May 2015

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Executive summary

Insights

Asset Allocation: Amundi’s investment strategies

How will assets be allocated faced with the return of risk (economic, financial and political)?

Different types of risks are causing investors concern: a bond crash, the end of the cycle in the United States, a hard-landing in China, a Grexit, a Brexit, etc. Against this backdrop, should we review our asset allocation? Not based on the fundamentals, but portfolios should be prepared for renewed volatility.

Risk factors

Macroeconomic picture

Macroeconomic and financial forecasts

United States

1 United States: towards a recession?

GDP stagnated in the first quarter of 2015. The weather does not explain the entire situation. The dollar’s appreciation has an impact on activity that is comparable to a tightening of monetary conditions. Should we fear the end of the cycle? No, but the consensus is too optimistic, both for 2015 and 2016.

> FOCUS > What do the statistical approaches on growth in the second quarter of 2015 say?

2 US: the equilibrium real interest rate is lower than in the past

FOMC members are increasingly referring to a mechanical implementation of the Taylor rule when discussing the forthcoming direction of monetary policy. However, the real equilibrium rate, a key determining variable for the Taylor rule and thus central bankers, has dropped significantly in recent years. The scale of the increase in the fed funds rate, which has been postponed numerous times, will therefore be very slight.

3 Why does investment by US companies remain so low?

Despite the economic recovery underway in the United States since 2009, non-residential investment is in a slump. After nearly a decade of extremely accommodative monetary policy, this is surprising to say the least.
Credit

4 ECB’s QE proceeds at full steam but the bond market recently corrected: is the squeeze over?

The impressive size of the ECB’s extended purchase programme combined with negative deposit facility rates has already had a dramatic impact on sovereign bond yields and more pressure is expected to come over the coming months. Recent yield rise eased concerns on bond scarcity, but is this topic over?

5 European HY default rate perspectives

Among advanced economies the current low HY default rate “regime” is still persisting and is likely to rule the remaining of 2015, too. Over the last two quarters, however, it was in the Eurozone that the picture mostly changed.

> FