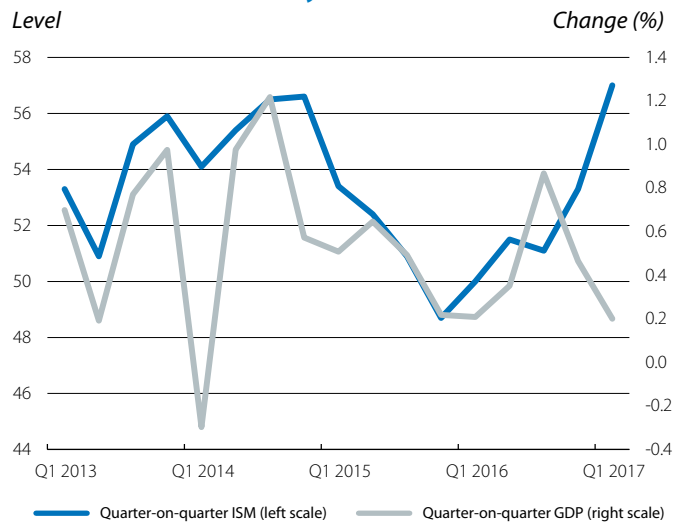
Corporate and residential expenditure will boost the economic expansion. In addition to these factors supporting consumption, the solid performance by the real estate sector and improved corporate capital expenditure will be an additional boost for growth. In short, should the US scenario turn out as we expect, its economy will grow by 2.2% in 2017 compared with 1.6% in 2016. Circumstances will be quite different in 2018, however, as the new administration's expansionary fiscal policy, which should start to take shape over the coming months, will stimulate growth. For the time being, the White House has presented its proposal to cut corporate tax (from 35% to 15%), as well as personal income tax, especially for higher income brackets. These favourable forecasts should be taken with some caution, however, as there are still significant downside risks to the macroeconomic situation, due to uncertainty regarding the US government's policies (fiscal stimulus, protectionism and diplomatic tension), as well as its capacity to actually implement them.

Given this complex context, the Fed is expected to maintain the stance shown in its last few meetings. CaixaBank Research predicts a monetary policy scenario with two further hikes in 2017 (June and September), an announcement that the Fed will gradually stop reinvesting maturing assets in Q4 2017 and three more hikes in 2018. March's surprisingly low inflation figure should be seen as a temporary phenomenon that does not alter the underlying trend in prices.

EMERGING ECONOMIES

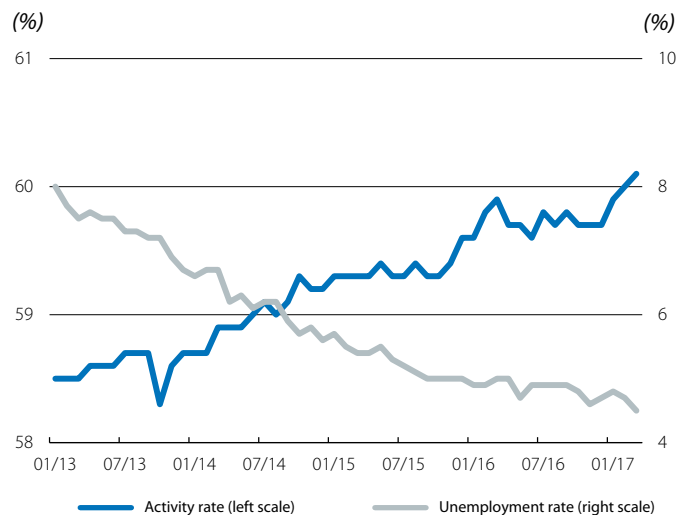
Increasing economic activity in the emerging economies. Although doubts regarding the possible discrepancy between hard and soft data could also affect the emerging countries and these should therefore be interpreted with caution,

US: GDP and ISM activity indicator



Source: CaixaBank Research, based on data from the ISM and the BEA.

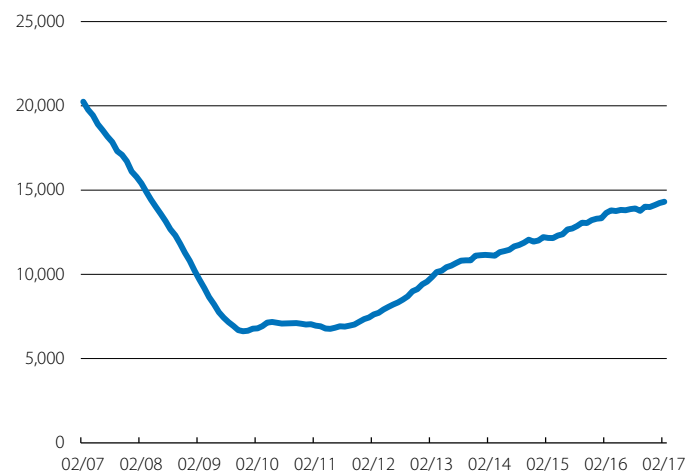
US: labour market



Source: CaixaBank Research, based on data from the Bureau of Labor Statistics.

US: housing starts

Cumulative over 12 months (thousands)



Source: CaixaBank Research, based on data from the US Census Bureau.

economic sentiment indicators point to growth in activity speeding up in almost all emerging economies in Q1 2017. In line with this economic improvement, capital inflows to emerging economies have continued to recover and there has even been a notable improvement in capital flows to China.

China's economy performs surprisingly well but risks are still high. Growth in Q1 2017 was higher than expected, reaching 6.9% year-on-year, 0.1 pp above the figure in Q4 2016. CaixaBank Research has therefore raised its growth forecast for 2017 from 6.4% to 6.6% (in line with the target announced by the National People's Congress last March), and from 5.9% to 6.1% for 2018. But this slightly better scenario does not lessen doubts regarding a large number of risks (excessive corporate debt, shadow banking, real estate bubble, etc.). Inflation is still low, at 0.9% in March (0.8% in February) due to falling food prices.

Brazil and Russia, two different ways of going through a recession. Brazil's data suggest the country is taking some time to fully exit its deep recession in 2014-2016. The country's poor performance is accompanied by a sharper drop in inflation than expected (due to the combined effect of a reduction in food and government regulated prices) and good prospects for Social Security reform (improving the sustainability of the pension system). In Russia, meanwhile, GDP growth was 0.3% year-on-year in Q4 2016, considerably higher than expected (the annual decrease in GDP was 0.2%, clearly lower than the -2.8% posted in 2015). But in spite of this improvement in short-term prospects at the end of 2016, the country's medium-term outlook is not good (due to a combination of sanctions, geopolitical uncertainty and dependence on oil and gas).

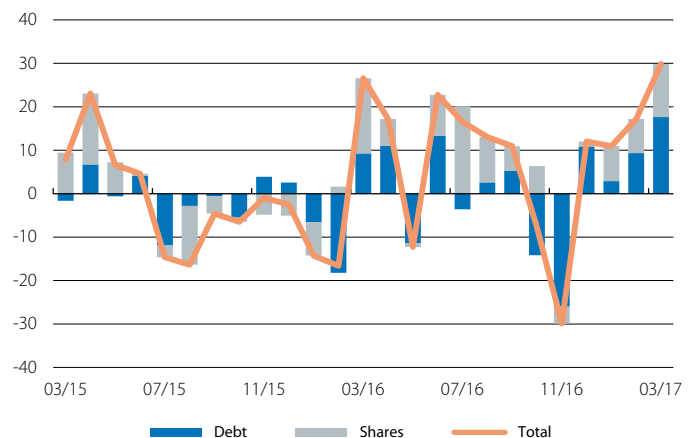
Mexican growth outperforms expectations in Q1 2017.

Although the ultimate impact of the new US policy on Mexico is still uncertain (immigration and the NAFTA revision), Q1 growth was a dynamic 0.6% quarter-on-quarter (2.5% year-on-year), higher than expected. Following the same positive tone, Moody's decided to maintain its credit rating for the country.

Turkey enters unknown territory (institutionally). GDP grew by 3.5% year-on-year in Q4 2016, much higher than expected, bringing growth in 2016 to 2.9%. Inflation was also surprisingly high, in this case in Q1 2017, due to the combined increase in energy and food prices. But what has grabbed most attention is the country's constitutional referendum, whose approval of the new Magna Carta has reduced political uncertainty in the short term but marks the start of a period of relatively unprecedented institutional change.

Capital inflows towards emerging countries *

(USD billion)



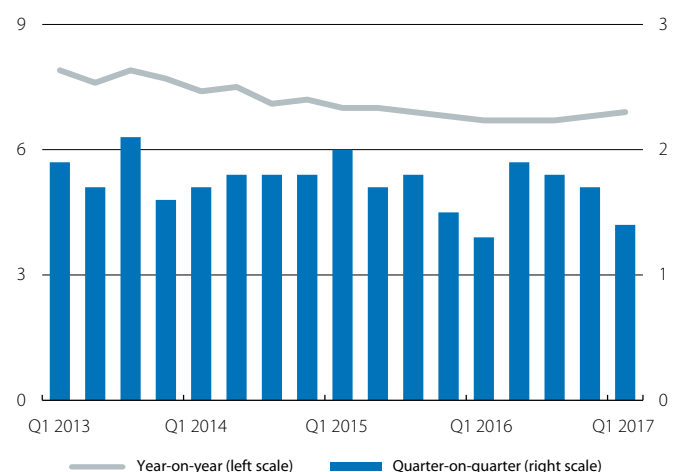
Note: * Portfolio inflows (debt and stock). Countries included: Brazil, Chile, China, India, Indonesia, Mexico, Poland, Russia, South Africa and Turkey.

Source: CaixaBank Research, based on data from the IIF.

China: GDP

Change (%)

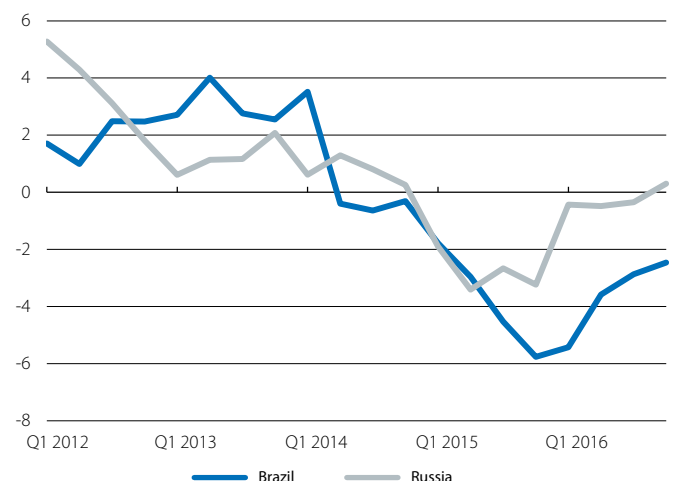
Change (%)



Source: CaixaBank Research, based on data from the Chinese National Statistics Office.

Brazil and Russia: GDP

Year-on-year change (%)



Source: CaixaBank Research, based on data from the national statistics offices.

FOCUS · Emerging debt and currency mismatch: a combination to watch closely

At the end of 2007, private debt (of non-financial corporations and households) for the benchmark emerging countries as a whole stood at 85% of GDP. By the end of 2016, this figure had multiplied by 1.5, reaching 134.8%. This increase in private leveraging has occurred particularly through debt held in foreign currencies with companies taking advantage of accommodative international financial conditions to finance themselves in «strong currencies». On average, at year-end 2016 44% of emerging corporate debt was in a foreign currency.¹

So is this a problem? Providing there is no extensive currency mismatch, no. Such a mismatch occurs when an economic agent has assets and liabilities, or collects and makes payments, in different currencies. This problem tends to arise in emerging economies when the local currency depreciates substantially, making it more expensive for such countries to meet their loan repayments or to pay their suppliers in a foreign currency. In general, a good way of estimating the size of a currency mismatch is by adding together the net foreign liabilities held in another currency by banks, firms and households and dividing this by exports. The aim is to identify whether international debt is sufficiently «hedged» by foreign assets in another currency or by an appropriate inflow of foreign capital.

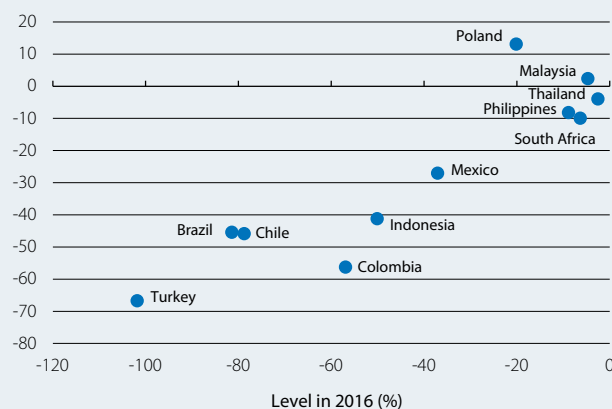
Using a variation of the aforementioned calculation, we can see that, at year-end 2016, some emerging countries were experiencing a significant currency mismatch (see the enclosed chart). Specifically, there was a large mismatch in Turkey (whose net foreign liabilities exceeded its revenue from exports) and a somewhat smaller but still significant mismatch in Brazil, Chile and Colombia.² This currently high level results from a sharp increase in currency mismatches in these four countries since 2008. Such figures challenge a commonly held belief that commodity exports benefit from «natural» hedging, since the aforementioned South American countries are international commodity producers but are nonetheless suffering from currency mismatches.

At this point in the discussion, the tendency is to tone down the alarm bells by noting that companies can hedge their exchange rate risk through financial instruments. However, the use of financial hedging could actually be less prevalent than expected, even in those firms potentially affected by a currency mismatch. For instance, a recent study by Brazil's Central Bank noted that 35.5% of all corporate debt in foreign currencies was held by exporters; 17.5% by non-exporters with financial hedging and the remaining 47% was not hedged at all, not by «natural» or financial means.

In short, the risk is there and if little attention is paid to such a threat it is probably because most emerging currencies have appreciated considerably this year so far (or even earlier, in cases such as the Brazilian real). However, should this trend reverse, and to paraphrase Warren Buffett, we will see who has been swimming naked once the tide goes out.

Emerging economies: currency mismatch *

Difference between 2008 and 2016 **
(pp)



Notes: * Calculated as the total net foreign assets of banks, firms and households plus international corporate debt divided by exports of goods and services. Interpretation: the larger the negative number, the greater the currency mismatch.

** For Poland, the difference between 2011 and 2016.

Source: CaixaBank Research, based on data from Oxford Economics.

1. It is much less normal for households to resort to financing in foreign currencies. Nevertheless, Poland is an exception in that 43% of its household debt is in a foreign currency.

2. The previous mismatch has been calculated by adding together three groups: i) net foreign assets of national banks; ii) the difference between international bank loans to households and non-financial firms less their deposits at these banks, and iii) international debt issuances by non-financial firms. This figure has then been divided by the exports of goods and services. When there is a mismatch, the quotient is negative and, the greater the mismatch, the more negative the figure. This is a similar measure to the one calculated by the Bank for International Settlements (see Chui, M. *et al.*, 2016, «A new dimension to currency mismatches in the emerging markets: non-financial companies», BIS Working Papers, 550).

FOCUS · Growth is speeding up in the emerging countries, but not inflation

The emerging countries have driven global growth over the past few years. While the advanced economies entered a recession in 2009 and have since seen a relatively modest recovery, the emerging economies have enjoyed a notable rate of GDP growth, although this has now fallen from 7.4% in 2010 to 4.1% in 2016. As emerging growth has gradually slowed down, emerging inflation has also tended to fall moderately, going from 5.6% in 2010 to 4.4% last year. Now that the rate of GDP growth in the emerging countries looks like accelerating over the coming years, will inflation follow suit?

Not according to the IMF forecasts. Although growth is expected to speed up considerably over the coming years, possibly reaching a rate of 5.0% by 2019, the institution predicts that emerging inflation will continue to fall. A brief review of both the cyclical and underlying aspects influencing the trend in inflation can throw some light on the conditioning factors for future inflation in the emerging countries.

One of the most widely used tools by economists to analyse long-term inflation throughout the economic cycle is the Phillips curve. This relates an economy's inflation to its output gap (the difference between actual and potential GDP). We might suppose that inflation tends to be stable when actual GDP is the same as potential, while deviations in the actual GDP rate above the potential tend to push up inflation (and push it down in the opposite case). However, since the beginning of the new millennium this relationship appears to have weakened in the emerging economies (see the second chart). Although the output gap for the emerging countries as a whole has gradually narrowed over the past few years, inflation has failed to pick up.

Globalisation is one of the reasons for inflation becoming less sensitive to the economic cycle. The rise in international trade is providing access to an increasingly large market of goods. This means that prices are tending to converge globally, raising the importance of the global output gap in detriment to the domestic in terms of price trends.¹

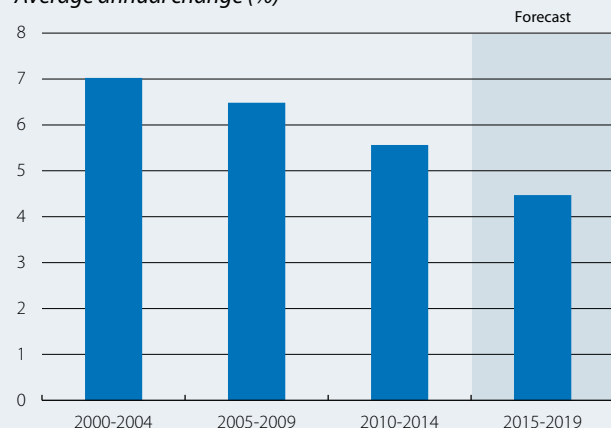
Another fundamental factor behind inflation's reduced cyclical sensitivity in the emerging countries and also its downward slide over the past few decades is the greater independence of emerging central banks and their inflation targeting. The improved credibility of emerging central banks has also helped to lower and stabilise the

inflation expectations of agents. This also explains why inflation now tends to fluctuate less throughout the economic cycle, as there are fewer second-round effects.²

Finally, to understand the moderate inflation prospects for the emerging countries we must also look at two underlying global factors that affect both the emerging and the advanced economies. First, current forecasts point to commodity prices, and especially oil, following a moderate upward trend over the coming years. Second, the development of new technologies, known as the Fourth Industrial Revolution, could help to improve productivity which would also decrease inflationary pressures.

Inflation in the emerging countries

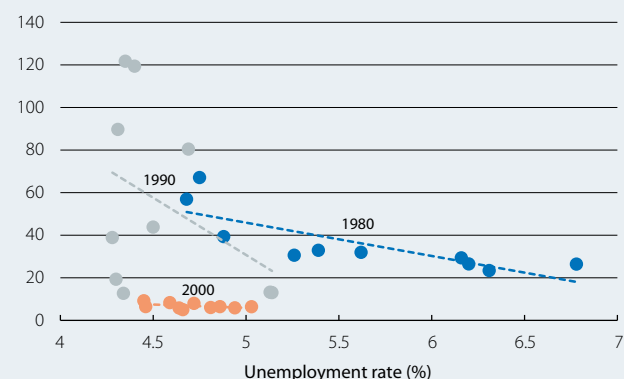
Average annual change (%)



Source: CaixaBank Research, based on IMF data.

Phillips curve for the emerging countries

Inflation (%)



Note: Average inflation and unemployment rate for emerging countries as a whole at each point in time. Annual data.

Source: CaixaBank Research, based on data from the IMF and Oxford Economics.

1. See the article «Growth without inflation: what does the Phillips curve tell us?» in the Dossier of MR02/2015.

2. Second-round effects occur when agents alter their inflation expectations and, in turn, this adjustment affects the trend in current prices. For instance, it can influence wage negotiations between companies and their employees.

KEY INDICATORS

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

UNITED STATES

	2015	2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17
Activity									
Real GDP	2.6	1.6	1.6	1.3	1.7	2.0	–	1.9	–
Retail sales (excluding cars and petrol)	4.3	3.8	3.9	4.3	3.4	3.4	4.5	3.4	3.6
Consumer confidence (value)	98.0	99.8	96.0	94.8	100.7	107.8	111.6	116.1	124.9
Industrial production	–0.7	–1.2	–2.2	–1.3	–1.2	–0.1	0.0	0.3	1.5
Manufacturing activity index (ISM) (value)	51.4	51.5	50.0	51.5	51.1	53.3	56.0	57.7	57.2
Housing starts (thousands)	1,108	1,176	1,151	1,159	1,145	1,248	1,241	1,303	1,215
Case-Shiller home price index (value)	179	189	186	188	188	192	195	197	...
Unemployment rate (% lab. force)	5.3	4.9	4.9	4.9	4.9	4.7	4.8	4.7	4.5
Employment-population ratio (% pop. > 16 years)	59.4	59.7	59.8	59.7	59.8	59.7	59.9	60.0	60.1
Trade balance ¹ (% GDP)	–2.8	–2.7	–2.8	–2.7	–2.7	–2.7	–2.7	–2.7	...
Prices									
Consumer prices	0.1	1.3	1.1	1.0	1.1	1.8	2.5	2.7	2.4
Core consumer prices	1.8	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.0

Note: 1. Cumulative figure over last 12 months.

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

JAPAN

	2015	2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17
Activity									
Real GDP	1.2	1.0	0.4	0.9	1.1	1.6	–	...	–
Consumer confidence (value)	41.3	41.7	41.3	41.2	42.1	42.2	43.1	43.2	43.9
Industrial production	–1.2	–0.2	–3.1	–1.5	1.0	2.8	1.5	6.7	3.3
Business activity index (Tankan) (value)	12.8	7.0	6.0	6.0	6.0	10.0	–	12.0	–
Unemployment rate (% lab. force)	3.4	3.1	3.2	3.2	3.0	3.1	3.0	2.8	2.8
Trade balance ¹ (% GDP)	–0.5	0.7	–0.2	0.1	0.5	0.7	0.9	1.0	1.0
Prices									
Consumer prices	0.8	–0.1	0.0	–0.3	–0.5	0.3	0.5	0.2	0.2
Core consumer prices	1.0	0.4	0.6	0.6	0.2	0.1	0.1	–0.1	–0.1

Note: 1. Cumulative figure over last 12 months.

Source: CaixaBank Research, based on data from the Communications Department, Bank of Japan and Thomson Reuters Datastream.

CHINA

	2015	2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17
Activity									
Real GDP	6.9	6.7	6.7	6.7	6.7	6.8	–	6.9	–
Retail sales	10.7	10.4	10.3	10.2	10.5	10.6	9.5	9.5	11.0
Industrial production	6.1	6.0	5.9	6.1	6.1	6.1	6.3	6.3	0.0
PMI manufacturing (value)	49.9	50.3	49.5	50.1	50.2	51.4	51.3	51.6	51.8
Foreign sector									
Trade balance ¹ (value)	608	513	588	576	554	513	508	470	469
Exports	–2.3	–8.3	–14.3	–7.5	–7.0	–5.2	8.0	–1.5	16.1
Imports	–14.2	–5.7	–14.1	–7.1	–4.7	2.1	16.7	38.0	20.2
Prices									
Consumer prices	1.4	2.0	2.1	2.1	1.7	2.2	2.5	0.8	0.9
Official interest rate ² (value)	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35	4.35
Renminbi per dollar (value)	6.3	6.6	6.5	6.5	6.7	6.8	6.9	6.9	6.9

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

Source: CaixaBank Research, based on data from the National Bureau of Statistics of China and Thomson Reuters Datastream.

ECONOMIC OUTLOOK · The euro area economy remains strong despite the political risks

The euro area's economic growth gains traction in spite of uncertainty. After several years of moderate but uneven growth in the euro area, the cyclical recovery has become stronger in most of its economies. CaixaBank Research forecasts point to euro area growth of 1.7%, both for 2017 and 2018. The IMF forecasts are along the same lines: 1.7% growth in 2017 and 1.6% in 2018. This is slightly higher for most euro area economies than its January forecast. Domestic demand is getting stronger in the euro area, supported by private consumption after the gradual recovery in the labour market, as well as increased corporate capital expenditure. The foreign sector is also improving, boosted by stronger global demand and a weaker euro. Some of the political risks that had threatened the recovery at the start of 2017 are now starting to fade (the outcome of the Dutch elections and the first round in France, and less support for Germany's extreme right-wing). The Eurogroup has also reached a preliminary agreement with Greece for the upcoming payments from the third bail-out programme and an orderly start is expected for the Brexit negotiations. However, several core countries from the euro area are also about to go to the polls, the agreement with Greece does not include measures for long-term debt relief and the Brexit negotiations are likely to be long and complex. On 29 April the EU-27 countries unanimously established not only their negotiating position with the UK but also how these negotiations will take place. The second phase discussing the future basis of relations between the UK and the EU-27 will not begin until the following have been clarified: the impact of Brexit on citizens and companies and all the country's rights and obligations as a former EU member.

Economic activity indicators point to higher GDP growth in the first half of 2017. Pending the GDP growth figure for Q1 in the euro area, most economic sentiment indicators suggest growth has speeded up. The composite business sentiment index (PMI) for the euro area increased in the first four months of the year, up to 56.7 points in April, clearly in the expansionary zone (above 50 points) and its highest level since 2011. The economic sentiment index (ESI) reached 109.6 points in April, its highest since August 2007. This growth in economic activity indicators was widespread among the largest economies in the euro area. Regarding other hard data for the euro area, industrial production increased by 1.2% year-on-year in February, the highest rates being Spain with 2.5%, Italy with 2.2% and Germany with 1.5%. In France, a country whose Q1 GDP figure is already available, economic activity grew by 0.3% quarter-on-quarter, slightly lower than the 0.5% in Q4 2016 (the latter having been upgraded by 0.1 pp). This slower rate was partly due to a seasonal slowdown in consumption (for instance, less energy consumption because

Euro area: IMF forecasts

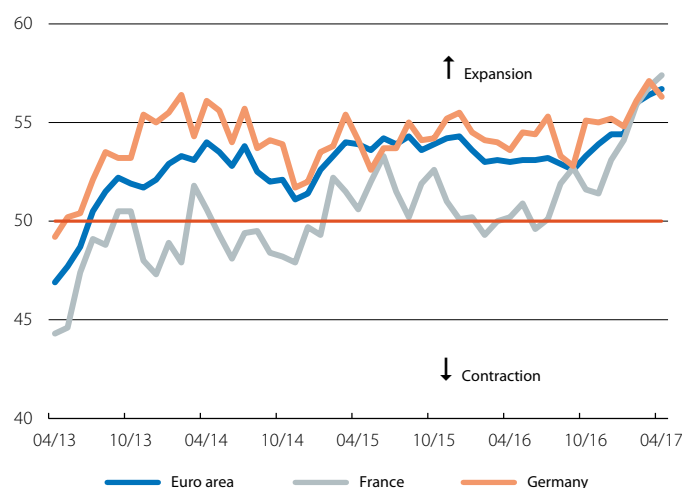
Annual change (%)

	2016	GDP forecast		Change compared with January 2016's forecast	
		2017	2018	2017	2018
Euro area	1.7	1.7	1.6	▲ 0.1	= 0.0
Germany	1.8	1.6	1.5	▲ 0.1	= 0.0
France	1.2	1.4	1.6	▲ 0.1	= 0.0
Italy	0.9	0.8	0.8	= 0.0	▲ 0.3
Spain	3.2	2.6	2.1	▲ 0.3	= 0.0

Source: CaixaBank Research, based on IMF data (WEO, April 2017).

PMI composite activity indicator

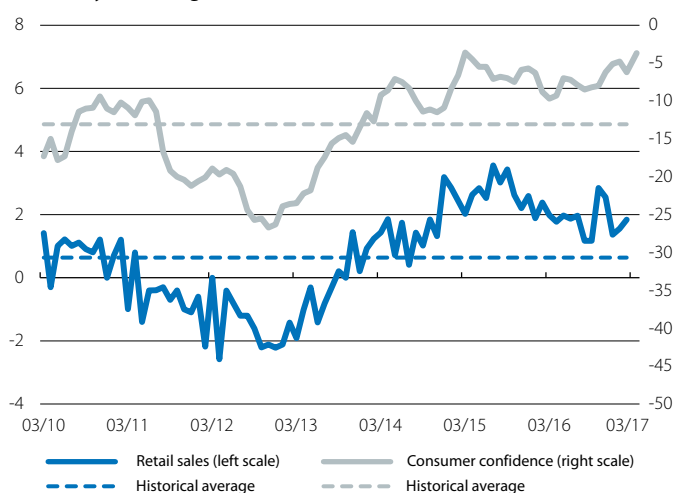
Level



Source: CaixaBank Research, based on Markit data.

Euro area: consumption indicators

Year-on-year change (%)



Source: CaixaBank Research, based on Eurostat data.

of the mild winter) and a drop in exports (particularly transport materials). April's indicators suggest France's economic activity has rallied slightly in Q2.

Household consumption is still strong. Retail sales in the euro area rose by 1.8% year-on-year in February (1.6% in January), a clearly faster rate than the average for the past few years. Its consumer confidence index increased during the first four months of the year to -3.6 points in April, the highest since March 2015. Positive private consumption is supporting the euro area's solid growth, a pattern that should continue, helped by the better labour market and accommodative financial conditions over the next few months.

Euro area inflation is gradually getting back to normal thanks to increasing economic activity. Headline inflation in the euro area, measured by the harmonised index of consumer prices (HICP), climbed to 1.9% in April. This figure is 0.4 pp higher than the previous month, thanks to the sharp upswing in service prices due to the calendar effect of Easter, which fell in March in 2016. Beyond this one-off factor, we expect headline and core inflation to increase gradually over the coming months. Growth in economic activity will push up inflation, boosted by the ECB maintaining its rate of bond purchases (EUR 60 billion per month) until December 2017.

Financial conditions remain accommodative. According to the bank lending survey for Q1 2017, over the past six months the ECB's purchase programme has improved banks' liquidity position and financing conditions, although reducing their profits. According to the same survey, and given the relaxed monetary environment, demand for credit continued to rise in all segments in Q1 2017. Credit institutions expect this growth to continue in Q2 2017. Banks also relaxed their criteria to grant loans, both to companies and households, particularly in Germany. All this suggests financial conditions will continue to support growth in domestic demand.

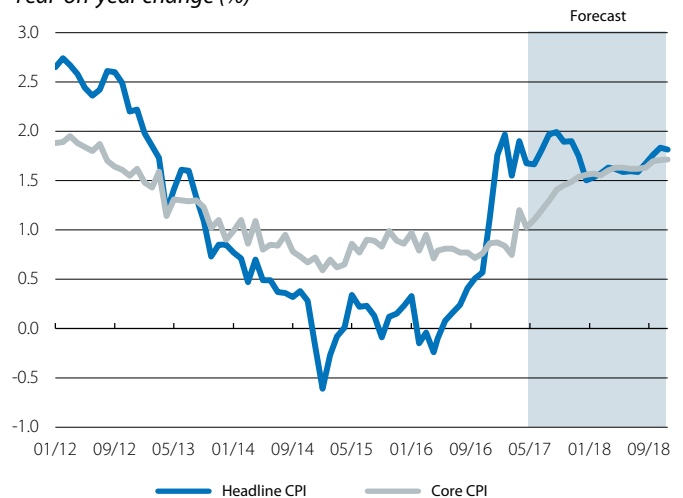
The euro area's fiscal adjustment continued gradually in 2016. In 2016 the euro area's average budget deficit fell to 1.5% of GDP, 0.6 pp lower than in 2015 (2.1%). Public debt in the euro area as a whole reached 89.2% of GDP in 2016, a high level although almost 1 pp lower than 2015's figure (90.3% of GDP). But this gradual reduction in public debt hides big differences between countries. In high debt countries such as Italy, Portugal, Belgium, Spain and France, public debt has remained almost stable or even increased. It is important for these countries to decisively reduce their debt to more sustainable levels before the next cycle of economic crisis.

PORTUGAL

The Portuguese economy is more dynamic in the first few months of the year. After achieving 1.4% growth year-on-year in 2016, sentiment indicators suggest economic activity has accelerated in 2017. April brought good consumer confidence data, at an all-time high, as well as a good economic sentiment index, posting its highest figure since 2001. This

Euro area: Harmonised CPI

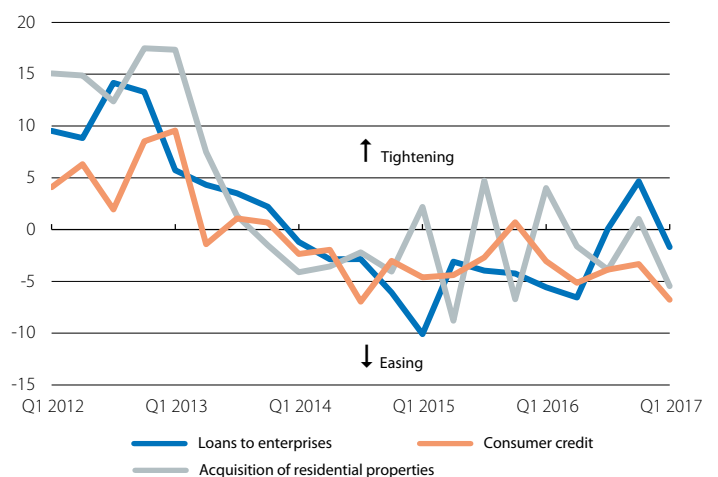
Year-on-year change (%)



Source: CaixaBank Research, based on Eurostat data.

Euro area: bank lending survey

Banks with tougher (+) or easier (-) criteria for approving loans (net %)

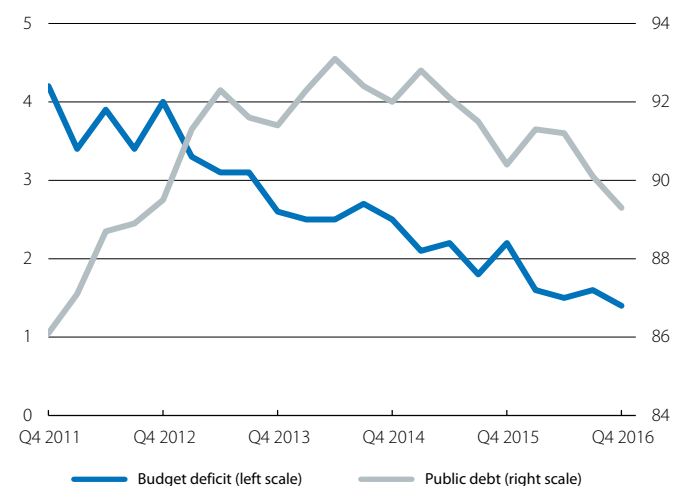


Source: CaixaBank Research, based on data from the ECB.

Euro area: budget deficit and public debt

(% of GDP)

(% of GDP)



Source: CaixaBank Research, based on Eurostat data.

improvement led the Bank of Portugal to revise up its GDP forecasts to 1.8% in 2017 and 1.7% in 2018 (+0.4 pp and +0.2 pp higher than the December 2016 forecasts, respectively). Portugal is also enjoying its most balanced economic growth since 2014. Private consumption will continue to grow at a similar rate in 2017, helped by the gradual improvement in the labour market, while public consumption will see subdued growth due to fiscal adjustment. Investment should also come to the fore in 2017 as uncertainty fades thanks to favourable financing conditions and more European funds available for investment. External demand will continue strong with a notable increase in exports, helping to maintain the country's trade surplus.

The competitiveness gains made by Portuguese exporters have led to significant improvement, on a par with their European neighbours. The competitiveness lost before the crisis has been recovered, partly thanks to several years of wage moderation. This has boosted exports, which have gone from representing 27% of GDP in 2005 to around 44% in 2016. This improvement has also occurred across a more varied range of sectors and towards a larger number of destinations. Exports should continue to grow at a strong rate in 2017, supported by increasing demand from Portugal's major trading partners. The first data available for the year support this: exports of goods rose by approximately 14% year-on-year over the first two-month period, especially due to more trade with countries outside the EU.

Portugal's economic recovery is helping its labour market.

The unemployment rate has fallen sharply since 2013 (by around 2 pp each year), supported partly by the ambitious labour reforms implemented since 2011. In February unemployment fell from 10% to 9.9% and, according to the provisional estimate by Portugal's statistics institute, it will have reached 9.8% by March. Jobs are also being created at a good pace (2.8% year-on-year in February). We expect the labour market to go on improving in 2017 and 2018 as the country's economy recovers. Not everyone is benefitting to the same degree, however. The youth unemployment rate is much higher (24.4% in February) and more than half the unemployed are long-term (over one year without work).

Portugal: macroeconomic forecasts by the Bank of Portugal

Year-on-year change (%)

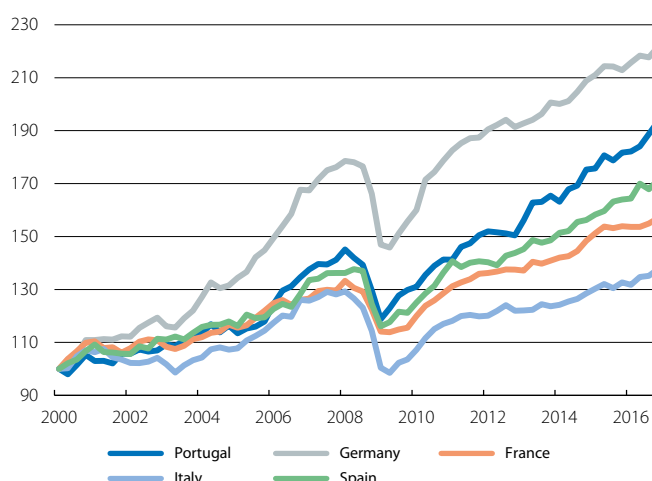
	2016	Forecasts		
		2017	2018	2019
GDP	1.4	1.8	1.7	1.6
Private consumption	2.3	2.1	1.4	1.4
Public consumption	0.8	0.2	0.5	0.2
Investment	-0.3	6.8	5.0	4.8
Exports	4.4	6.0	4.8	4.5
Imports	4.4	7.3	4.8	4.7
Employment	1.6	1.6	1.0	1.1
Unemployment rate *	11.1	9.9	9.0	7.9
Current account **	2.2	1.4	1.3	1.4
Inflation (HICP)	0.6	1.6	1.5	1.5

Notes: * Percentage of the labour force. ** As % of GDP.

Source: CaixaBank Research, based on data from the Bank of Portugal.

Exports of goods and services

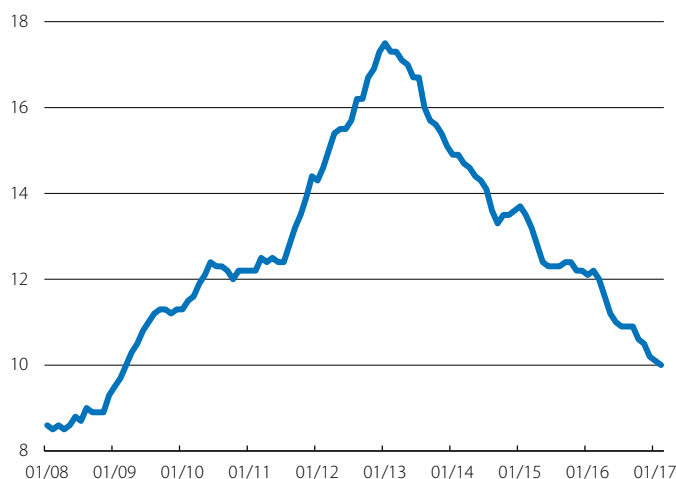
Index (100 = Q1 2000)



Source: CaixaBank Research, based on data from DESTATIS, INE, INE Portugal, INSEE and ISTAT.

Portugal: unemployment rate

(% of the labour force)



Source: CaixaBank Research, based on data from INE Portugal.

FOCUS · What economy is awaiting the next President of France?

France's new President will inherit an economy which, in terms of economic activity, has recovered from the financial crisis and whose GDP, in 2016, was 4% higher than in 2008. However, real GDP growth over the past few years has been modest,¹ clearly below other advanced economies (see the first chart). The outlook is not very promising for 2017-2018 either: the consensus of analysts predict growth to stand at around 1.3%. Moreover, although reducing the unemployment was one of the priorities of the former President, François Hollande, the unemployment rate is still high (10%), especially among the young (24%), while job creation remains sluggish (0.7% annually).

This lack of economic vigour reflects a lower productivity growth,² largely due to significant structural rigidities. The country has a relatively inflexible labour market, a high tax burden,³ and complex regulations which act as a barrier to corporate investment and growth.

Over the past few years, some progress has been made to tackle these rigidities and increase the dynamism of the economy. For instance, the labour market has been reformed, by clarifying the legal definition of dismissal for economic reasons, reinforcing collective bargaining at the level of company and sector, and improving training for the unemployed. Efforts have also been made⁴ to ease the tax burden and boost competitiveness by reducing companies' Social Security contributions.⁵ The Macron Law of 2015 of market liberalisation was aimed at encouraging business by increasing Sunday opening times and liberalising various regulated professions.

Nevertheless, although these reforms were going in the right direction, their impact seems to have been limited. Therefore, France still requires an ambitious agenda of reforms. One of the priorities is to increase the rate of job creation in the private sector. To do so, the main international organisations believe it is important to reduce the labour market's excessive segmentation, which impedes labour factor mobility, as well as simplifying the labour legislation.

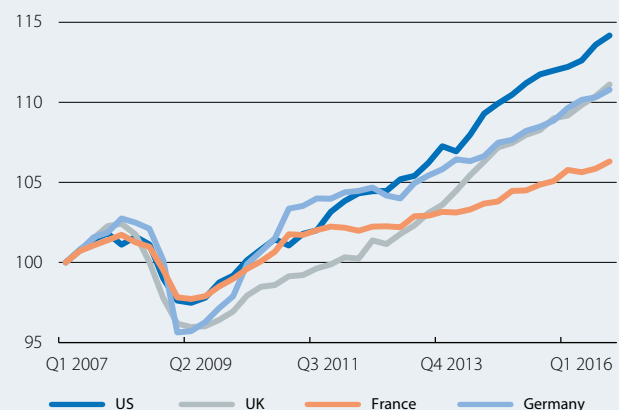
1. Average growth between 2012 and 2016 was 0.8%.
2. Between 2010 and 2016, labour productivity, calculated as real GDP per hour worked, grew by 1.0% on average (compared with 2% in 2000-2006), while total factor productivity grew by 0.5% (compared with 1.2% in 2000-2006).
3. The tax burden is 47% of GDP, compared with 40% on average in the euro area.
4. As per the *Pacte de responsabilité et de solidarité* and the CICE (Crédit d'impôt pour la compétitivité et l'emploi).
5. The tax wedge on labour (taxes on labour as a percentage of all labour costs) in France (48%) is the fifth highest of OECD countries.

Another priority is the consolidation of public finances. Although the budget deficit has fallen from 7.2% of GDP in 2009 to 3.4% in 2016, public debt is close to 100% of GDP, which makes the French economy vulnerable to any changes in investor sentiment and higher interest rates. Improving the government's efficiency could significantly help given the high level of public spending, which is far above the euro area's average (57% of GDP compared with 47%).

Finally, the French economy would also greatly benefit from an improvement in the business environment and a lowering of the red tape to start a business. For example, in the 2017 World Bank Doing Business report, France ranked 29th, far below other European countries such as Germany and the UK, and also behind Poland and Portugal.

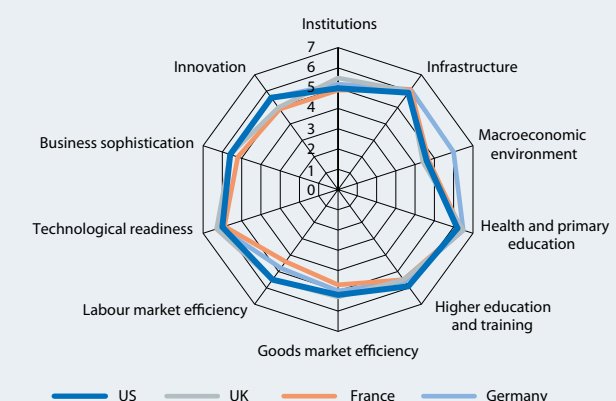
GDP in real terms

Index (100 = Q1 2007)



Source: CaixaBank Research, based on data from Thomson Reuters Datastream.

World Economic Forum competitiveness index



Note: Index between 1 and 7. A higher score indicates greater competitiveness.

Source: CaixaBank Research, based on data from the World Economic Forum Global Competitiveness Index (2016-2017).

FOCUS · The productivity gap between the euro area and the US: a sectoral analysis

Without a doubt, one of the biggest challenges the euro area faces is how to increase its productivity growth. As can be seen in the first chart, it has been relatively weak over the past few years. Between 1995 and 2014, annualised productivity growth in the euro area was 0.7 pp below the rate in the US.

A breakdown of the euro area's trend in productivity between core and periphery countries reveals three patterns. First, the trend differs greatly between core and peripheral countries. Second, and as would be expected, core countries have outperformed the trend for the euro area as a whole, albeit still far from the rate achieved by the US. Third, the trend in countries on the periphery of Europe has been very weak. Annualised productivity growth was just 0.5% for this group.

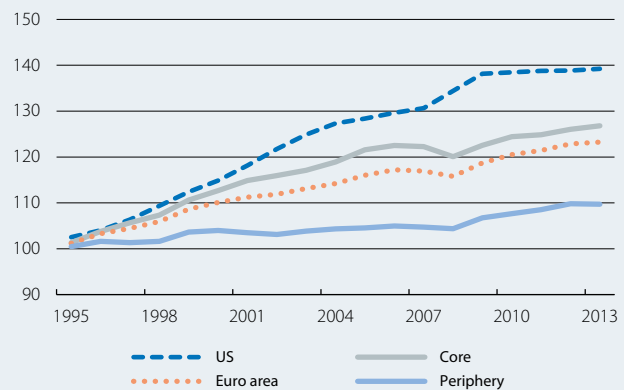
When we take a closer look at the pre-crisis productivity trend in different economies and break it down by sector, our conclusions are not very promising for the core and the euro area. For each sector, even if we choose the most productive country of the different euro area countries, its productivity only equals the trend observed for the US as a whole (see the second chart). In other words, and using the analogy of a school class in which each subject is a sector and the pupils are the different countries, the top European pupil from each subject only manages to come up to the average standard of a US pupil.¹

Finally, looking at the trend in productivity in the periphery countries, the table enclosed shows that, between 1995 and 2014, productivity grew by 0.6 pp less, in annualised terms, than in the core countries. This gap is particularly large in the sectors of tourism, retail trade and transport, as well as telecommunications. Nevertheless, there has been a remarkable change in trend since the economic crisis. While the pre-crisis gap in productivity growth between the periphery and core countries was -1.2 pp, in the post-crisis period productivity growth was slightly higher in Europe's periphery. But it is still too soon to claim victory since part of this improvement in productivity is due to the considerable job losses suffered in the periphery countries during the crisis. We will therefore have to keep a close eye on this change in trend to see whether it continues during the years of economic recovery. Thanks to the structural reforms carried out by the periphery countries, there are reasons to be relatively optimistic.

1. EU Klems only provides data comparable with the US up to 2007.

GDP per hour worked by region *

Index (100 = 1995)

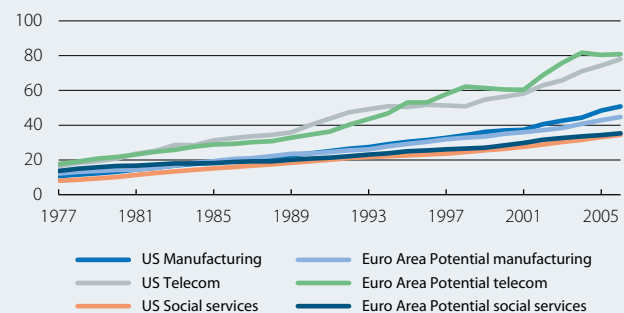


Note: * The core is the weighted average for Germany, France and the Netherlands while the periphery is made up of Spain and Italy. GDP at constant prices.

Source: CaixaBank Research, based on OECD data.

Gross value added per hour worked by sector *

(Euros by PPP) **



Notes: * The potential from the euro area in each sector corresponds to the maximum productivity for Germany, the Netherlands, France, Italy and Spain in each period.

** Gross value added adjusted by purchasing power parity.

Source: CaixaBank Research, based on data from EU KLEMS.

Gap in annualised productivity growth * of the periphery compared with the core ** (pp)

	1995-2007	2008-2014	1995-2014
Agriculture, mining and fishing	0.4	1.5	0.7
Manufacturing	-2.1	0.8	-0.7
Construction and supplies	-2.8	2.7	-0.4
Telecommunications	-2.2	0.2	-1.0
Tourism, retail trade and transport	-2.5	0.0	-1.3
Financial services	2.2	-1.4	0.6
Social services	-0.5	-0.3	-0.4
Total	-1.2	0.2	-0.6

Notes: * Productivity measured as the gross value added per hour worked.

** The core is the weighted average for Germany, France and the Netherlands while the periphery is made up of Spain and Italy.

Source: CaixaBank Research, based on data from EU KLEMS.

KEY INDICATORS

Activity and employment indicators

Values, unless otherwise specified

	2015	2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17	04/17
Retail sales (year-on-year change)	2.7	1.9	1.8	1.3	2.2	1.5	1.8	...	...
Industrial production (year-on-year change)	2.1	1.5	1.1	1.1	2.3	0.2	1.2	...	...
Consumer confidence	-6.2	-7.7	-7.8	-8.2	-6.4	-4.8	-6.2	-5.0	-3.6
Economic sentiment	104.2	104.8	104.2	104.2	106.9	108.0	108.0	108.0	109.6
Manufacturing PMI	52.2	52.5	52.0	52.1	54.0	55.2	55.4	56.2	56.8
Services PMI	54.0	53.1	53.1	52.6	53.4	53.7	55.5	56.0	56.2
Labour market									
Employment (people) (year-on-year change)	1.0	1.3	1.4	1.2	1.2	-	...	-	-
Unemployment rate: euro area (% labour force)	10.9	10.0	10.1	9.9	9.7	9.6	9.5	...	...
Germany (% labour force)	4.6	4.2	4.2	4.1	3.9	3.9	3.9	...	...
France (% labour force)	10.4	10.1	10.1	10.0	10.0	10.0	10.0	...	...
Italy (% labour force)	11.9	11.7	11.6	11.6	11.8	11.8	11.5	...	...
Spain (% labour force)	22.1	19.6	20.1	19.3	18.7	18.2	18.0	...	...

Source: CaixaBank 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

	2015	2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17
Current balance: euro area	3.4	3.6	3.7	3.7	3.6	3.5	3.6	...
Germany	8.6	8.4	8.9	8.6	8.4	8.3	8.3	...
France	-0.2	-1.1	-0.8	-1.1	-1.1	-1.4	-1.3	...
Italy	1.4	2.6	2.2	2.5	2.6	2.6	2.5	...
Spain	1.4	2.0	1.7	1.8	2.0	2.0	2.1	...
Nominal effective exchange rate¹ (value)	92.3	94.7	94.8	95.1	94.8	94.3	93.8	94.4

Note: 1. Weighted by flow of foreign trade. Higher figures indicate the currency has appreciated.

Source: CaixaBank 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

	2015	2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17
Private sector financing								
Credit to non-financial firms ¹	-0.3	1.8	1.7	2.0	2.1	2.2	1.9	2.3
Credit to households ^{1,2}	0.7	1.7	1.7	1.8	1.9	2.2	2.3	2.4
Interest rate on loans to non-financial firms ³ (%)	1.6	1.4	1.4	1.3	1.3	1.3	1.2	...
Interest rate on loans to households for house purchases ⁴ (%)	2.1	1.9	1.8	1.8	1.8	1.8	1.8	...
Deposits								
On demand deposits	11.1	10.0	10.1	9.5	9.3	9.3	9.2	10.1
Other short-term deposits	-3.8	-1.8	-1.8	-1.2	-2.0	-2.2	-2.1	-2.5
Marketable instruments	2.6	2.8	2.3	5.4	4.5	7.0	3.7	8.5
Interest rate on deposits up to 1 year from households (%)	0.8	0.5	0.6	0.5	0.4	0.4	0.4	...

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: CaixaBank Research, based on data from the European Central Bank.

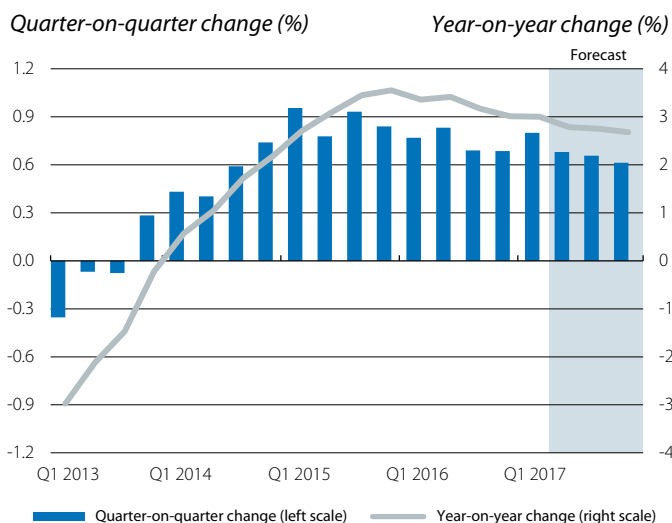
ECONOMIC OUTLOOK · The Spanish economy continues to advance at a good pace

Economic growth accelerated to 0.8% quarter-on-quarter in Q1 2017, 0.1 pp faster than the previous two quarters. In year-on-year terms, growth remained strong at 3.0% and with no signs of slowing down. Pending details by component, available indicators point to private consumption still driving growth, albeit easing slightly. Capital goods investment seems to be picking up, supported by even better business investment sentiment. External demand has also recovered thanks to good export performance and a more subdued increase in imports.

Prospects improve across the board for 2017. Given the Spanish economy's good performance in the first three months of the year, the main national and international institutions have revised up their GDP growth forecasts for 2017. It was the International Monetary Fund's turn in April, raising its forecast to 2.6% (0.3 pp higher than January). The Spanish government also followed suit, presenting the Updated Stability Programme (APE) 2017-2020 with a new macroeconomic scenario predicting 2.7% GDP growth (0.2 pp more than in March). The CaixaBank Research forecast is slightly higher, 2.8%. Nevertheless, the economy might even outperform this figure provided it is not hit by any external shocks. This exceptional performance by Spain's economy, with three years of sustained growth, is thanks to the combination of temporary support factors such as low oil prices and the ECB's expansionary monetary policy, and the positive effect of the structural reforms carried out in recent years. Given these better forecasts, Standard & Poor's has improved its outlook for Spain's sovereign debt from stable to positive, clearing the way for a rating upgrade in the next few months.

The positive outlook boosts public finances. As in the last two years, this solid economic growth will help to reduce the public deficit, mainly by improving taxable bases (increasing public revenues) and decreasing unemployment (lowering spending on unemployment benefit). The low interest rates resulting from the ECB's accommodative monetary policy will also help to contain interest payments even though public debt is close to 100% of GDP. According to the fiscal strategy in the APE for 2017-2020, the budget deficit will continue to fall over the next few years, gradually bringing down public debt. The government expects the deficit to end this year at 3.1% of GDP and to fall below 3% in 2018, helping to end the excessive deficit procedure (EDP) with the European Commission. The current figures for state expenditure up to March show an adjustment of 0.4% of GDP compared with the previous year, supported by revenue and contained current expenditure. See the Focus «Correcting

GDP



Source: CaixaBank Research, based on INE data.

Macroeconomic scenario contained in the Stability Programme (APE) 2017-2020

	2016	2017	
		APE	CaixaBank Research forecast
GDP (year-on-year change, %)	3.2	2.7	2.8
Employment (year-on-year change, %) *	2.9	2.5	2.4
Unemployment rate (%)	19.6	17.5	17.7
Budget deficit (% of GDP) **	4.3	3.1	3.4
Public debt (% of GDP)	99.4	98.8	98.6

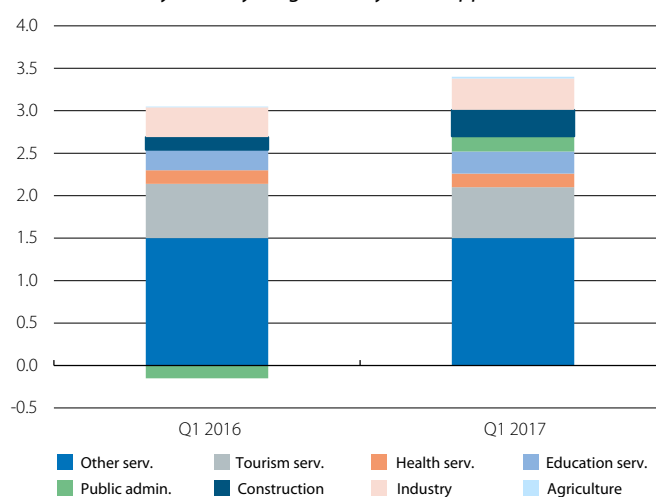
Notes: * Employed full-time equivalent.

** Not including bank restructuring costs.

Source: CaixaBank Research, based on data from the Stability Programme 2017-2020.

Registered workers affiliated to Social Security

Contribution to year-on-year growth by sector (pp)



Source: CaixaBank Research, based on data from the Ministry of Employment and Social Security.

the budget deficit; mission possible» in this *Monthly Report* for more details.

The labour market benefits from growth in activity. Like economic growth, job creation also accelerated slightly in Q1 in seasonally adjusted terms, according to the EPA data. This was 0.7% quarter-on-quarter (0.5% in Q4 2016), suggesting the trend is still positive in the labour market. In year-on-year terms, growth in employment maintained its 2.3% year-on-year rate of increase. Given the seasonal nature of Spain's labour market, the number of employees fell by 69,800 in Q1 2017, similar to the number recorded in Q1 2016, a very good figure if we remember that Easter fell entirely in April this year (and March in 2016). The fact that job creation was largely in the private sector is another sign of the labour market's strength, while public sector employment continues to decline.

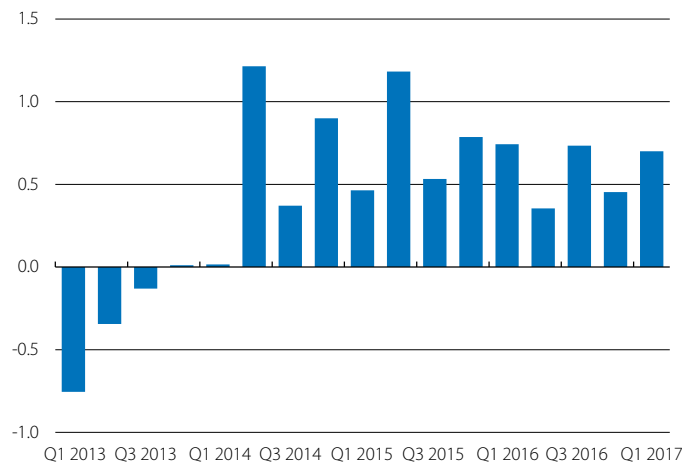
Unemployment, a problem yet to be solved. In spite of these good job creation figures, unemployment is still very high. As is customary in Q1 due to seasonal reasons, the unemployment rate rose slightly to 18.8% (0.2 pp higher than in Q4 2016), while the youth unemployment rate (aged 20 to 24) stood at 38.3%. Such levels are much higher than in other euro area countries, highlighting the need for Spain to get to grips with its unemployment. Job creation is therefore still crucial for the country's recovery.

Job creation boosts household income. Rising employment has helped to push up gross disposable household income (GDHI) by 2.5% in 2016, 0.7 pp more than in 2015. This improvement is stimulating consumption, up by 3.0% in nominal terms in 2016. The household savings rate therefore fell by 0.5 pp to 7.7% in 2016. GDHI growth should continue to be supported by job creation in 2017 as wage rises are still modest. Judging by the good consumer sentiment data for Q1, consumption growth will continue solid so the savings rate is likely to remain low compared with the historical average (9.6%).

Private sector deleveraging continues. The economic recovery is also affecting deleveraging among households and non-financial firms. After falling steadily for six years, household debt stood at 64.4% of GDP in Q4 2016 while the debt of financial firms stood at 101.7% of GDP. Corporate debt has now fallen below the euro area average but household debt is falling more slowly and is still above the average for euro area households. Over the coming quarters, dynamic GDP growth should help this deleveraging to continue as well as boosting the flow of new loans to households and companies. In fact, the bank lending survey for Q1 2017 shows that banks have relaxed their criteria to grant consumer loans, although the criteria to grant company loans have been tightened up slightly. The continued reduction in the bank NPL ratio, down to 9.1% in February, indicates that banks are in an increasingly healthy position. The balance of doubtful loans has fallen by a cumulative 42% since the peak reached

Employment

Quarter-on-quarter change (%)

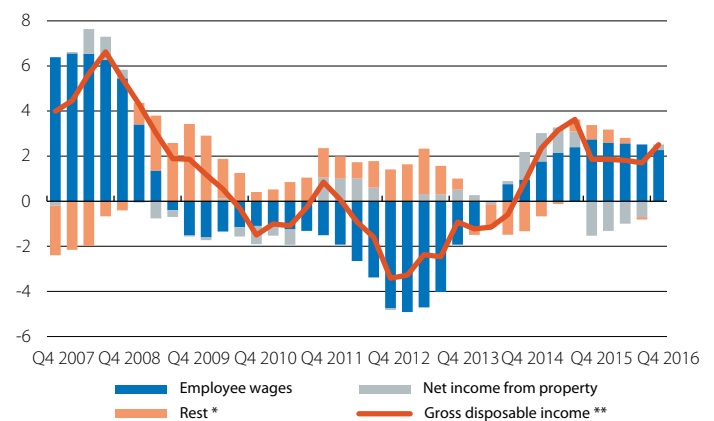


Note: Data seasonally adjusted.

Source: CaixaBank Research, based on INE data (EPA).

Gross disposable income

Contribution to year-on-year growth of the cumulative figure over four quarters (pp)

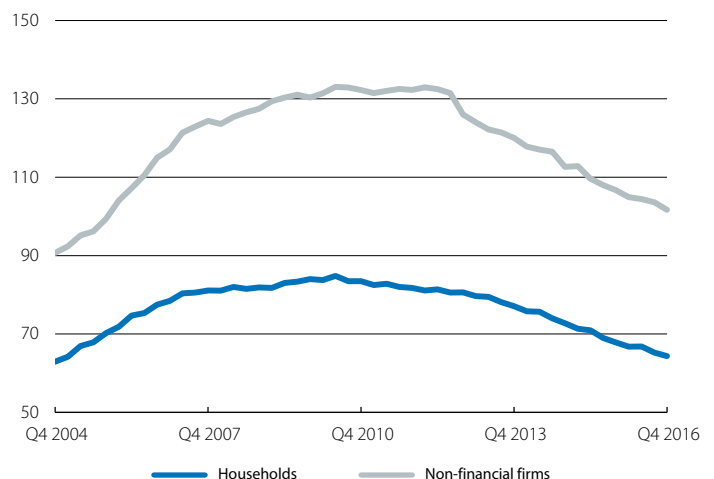


Notes: * Rest of headings used to calculate the gross disposable income, such as gross operating surplus, Social Security contributions, etc. ** Year-on-year change.

Source: CaixaBank Research, based on INE data.

Private sector debt

(% of GDP)



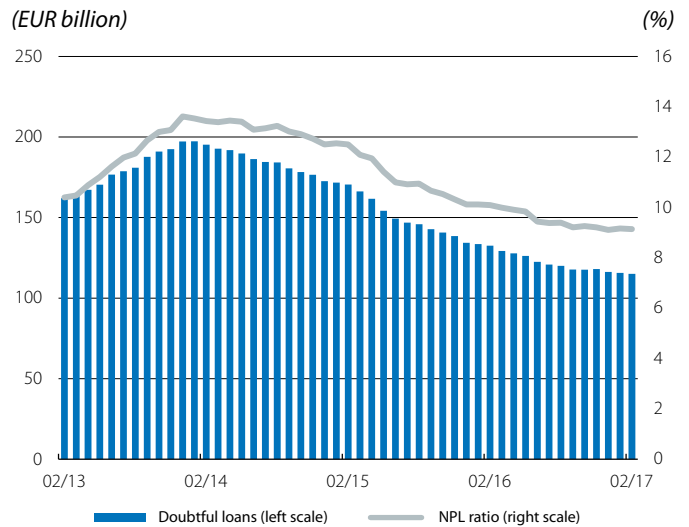
Source: CaixaBank Research, based on data from the Bank of Spain.

in January 2014, a trend that will also continue over the next few months.

Inflation rises to 2.6% in April (2.3% in March), a temporary upswing resulting from the increase in tourism prices due to Easter falling in April (whereas it was in March in 2016) and also to stable electricity prices compared with the drop last month. Beyond this seasonal spike in prices, headline inflation should moderate over the coming months due to the slowdown in oil prices in year-on-year terms, ending the year at around 1.3%. Average inflation will therefore be 2.2% in 2017, much higher than the negative figures of the last two years (−0.2% in 2016 and −0.5% in 2015). Core inflation remains very subdued (0.9% in March) although it should rise slightly, driven by dynamic private consumption.

The current account reflects rising oil prices. Oil prices had boosted the foreign sector substantially over the past two years but their support is now waning. Rising oil prices pushed up the cumulative energy import bill in January and February to EUR 7,609 million (compared with EUR 4,228 million in the first two months of 2016). But dynamic exports, up by 4.7% year-on-year in February and outperforming the growth in imports of 3.2% year-on-year (both cumulative over 12 months), meant that the current account surplus increased in February to 2.1% of GDP. See the Focus «Dissecting the improvement in the current account» in this *Monthly Report* for a more detailed discussion. This consolidation of the flow of Spanish firms exporting over the past four years augurs well for the export sector.

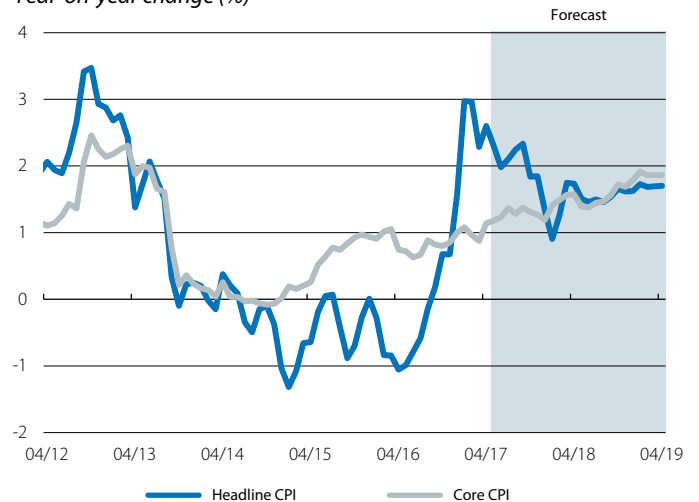
NPL ratio and doubtful loans



Source: CaixaBank Research, based on data from the Bank of Spain.

CPI

Year-on-year change (%)

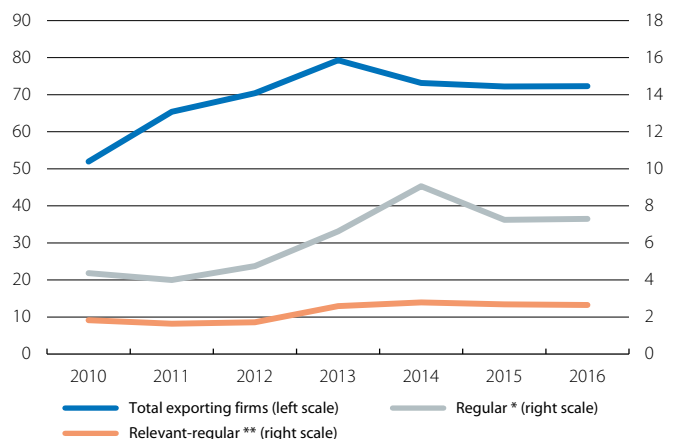


Source: CaixaBank Research, based on INE data.

Flows of new exporting firms

(Thousands of firms)

(Thousands of firms)



Notes * Regular: firms exporting in the past four years.

** Relevant-regular: firms exporting >EUR 50,000 in the past four years.

Source: CaixaBank Research, based on data from ICEX.

FOCUS · Correcting the budget deficit; mission possible

The total general government deficit stood at 4.3% of GDP in 2016 (4.5% including bank restructuring costs), 0.8 pp lower than the 5.1% posted in 2015. Spain therefore met its stability target agreed with the European Commission of 4.6% of GDP. However, this target had been lessened considerably from the 3.6% of the Stability Plan updated in 2016. We must also remember that the economic situation was highly favourable. The whole adjustment was confined to public expenditure, down by 1.5 pp of GDP. Revenue, however, fell by 0.8 pp in spite of the economic recovery, due to the tax reform which, according to government estimates, had a negative impact of around EUR 6.4 billion.

In 2017 the government expects to correct the deficit by a further 1.3 pp, reaching 3.0% of GDP (3.1% including bank restructuring costs). Since the deficit exceeded its target in 2016, this year Spain is starting from a better position and therefore needs to make less effort than expected last August, when the fiscal consolidation path was agreed. The favourable economic situation will also help to bring down the deficit. In spite of the slowdown expected in real GDP growth, higher inflation is likely to push up nominal GDP growth, increasing taxable income and therefore revenue. There are also upside risks regarding the macroeconomic forecasts that form the basis of the central government budget (PGE in Spanish). These predict 2.5% real GDP growth in 2017, a figure at the lower end of the forecasts produced by analysts and other institutions such as CaixaBank Research and the Bank of Spain, which expect a growth rate of 2.8%.¹

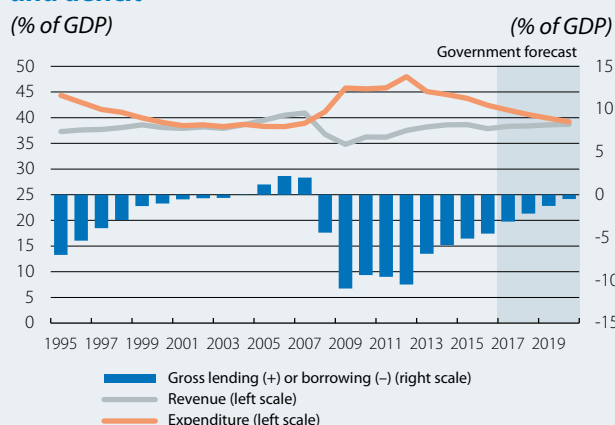
But we cannot assume the new target will be achieved, in spite of all these favourable factors. On the revenue side, the central government budget expects tax revenue to increase by 7.9% and Social Security contributions by 6.8%, slightly higher figures than those obtained using historical elasticities. At least the data published up to March allow us to be moderately optimistic. VAT revenue has started the year particularly well: up by 8.4% year-on-year in the cumulative figure from January to March.

Regarding expenditure, the government's approval of a state spending limit of EUR 118,337 million, 4.4% below 2016's limit, is a sign that it intends to focus its attention on curtailing expenditure. By item, the budget includes a 1.7% reduction in spending on unemployment and almost zero growth in interest expenditure (0.5%). Both projections for expenditure are higher than those produced by CaixaBank Research, giving the government some margin to offset any deviation in revenue.

Spain's government therefore expects most of the adjustment to be carried out via spending, reducing its share of GDP by 0.9 pp to 41.5%.² Revenue will also help to bring down the public deficit but to a lesser extent, with a predicted increase of 0.5 pp to 38.3% of GDP. Over the coming years, the budget deficit will continue to fall thanks to contained expenditure and moderately higher revenue, as established in the fiscal strategy contained in the Updated Stability Programme for 2017-2020.

In short, both the end of 2016 and the good economic outlook for 2017 will help to reduce the budget deficit. Hitting the target therefore seems to be a «mission possible».

General government revenue, expenditure and deficit



Source: CaixaBank Research, based on data from the State Public Accounts and the Updated Stability Programme (APE) 2017-2020.

Forecasts for some items of revenue and expenditure

Annual change (%)

	PGE 2017 (EUR million)	Data 2016	PGE 2017	Data up to March 2017
Revenue				
Tax revenue	200,963	2.3%	7.9%	5.5%
Income tax	78,027	0.1%	7.7%	2.3%
Corporate tax	24,399	9.5%	12.6%	2.9%
VAT	67,463	4.2%	7.3%	8.4%
Social Security contributions	110,560	3.0%	6.8%	6.7%
Expenditure				
Unemployment benefits *	18,318	-9.6%	-1.7%	-7.5%
Interest expenditure	32,230	1.0%	0.5%	-

Note: * Data up to February 2017.

Source: CaixaBank Research, based on data from the General Government Budget (PGE) 2017, the State Public Accounts and the Tax Agency.

1. The government has raised its own GDP growth forecast to 2.7% in the Updated Stability Programme 2017-2020.

2. These figures include bank restructuring costs.

FOCUS · Dissecting the improvement in the current account

One of the Spanish economy's key achievements over the past few years has been the correction of its external imbalance. Its current account (CA) went from a deficit of 3.9% of GDP in 2010¹ to a 2.0% surplus in 2016, a cumulative improvement of 1 pp year-on-year on average. In composition terms, this improvement was mainly due to the correction in the deficit of the goods account (contributing 0.5 pp each year on average to the improvement in the CA). But the sustained increase in the services account surplus (0.2 pp each year on average) and lower income deficit (0.3 pp each year on average) also helped. In short, there has been a positive trend in the three components that make up the CA over the past six years.

Looking at the trade balance in more detail, it is useful to differentiate between energy and non-energy goods. The trend in energy goods was strongly affected by oil prices as the Spanish economy depends heavily on crude oil imports. While the energy bill was inflated by the higher oil prices in 2011 and 2012, this subsequently fell as from 2013 thanks to the slump. The balance of non-energy goods was mainly responsible for the improvement in the CA from 2010 to 2013. Strong export performance, boosted by gains in competitiveness, was joined by weak imports due to a drop in domestic demand. As from 2014, however, and although exports of non-energy goods were still very strong, the recovery in domestic demand pushed up imports and the balance of non-energy goods therefore remained stable.

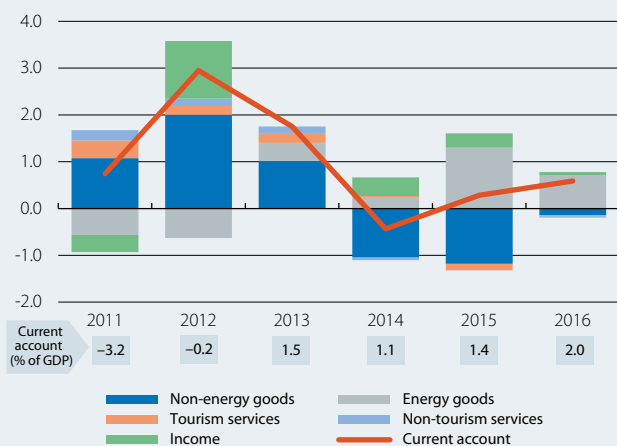
Like the non-energy goods balance, the services account has gone through two different periods. During the economic crisis from 2010 to 2013, it contributed positively to the improved CA while, during the recovery from 2014 to 2016, its contribution was slightly negative given the upsurge in domestic demand. Nevertheless, there was considerable growth in exports of tourism and non-tourism services during both periods. Spain's tourism industry has performed exceptionally, setting new records every year for its number of international tourist arrivals, helped by the geopolitical disturbances in the Middle East and North Africa but especially by improved competitiveness in the sector. The World Economic Forum has once again ranked Spain number one in its global competitiveness index for tourism. But non-tourism services have also been very positive, as explained in the Focus «The rise in exports of non-tourism services» published in MR04/2016.

1. Although the largest deficit was recorded in 2007 (9.6% of GDP), the analysis begins in 2010 to exclude 2009, the year when global trade collapsed.

Finally, the third component of the CA, the income balance, has managed to substantially reduce its deficit since 2012 thanks to low interest rates and the consequent decrease in foreign interest payments.

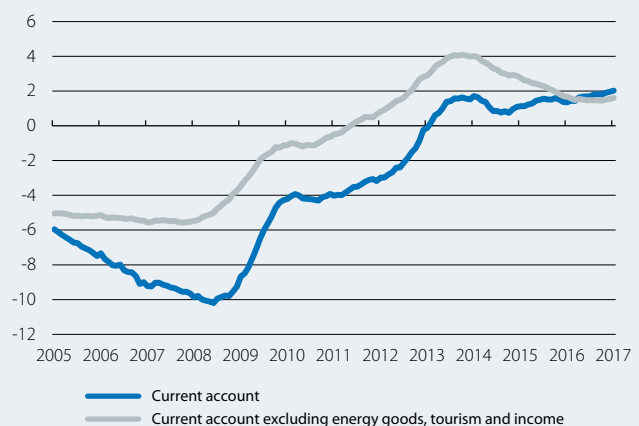
The CA has therefore improved thanks to gains in competitiveness in the Spanish economy but it has also been spurred on by lower oil prices, low interest rates and tourism's exceptional performance. To illustrate how the CA would have evolved without these factors, we have calculated what the current account balance would look like without energy goods, tourism and income. The second chart shows that, in 2016, this balance was around 1.5% of GDP and that it has also improved significantly since the start of the crisis.

Contribution to the change in the current account *
(pp of GDP)



Note: * Contribution of each component to the annual change in the current account.
Source: CaixaBank Research, based on data from the Bank of Spain and the Ministry of Finance.

Current account
(% of GDP)



Source: CaixaBank Research, based on data from the Bank of Spain and the Ministry of Finance.

FOCUS · The Spanish stock exchange compared with Europe's: time to make up lost ground?

Has Spain's stock market rallied since it hit rock bottom in 2012? Yes, by an impressive 70%. So has it performed better than the European stock market? No, not by a long shot. This might seem strange considering, for example, the considerable reduction in Spain's sovereign risk premium and the relative growth rates of both economies. Spain has consistently outperformed the euro area in terms of growth since Q4 2013.

A brief review of GDP trends in Spain and the euro area over the past 10 years helps to contextualise the relative performance of their main stock market indices. The benchmark stock market index for the euro area, Eurostoxx, fell by 58% between 2007 and 2013 and, over the same period, GDP in real terms decreased by 5.5%. In Spain this slump in the stock market reached 64% and the cost in terms of its GDP was much higher, dropping by 9.5% (see the first chart).

The figures for the recovery since the lowest point of the crisis are also revealing. In March 2017, the euro area's stock market was 15% below its pre-crisis peak while the Spanish stock market was 40%. In terms of GDP, the euro area was 3% higher than its pre-crisis peak while the scars have taken longer to heal in Spain and its GDP was still 0.4% below its respective peak. But the longer time taken by the Spanish stock market to recover is less surprising when we look at the different positions of both economies in the recovery phase.

The main reason for Spanish and European stocks performing differently is the trend in corporate earnings for each area. Earnings for Spanish listed companies have performed less well than for Eurostoxx companies.¹ It therefore comes as no surprise that investors have adopted a more cautious approach with Spanish equity.

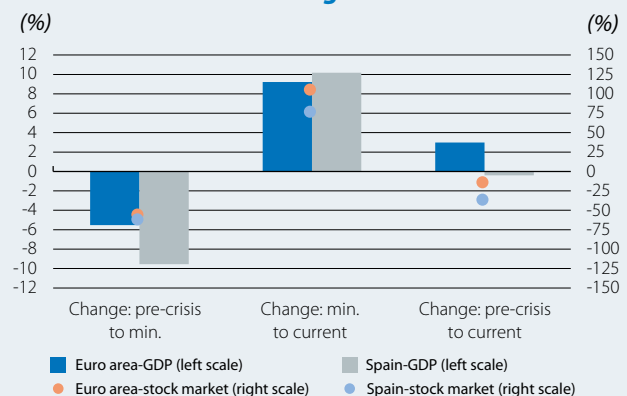
Two fundamental factors help to explain why Eurostoxx firms have performed better than Spanish listed companies. First, the large share of banks in the Spanish stock market (37% compared with 12% in the euro area). In general, bank profits have been lower than corporate earnings overall as the sector has been hit hard by ultra-low interest rates. The second factor is the sizeable exposure of Spanish companies to Latin America. Spanish firms get between 20% and 25% of their income from this region and its sharp economic slowdown has affected their performance.

1. The difference between the annual average growth in earnings of listed companies from the euro area and from Spain since 2012 is 8 pp.

On the whole, if we exclude the Spanish stock market's greater exposure to both factors, the gap between it and the European stock market since their respective minimums up to March 2017 would fall from the aforementioned 32% to just 4%.

In short, an analysis of the factors underlying the different performances by Spanish and European equity provides a relatively optimistic scenario. Over the coming quarters, monetary conditions are likely to get back to normal and the main Latin American countries should start to enjoy stronger growth. Spain's macroeconomic outlook is also still highly favourable.

The euro area and Spain: change in GDP and stock markets during 2007-2017 *

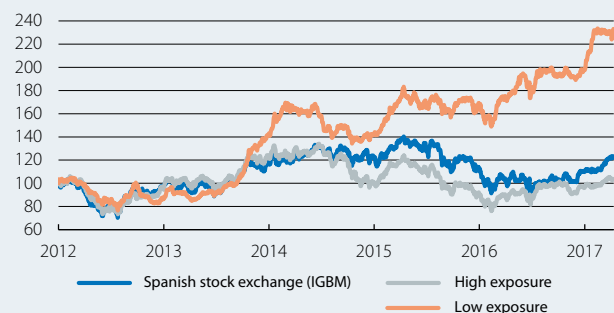


Note: * Change calculated based on the series of real annual GDP. In the case of the stock markets, the Eurostoxx index is used for the euro area and the IGBM (Índice General de la Bolsa de Madrid) for Spain.

Source: CaixaBank Research, based on data from Eurostat and Bloomberg.

Spain: stock market indices by exposure to Latin America *

Index (100 = January 2012)



Note: * The IGBM consists of 120 companies. The «high exposure» index is made up of 15 companies (not banks) from the IGBM which obtain, on average, 40% of their income from Latin America. The «low exposure» index is made up of 15 companies (not banks) from the IGBM which obtain, on average, 1% of their income from Latin America.

Source: CaixaBank Research, based on data from Bloomberg.

KEY INDICATORS

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

Activity indicators

	2015	2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17	04/17
Industry									
Electricity consumption	1.7	0.1	0.8	0.3	-0.1	4.9	1.3	-2.6	-1.1
Industrial production index	3.3	1.9	1.4	1.9	1.8	2.7	2.4	...	...
Indicator of confidence in industry (value)	-0.3	-2.3	-2.8	-3.8	-0.6	0.1	1.7	-0.9	-1.3
Manufacturing PMI (value)	53.6	53.2	52.5	51.4	54.4	55.6	54.8	53.9	...
Construction									
Building permits (cumulative over 12 months)	20.0	43.7	48.1	44.8	36.9	27.5	25.6	...	...
House sales (cumulative over 12 months)	10.9	12.9	14.1	13.3	13.6	15.7	14.1	...	...
House prices	1.1	1.9	2.0	1.6	1.5	-	...	-	-
Services									
Foreign tourists (cumulative over 12 months)	5.6	8.2	7.5	9.3	10.1	10.3	10.2	9.3	...
Services PMI (value)	57.3	55.0	55.5	54.9	54.9	54.2	57.7	57.4	...
Consumption									
Retail sales	3.0	3.6	3.8	3.8	3.0	-0.9	0.6	1.7	...
Car registrations	21.3	11.4	17.8	11.0	8.9	10.6	0.1	12.6	...
Consumer confidence index (value)	0.3	-3.8	-3.2	-6.1	-3.2	-2.5	-3.8	-2.2	1.3

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

Employment indicators

	2015	2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17
Registered as employed with Social Security¹								
Employment by industry sector								
Manufacturing	2.2	2.8	2.7	2.7	2.8	3.0	2.9	3.2
Construction	4.7	2.6	2.1	2.7	3.3	4.7	5.0	6.2
Services	3.5	3.2	3.0	3.3	3.5	3.4	3.4	3.4
Employment by professional status		3.5						
Employees	3.5	3.5	3.1	3.5	3.8	3.9	3.9	4.1
Self-employed and others	1.9	1.0	1.0	0.9	0.9	0.9	0.9	0.9
TOTAL	3.2	3.0	2.7	3.0	3.3	3.3	3.4	3.5
Employment²	3.0	2.7	2.4	2.7	2.3	-	2.3	-
Hiring contracts registered³								
Permanent	12.3	14.2	17.4	17.9	13.3	19.5	8.4	18.4
Temporary	11.2	7.2	9.1	7.1	6.6	16.7	5.1	14.4
TOTAL	11.3	7.8	9.8	7.9	7.1	16.9	5.4	14.8
Unemployment claimant count³								
Under 25	-11.0	-12.6	-12.0	-14.4	-13.2	-12.3	-14.0	-13.7
All aged 25 and over	-7.2	-8.2	-7.5	-8.6	-9.0	-9.2	-9.3	-9.2
TOTAL	-7.5	-8.6	-7.9	-9.1	-9.4	-9.4	-9.7	-9.6

Notes: 1. Mean monthly figures. 2. LFS estimate. 3. Public Employment Offices.

Source: CaixaBank Research, based on data from the Ministry of Employment and Social Security, INE and Public Employment Offices.

Prices

	2015	2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	03/17	04/17
General	-0.5	-0.2	-0.9	-0.2	1.0	3.0	3.0	2.3	2.7
Core	0.6	0.8	0.7	0.8	0.9	1.1	1.0	0.9	...
Unprocessed foods	1.8	2.3	2.7	3.5	1.0	2.7	5.4	4.3	...
Energy products	-9.0	-8.4	-13.6	-8.6	1.6	17.5	16.8	11.7	...

Source: CaixaBank Research, based on data from the INE.

Foreign sector

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

	2015	2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17
Trade of goods								
Exports (year-on-year change)	4.3	1.7	0.2	4.3	-1.1	3.2	17.4	8.3
Imports (year-on-year change)	3.7	-0.4	-0.7	-0.3	-3.7	3.0	19.0	11.4
Current balance	14.7	21.8	15.5	18.5	20.0	21.8	22.6	23.5
Goods and services	26.2	32.9	26.1	29.3	31.2	32.9	32.8	32.4
Primary and secondary income	-11.5	-11.1	-10.6	-10.8	-11.2	-11.1	-10.2	-8.9
Net lending (+) / borrowing (-) capacity	21.7	23.6	21.8	24.0	24.3	23.6	25.1	25.7

Source: CaixaBank 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

	2015	2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17
Net lending (+) / borrowing (-) capacity¹	-5.1	-4.5	-0.7	-3.0	-2.8	-4.5	-	-
Central government	-2.6	-2.7	-0.8	-1.9	-2.6	-2.7	-0.5	-1.0
Autonomous regions	-1.7	-0.8	-0.1	-0.6	-0.1	-0.8	-0.1	-0.1
Local government	0.5	0.6	0.1	0.1	0.5	0.6	-	-
Social Security	-1.2	-1.6	0.2	-0.6	-0.6	-1.6	0.1	0.1
Public debt (% GDP)	99.8	99.4	101.2	101.1	100.4	99.4	-	-

Note: 1. Includes aid to financial institutions.

Source: CaixaBank 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

	2015	2016	Q1 2016	Q2 2016	Q3 2016	Q4 2016	01/17	02/17	Balance 02/17 ¹
Financing of non-financial sectors²									
Private sector	-3.9	-2.6	-3.2	-2.9	-2.1	-2.1	-1.5	-1.3	1,634.9
Non-financial firms	-4.0	-2.8	-3.4	-3.2	-2.2	-2.2	-1.4	-1.0	914.2
Households ³	-3.6	-2.3	-3.0	-2.5	-2.0	-1.9	-1.7	-1.7	720.7
General government ⁴	4.0	3.9	3.5	4.2	4.6	3.1	3.9	3.2	1,100.3
TOTAL	-1.0	-0.1	-0.6	-0.2	0.5	-0.1	0.6	0.5	2,735.2
Liabilities of financial institutions due to firms and households									
Total deposits	-1.0	-0.3	-0.4	-0.3	-0.3	-0.1	-1.0	-1.4	1,152.3
On demand deposits	18.5	16.6	16.2	16.0	16.4	17.8	17.3	18.6	444.6
Savings deposits	12.9	12.4	13.4	12.1	11.5	12.5	13.9	14.9	279.6
Term deposits	-15.3	-17.2	-15.4	-16.4	-17.4	-19.7	-23.0	-25.1	406.8
Deposits in foreign currency	5.6	-1.1	-4.0	1.6	-1.9	0.1	-1.5	-7.4	21.3
Rest of liabilities ⁵	-13.0	-15.7	-16.7	-16.3	-11.3	-18.6	-18.9	-13.4	84.0
TOTAL	-2.2	-1.6	-1.9	-1.7	-1.2	-1.6	-2.4	-2.2	1,236.3
NPL ratio (%)⁶	10.1	9.1	10.0	9.4	9.2	9.1	9.2	9.1	-
Coverage ratio (%)⁶	58.9	58.9	59.0	58.7	59.3	58.9	58.9	58.9	-

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: CaixaBank Research, based on data from the Bank of Spain.

EDUCATION: MORE CRUCIAL THAN EVER

Education and economic growth

In 1900, Spain and Finland were very similar: they were underdeveloped, largely agricultural countries with a low level of literacy (scarcely 40% of the population) and a similar income per capita. 50 years on, Finland's income per capita doubled Spain's, all Finns were literate and secondary education had started to spread to all social classes in the country. Meanwhile, in Spain, illiteracy was still widespread and secondary education a rarity. Almost 70 years later, and in spite of Spain's huge economic development and improvements in terms of education, Finland's income per capita is still higher than Spain's. And so is its level of education. Therefore, were Finland's educational improvements the key to its success? This must certainly be partly the case.

Education directly affects economic growth insofar as it is essential to improve human capital. Let's take this step by step. An economy's production capacity depends on different factors. These include physical capital, technology and the number of workers, as well as their quality. This quality is largely determined by what is called human capital (the stock of knowledge, skills and habits). An increase in workers' educational level improves their human capital, increasing the productivity of these workers and the economy's output.

Numerous studies in the field of labour economics have attempted to measure this relationship between a worker's education and its productivity, called the private return to education. And the findings have been incredibly positive. The precursor to all such studies is the equation developed by Jacob Mincer in 1974, known as the Mincer Equation. This relates workers' earnings (seen as a way of measuring their productivity) with their years of schooling and work experience.¹ It goes without saying that equating a worker's education with their years of schooling is highly flawed since it assumes that, for instance, one additional year of primary education has the same effect on a worker's productivity as an additional year of university education. Neither does it take into account possible differences in the quality of the education received, particularly relevant for analyses carried out with data from different countries. Some studies therefore distinguish between primary, secondary and tertiary education and add quality controls such as the results from tests carried out internationally.

Another problem, more substantial and therefore more difficult to resolve, is whether such studies actually measure the effect of education on productivity or rather the result of talent. For instance, if more talented people are the ones who receive more education, then the estimated effect of education on productivity would largely reflect this greater talent and not the higher level of education. In order to avoid this problem (in technical terms, an omitted-variable bias), some articles have attempted to use natural experiments. One of the most curious used identical twins with different lengths of schooling. Such twins are genetically identical and tend to have the same family environment, so their skills and habits should be very similar. Such studies have found that one additional year of schooling results in an increase in earnings, and therefore productivity, of between 6% and 10%.²

In addition to education's direct effect on a worker's productivity, numerous economists also point to important education externalities for growth, larger than private returns. Paul Romer, for instance, suggests that societies with a large number of highly skilled workers generate more ideas and consequently grow more. In a recent work, Aghion et al present a theoretical model and some empirical evidence that shows more advanced economies benefit from workers with a university education since this promotes technological innovation, augmenting the productivity of both physical capital and the workforce as a whole. On the other hand, developing economies benefit from workers with a primary and secondary education as this helps them imitate the technologies developed in richer countries, thereby also increasing the productivity of their physical capital and workforce.³

Given their huge importance, the existence of such externalities, or social returns, and their quantification are undoubtedly important when designing educational policies in order to avoid underinvestment in education. Individuals tend to decide the

1. See Mincer, Jacob (1974), «Schooling, Experience, and Earnings», NBER Book. On the other hand, although wage income largely reflects a worker's productivity, there are other elements that can affect it, such as legislation, the role of trade unions, etc.

2. See Card, D. (1999), «The causal effect of education on earnings», Handbook of Labor Economics 3: 1801-1863, for a summary of the empirical literature. In this summary, David Card also comments on the use of the geographical proximity variable for individuals to university as a good proxy of the talent-free educational level of individuals.

3. See Romer, P. M. (1990), «Human Capital and Growth: Theory and Evidence», Carnegie-Rochester Conference Series on Public Policy, Vol. 32. And Aghion, P. et al. (2009), «The Causal Impact of Education on Economic Growth: Evidence from U.S.», Brookings Paper.

level of educational training they wish to attain based on the private returns they expect to receive and do not take social returns into account. A significant social return would therefore justify policies to encourage greater investment in education.

But studies focusing on quantifying the effects of education on economic growth and which therefore attempt to reflect both private returns and externalities also face several complications. Like studies focusing on private returns, they need to accurately measure the education variable, distinguishing between different educational levels and controlling via quality. They must also deal with a problem of inverse causality: is it the case that countries which invest the most in education grow the most and achieve the highest levels of income? Or, alternatively, do countries with higher levels of income tend to invest more in education? Both relationships are bound to exist but, in this case, we need to know the extent of the former since it will determine what kind of educational policies need to be implemented.

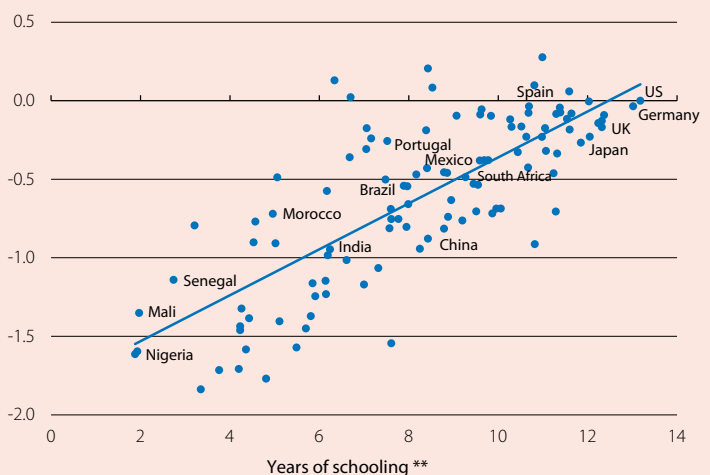
In order to identify this relationship, some studies make use of what are called instrumental variables. In other words, they look for countries or regions whose educational level has changed for some reason, independently of their growth rates. A mission which, in many cases, is almost impossible. Changes in mandatory education policies or appointments of politicians on legislative committees responsible for educational investment in US states are some of the events that have been considered. However, in such cases the findings of the different empirical studies are not conclusive: some show clearly greater social returns than private while others find that both types of return are similar.⁴

Lastly, other kinds of externalities also result from education. Most importantly, the fostering of democracy. Citizens with a higher educational level tend to associate more and take a more active part in civil society in terms of collective decision-making. Such movements are markedly democratic in nature. A higher educational level therefore tends to encourage the defence and reinforcement of democratic systems.⁵

But beyond the relevance of education in economic growth and in fostering democracy, in the words of the United Nations: «education is a fundamental human right and essential for the exercise of all other human rights».

Growth and education: relationship between productivity and training

GDP per worker (difference compared with US) *



Notes: * Log of GDP per worker in a certain country minus the log per worker in the US (2010).

** Average years of schooling for total population (2010).

Source: CaixaBank Research, based on data from the World Bank and Barro-Lee (2016).

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4. Acemoglu, D. and Joshua, A. (2000), «How Large Are Human-Capital Externalities? Evidence from Compulsory-Schooling Laws», NBER macroeconomics annual 15: 9-59, show a small social return. And Moretti, E. (2004), «Estimating the social return to higher education: evidence from longitudinal and repeated cross-sectional data», Journal of Econometrics 121, 1: 175-212, a clearly higher social return.

5. See Glaeser, E. L., Ponzetto, G. and Shleifer, A. (2007), «Why Does Democracy Need Education?», Journal of Economic Growth 12.2: 77-99.

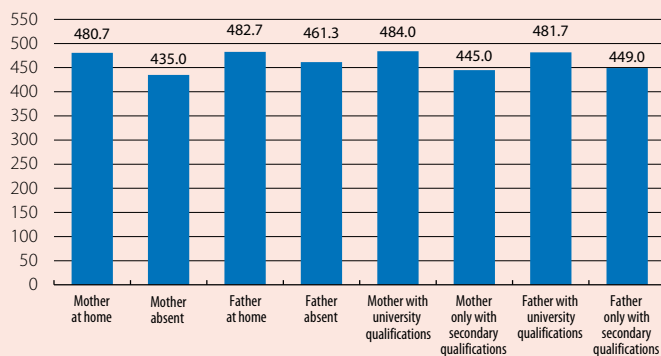
The pillars of education: a modern view

At this very moment, a lot of people born in the second half of the 20th century are facing the huge challenge of educating their children. This is a heavy responsibility as education will vastly influence the lives of their offspring. According to the prestigious economists James Heckman and Flavio Cunha, at least 50% of people's earnings are determined by features and characteristics developed before they are 18 years of age.¹ An illustrative way of seeing the importance of education is imagining the education process as a blank book that gradually fills up with the knowledge, skills and lessons accumulated by an individual throughout their lifetime. Continuing the analogy, this article looks at the key factors that ensure this book is well-written and is pleasant to read in the first chapters or, in other words, that the individual receives good quality education from birth right up to the beginning of their adult life.

The education an individual receives obviously depends very much on the people around them, which we can call their «environment»: as a wise African proverb says, «it takes a whole village to raise a child». This environment is made up of three basic components: the family, teachers and peers.

Education and family situation: the importance of parents

(Average aggregate score in PISA tests)



Note: The PISA test results correspond with 2012, as this is when pupils were asked about their family situation. The score ranges from 0 to 600 points and corresponds to the average marks in tests on science, reading comprehension and mathematics for all the participant countries.

Source: CaixaBank Research, based on OECD data.

Looking at the first component, the educational and academic community widely agree that a family is important for a child's education. For instance, according to an article by the economists Björklund and Salvanes, between 40% and 60% of students' academic achievements can be explained by family characteristics.² Another example comes from the PISA tests, globally standardised examinations carried out by 15-year-old pupils: students living with their mothers or whose mothers have a university qualification achieve much higher marks (this is also the case with fathers but to a lesser extent).

But parents are not only responsible for their children's development of cognitive skills. They also have a lot to do with non-cognitive skills such as perseverance, sociability, patience and empathy. This distinction is important because a lot of literature currently highlights the limits of the PISA tests. The fact is that, in total, the academic achievements of

teenagers only determine 17% of their future income variation.³ In any case, good parenting is critical for both kinds of skills, as stated by Heckman and Cunha in a series of articles confirming the importance of parents in ensuring their children do not engage in risky behaviour.⁴ To develop cognitive skills it is vital for parents to devote time to their children and encourage activities with high educational value, such as telling them stories, talking to them constantly and involving them in domestic chores. It will come as a relief to parents with a lower level of education to know that devoting more time to children has a similar impact as having parents with a higher educational level. But what really stimulates non-cognitive skills is how children are brought up, particularly by instilling discipline (although not too strict) and providing maternal affection. In fact, mothers' decisions have important long-term effects. For instance, in an influential article, the economists Carneiro, Loken and Salvanes have studied Norway's labour reform in the 1970s which extended maternity leave entitlement, showing that the children of mothers benefitting from this reform enjoyed 8% higher average earnings at age 30.⁵

One possible reason why parents are so critical is the particular importance of education in the first few years of life, a time when children spend a lot of time with their parents. It has been shown that any gap in the development of cognitive and non-cognitive skills occurs in the first few years; a gap which is very difficult to narrow afterwards.

1. See Cunha, F. and Heckman, J. (2008), «A New Framework for the Analysis of Inequality», *Macroeconomics Dynamics*.

2. See Björklund, A. and Salvanes, K. (2011), «Education and Family Background: Mechanisms and Policies», *Handbook of the Economics of Education*.

3. See Heckman, J. and Kautz, T. (2012), «Hard evidence on soft skills», *Labour Economics*.

4. See, for instance, Cunha, F. and Heckman, J. (2007), «The technology of skill formation», *American Economic Review*.

5. See Carneiro, P., Loken, K. and Salvanes, K. (2015), «A Flying Start? Maternity Leave Benefits and Long-Run Outcomes of Children», *Journal of Political Economy*.

Looking specifically at Spain, the situation clearly has a lot of room for improvement. According to a sociological study carried out in 2015,⁶ 63% of children aged between 6 and 9 wanted to spend more time with their parents. On the other hand, only 35% of families read with their children. Policies aimed at encouraging a better work-life balance would undoubtedly help a lot of parents to spend more time with their offspring.

Having looked at the importance of the family, we now focus on the second key component: teachers. These are also a basic pillar. In the US, for instance, each child taught by a high quality teacher will earn an additional EUR 36,000 in the future.⁷ Teachers can play a particularly decisive role in the first few years of a child's life when he or she comes from a dysfunctional family. One example is the undeniable success in the US in the 1970s of the Perry Preschool educational programme⁸ for at-risk Afro-American children aged between 3 and 4. These children had a much more successful adult life than children in a similar situation who did not take part in the programme. Teachers are powerful influencers but schools face the challenge of selecting the best professionals. This is a complex problem as it is not easy to gauge teacher performance accurately. One possible method, adopted by countries whose education systems are highly praised all over the world such as Singapore, South Korea and Finland, is to recruit 100% of the teachers from the best students and to make the teaching profession highly prestigious. Another key issue is whether good teachers are born or made. Academic literature may be able to shed some light on this since some papers show a positive relationship between good teachers and the experience acquired. This suggests that newcomers to the profession can improve their performance through mentoring with more veteran teachers.⁹ Lastly, if a country wishes to have good teachers, it is vital for them to continue their training throughout their careers to adapt to the socioeconomic and technological changes occurring in society. In fact, continued teacher training is another issue Spain has to tackle. According to the OECD, only 50% of teachers take part in training courses and 97% believe they have already had enough training.

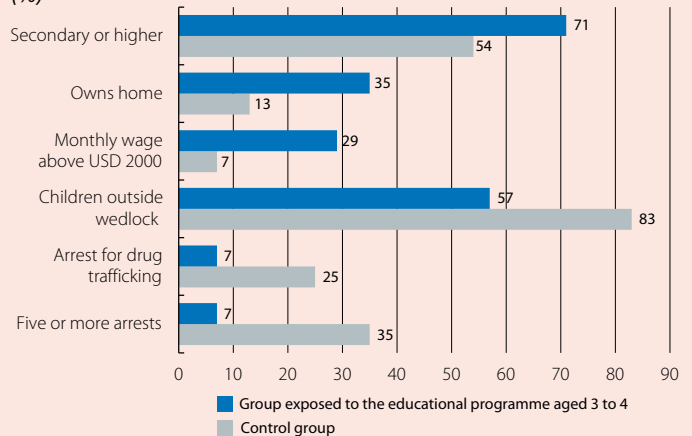
Finally, regarding the influence of peers, the evidence is not as conclusive as in the case of the family and teachers. This area warrants more in-depth study since, among other things, it would help to determine whether classes with students assigned according to their ability or rather heterogeneous classes are more effective. This said, in the area of higher education it has been shown that US university students who have been randomly assigned to a roommate who has a game console, devote less time to studying and achieve worse grades.¹⁰

In short, this article has identified the family and teachers as the pillars of education. One lesson that can be learned is the importance of the environment, since education does not depend solely on the educators but is everyone's responsibility. Ultimately, as Einstein would say «Education is what remains after one has forgotten what one has learned in school».

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Impact at age 27 of the Perry Preschool project * (%)



Note: * The Perry Preschool project is an educational programme for at-risk Afro-American children.
Source: CaixaBank Research, based on data from the HighScope Educational Research Foundation.

6. The study in question is by TriNa and entitled *Diversión en familia*, carried out in 2015.

7. See Chetty, R., Friedman, J. and Rockoff, J. (2014), «Measuring the Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood», American Economic Review.

8. This educational programme was based on the concept of active participative learning, so that students chose what they would learn, supported by educators, and had the chance to choose the materials, ideas and people involved.

9. See Jackson, K., Rockoff, J. and Staiger, D. (2014), «Teacher Effects and Teacher-Related Policies», Annual Review of Economics.

10. See Stinebrickner, R. and Stinebrickner, T. (2008), «The Causal Effect of Studying on Academic Performance», The B.E. Journal of Economic Analysis and Policy.

Beyond qualifications: the challenge of career-long continued training

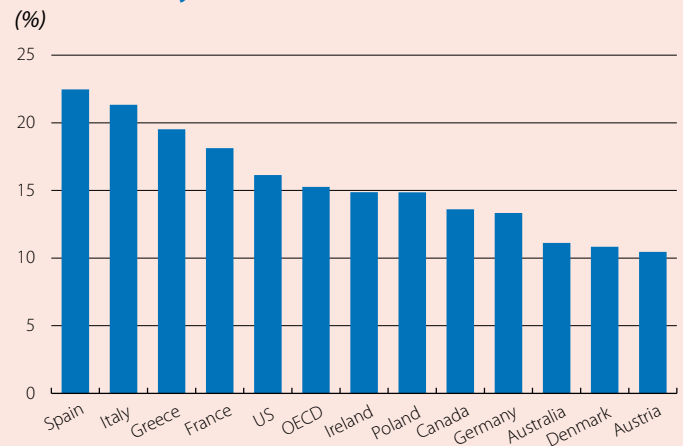
It is not easy to find time for training within the daily grind. But the continued training of workers is crucial. It encourages workers to develop new skills in a constantly evolving technological environment and also updates the knowledge required in their ever-longer working lives. This article looks at the key factors that determine adult training.

There are a number of benefits to lifelong training, both for the employed and unemployed. The vast literature on this area¹ concludes that on-the-job training increases worker productivity by improving performance, motivation and the quality of work. These improvements in productivity lead to larger profits for the company and higher wages for workers.² Regarding training for the unemployed, empirical evidence suggests that well-designed training schemes improve the likelihood of finding a job, especially in the medium term. However, several studies stress that active policies aimed at job-finding tend to be more effective than those aimed at training the unemployed.³

Of course training also has its drawbacks. It entails a cost, both in terms of time and money. The extent of these costs, compared with the benefits, determines the viability of investing in training in each case. Crucially, accounting standards do not treat expenditure on training employees as an investment but as a cost, so it cannot be amortised. Consequently, companies are more likely to invest in training with an immediate effect for the business, causing the minimum impact on the company's profits. This tends to be the case of specific employee training. But although more versatile training, such as IT, may not have such tangible benefits for the firm in the short term, it does tend to have very positive effects for worker employability and society as a whole, as well as for the company itself (for more details, see the article «Teaching to learn: education in the era of technological change» in this *Monthly Report*).

In spite of ample evidence for the benefits of continuing training throughout the working life, the percentage of workers in Spain receiving company training is below the EU-28 average (32% compared with 37%).⁴ These lower training participation rates in Spain unfortunately also coincide with a lower skills level among the adult population. For example, 17% of adults in Spain have no computer experience, while this percentage falls to 10% for the OECD average. Readers may also be surprised to learn that one out of every three adults has low or very low literacy and numeracy skills in Spain (compared with the OECD average of one in four), according to the Programme for the International Assessment of Adult Competencies (PIAAC 2015).⁵ It could be said that these bad figures are due to a composition effect (if Spain has a population with more people with a low level of education, it goes without saying that it also has a worse skills record than countries whose average population has a higher educational level). But Spain's skill level is lower than our European peers at all levels of training, even for higher education. This suggests that Spain's deficiencies in this area are not limited to adult training (see the article «The pillars of education: a modern view» in this Dossier for a more detailed discussion of school-age education). To throw some light on the difference between the level of

Adult population with low or very low literacy and numeracy skills



Source: CaixaBank Research, based on OECD data (PIAAC 2015).

1. See, for instance, Tharenou, P., Saks, Alan M. and Moore, C. (2007), «A review and critique of research on training and organizational-level outcomes», *Human Resource Management Review* 17, 251-273.

2. A meta-analysis published in 2011 concluded that taking part in continued training programmes increases earnings by 2.6% on average. See Haelermans, C. and Borghans, L. (2011), «Wage Effects of On-the-Job Training: A Meta-Analysis». However, it should be noted that empirical findings vary greatly and it is vital for the right training courses to be chosen to achieve good results.

3. See Card, D., Kluve, J. and Weber, A. (2010), «Active Labor Market Policy Evaluations: A Meta-Analysis», NBER Working Paper. And Kluve, J. (2006), «The Effectiveness of European Active Labor Market Policy», IZA Working Paper. For more details, see the Dossier «Policies to activate the labour market» in MR09/2015.

4. Data from 2015 based on the percentage of workers receiving company training over the previous 12 months. See Eurofound (2016), «Sixth European Working Conditions Survey», Overview Report.

5. See OECD (2015), Survey of Adult Skills (PIAAC).

training received by workers in Spain and the average in developed countries, it is useful to look at the main factors that augment worker training.

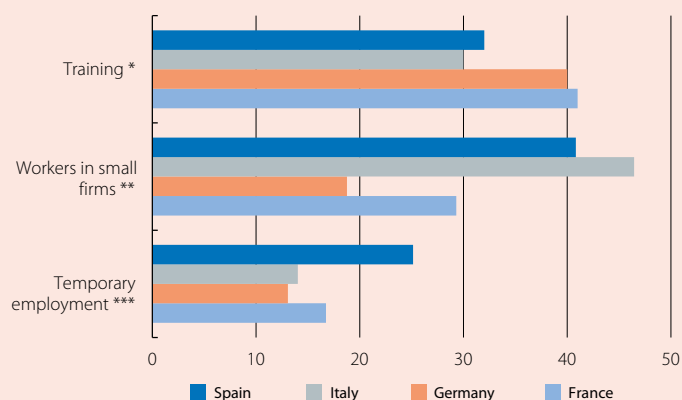
The literature highlights several aspects with a positive impact on on-the-job training: company size, innovative business, permanence of the worker-company employment relationship, international exposure and the educational level of the workforce.⁶ Of all these aspects, there are two that might play a decisive role in Spain: company size and the stability of the worker-company employment relationship.

First, the available evidence points to larger companies tending to provide more training as they benefit from lower fixed costs and find it less difficult to replace workers who are temporarily absent while being trained. The small size of companies in Spain compared with other EU countries could at least be part of the reason why workers receive less training.⁷

The employment relationship between workers and their employer can also affect the amount of training carried out. In this case, the longer a worker is expected to remain in a company, the greater incentive to invest in training, both on the part of the firm and the worker, since the investment can be optimised over a longer period. The high proportion of temporary employment in Spain (25%), far above the OECD average (11.4%), is therefore an evident deterrent to training.

The benefits of continued training on worker productivity are therefore additional reasons to conventional arguments in favour of increasing company size and reducing the share of temporary employment in Spain. Two challenges that should not be ignored.

Training, company size and temporary employment (% of total workers)



Notes: * Percentage of workers receiving training paid for by their employer in the previous 12 months.

** Percentage of workers in small firms (between 1 and 9 employees).

*** Percentage of workers with temporary contracts. Data from 2015.

Source: CaixaBank Research, based on OECD data.

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6. See Bassanini, A. *et al.* (2005), «Workplace Training in Europe», IZA Discussion Papers.

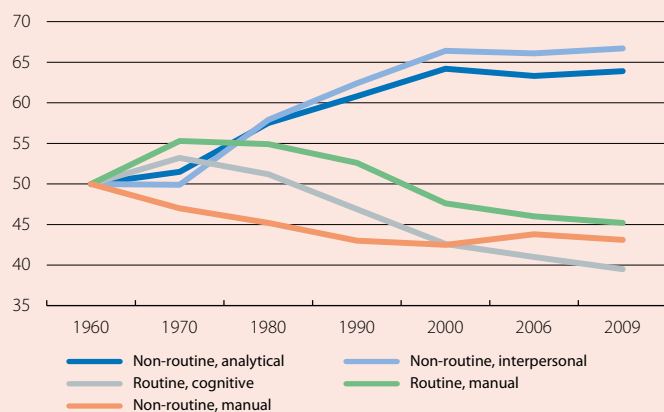
7. In Spain, 73% of people working for companies are employed by small or medium-sized enterprises while this percentage falls to 67% in the EU-28 (data from 2015, OECD). Spain has the EU's fourth highest percentage of people employed in companies with fewer than 10 workers (40.8%, 10 pp higher than the EU-28 average, according to Eurostat data from 2012).

Teaching to learn: education in the era of technological change

The term «industrial revolution» may conjure up pictures of 18th-century steam engines and cotton mills while the term «technological revolution» may suggest a futuristic world of flying cars. Nevertheless, the technological revolution is upon us. Over the past 50 years our economies have undergone a far-reaching transformation. They have gone from predominantly manufacturing-based to tertiary economies where services and the production and consumption of knowledge have prominent role. This process, known as the Third Industrial Revolution because of the role played by digital technology, has been preceded and accompanied by substantial developments in education. For instance, the percentage of adults with a secondary and/or tertiary education in the US has gone from around 25% in the early 1940s to over 80% today. The fact is that education goes hand in hand with technological change. It does not merely train present and future inventors but provides the whole population with the necessary tools to adapt to and make the most of new technologies. Riding on the back of digital technology, we might be on the verge of the Fourth Industrial Revolution, based on artificial intelligence. As in the previous revolutions, these new waves of technological progress will affect how education works.

Tasks in the US labour market

Index (50 = 1960)



Source: CaixaBank Research, based on data from Autor and Price (2013), «The Changing Task Composition of the US Labor Market: An Update of Autor, Levy, and Murnane (2003)».

One fundamental change brought about by digital technology is that we can now store and access an almost infinite amount of data. It is therefore impossible to think of education as merely a process of passing on information. Unlike the traditional emphasis on memorising facts, in a digital era with fast evolving technology, education must teach people how to learn. Although knowledge is just a click away, reaching it is not as easy as it looks. It requires certain competences such as being able to identify relevant information, interpreting, processing and, increasingly importantly, communicating it. Essential in such competences are critical thinking, problem solving, creativity and innovation, cooperation, a questioning mind and communicative skills. The demand for labour has actually reflected the importance of such skills for some time now. Autor and Price have analysed the types of tasks in the US labour market and how these have evolved over time.¹ As can be seen in the first chart, the labour market has gradually

abandoned manual routine tasks and replaced them with activities requiring analytical and interpersonal skills. Such trends have been amplified by improvements in automation, potentially resulting in the Fourth Industrial Revolution we mentioned earlier. As analysed in the article «Will the Fourth Industrial Revolution come to Spain?» in the Dossier of MR02/2016, technological advances in artificial intelligence and sensory capacities have the potential to automate more tasks and alter the world of work. Professions requiring emotional and creative intelligence will come to the fore: the skills pointed out above as a priority for the educational system.

Another key fact for the digital revolution is that we can now communicate and interact with an incredibly large number of people thanks to the expansion of the internet and social media. The low cost of this communication is one of the reasons for the recent boom in the gig economy.² The number of freelancers employed by companies has risen, such as journalists, while employment relations are carried out increasingly online (for instance, via Uber or Airbnb). Digital training is therefore vital for all workers as the internet is the way into a new job market. But the emergence of the gig economy can also result in less permanent and more diversified labour relations.³ Lifelong learning is therefore required to help workers constantly adapt. As explained in the article «Beyond qualifications: the challenge of career-long continued training» in this Dossier, the fact that most adult training is carried out between companies and employees with a long-term relationship is due to high training costs with returns that are spread over a long period of time. The less stable employment relations involved in a gig economy may therefore have an ambiguous effect. They might make employers less willing to contribute to their workers' training, even though employers

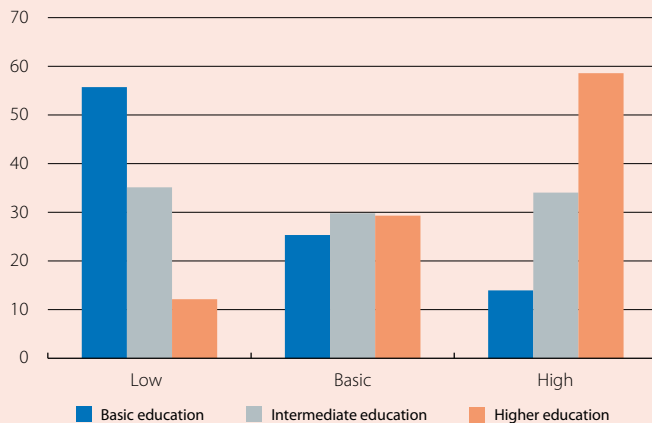
1. Autor, D. and Price, B. (2013), «The Changing Task Composition of the US Labor Market: An Update of Autor, Levy, and Murnane (2003)», MIT Worker Paper.

2. See Katz, F. and Krueger, A. B. (2016), «The Rise and Nature of Alternative Work Arrangements in the United States», NBER Working Paper. In the language of economists, the arrangement of workers into companies can be explained by the existence of transaction costs. The internet and social media reduce these costs, thereby encouraging the emergence of alternative work arrangements.

3. In other words, the same worker will work for more employers.

Digital skills of people aged 25 to 54 in Spain (2016)

(% of total individuals aged between 25 and 54)



Source: CaixaBank Research, based on Eurostat data.

are, traditionally, more able to afford the costs entailed. On the other hand, workers might gain more benefit from investing in their own training, encouraging them to train more. Lastly, one worrying phenomenon is that workers receiving more training throughout their careers already tend to have a higher level of formal education. This could magnify the consequences of not attaining a good level of education at a younger age. For instance, the second chart, with data for Spain, shows a significant gap between the digital skills of adult workers with a higher education and those with a basic education.

One obvious factor is that digital technologies have now become part of our daily lives. This means we all need at least a basic knowledge of how to use information and communication technologies (ICTs). We also need to train specialists to serve the sector. This is clearly one of the direct benefits of including digital technologies as part of the tools of

formal education. But beyond this direct benefit lies the debate as to whether using ICTs in the classroom could improve learning overall. For instance, distributing educational materials via videos and IT applications helps to tailor learning to each student. Moreover, as teachers are less involved in passing on information, they can devote more time to individually helping each pupil. Also, given that learning is a social process (empirical evidence shows that knowledge is acquired more effectively when it results from social interaction), the interactive nature of ICTs can therefore be particularly useful in increasing the number of potential social relations (for instance, via social media). Lastly, using digital tools in the classroom means that data on learning can be stored. This can then be used later by the scientific community to analyse which methods work best. So what does the evidence of ICT use in the classroom tell us? The numerous empirical studies have produced disappointing findings: ICTs do not seem to improve students' school performance.⁴ There are different reasons why these findings might not be conclusive.⁵ However, one interesting point resulting from this non-result is whether we are measuring educational performance accurately. In a changing technological environment, the skills which education needs to pass on (critical thought, creativity, teamwork, etc.) are particularly difficult to capture via standardised tests used to evaluate education. How to assess this correctly is therefore still of major concern.

Isaac Newton once said «if I have seen further, it is by standing upon the shoulders of giants». Today our giants are taller than ever. And smart education will help us see even further.

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4. See the review of the literature by Bulman, G. and Fairlie, R. W. (2016), «Technology and Education: Computers, Software, and the Internet», Handbook of the Economics of Education, Vol. 5. Regarding the impact of online teaching, the evidence also suggests that students achieve slightly better results with face-to-face learning than with distance learning. But as online courses are cheaper per student, they might still be cost effective.

5. For instance, for students to take advantage of using ICTs, school investment in ICTs needs to be above a minimum threshold and teachers need to be properly trained. Moreover, the real difference in students' exposure to digital technology may come from outside the school (home use of computers, mobiles, consoles, etc.).

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As of December 31, 2016

	MILLION €
Customer funds	303,895
Loans and advances to customers, gross	204,857
Profit attributable to Group	1,047
Market capitalisation	18,768
Customers (million)	13.8
CaixaBank Group employees	32,403
Branches in Spain	5,027
Self-service terminals	9,479

"la Caixa" BANKING FOUNDATION COMMUNITY PROJECTS: BUDGET 2017

	MILLION €
Social	304.2
Excellence in research and training	79.6
Raising awareness of culture and knowledge	126.2
TOTAL BUDGET	510

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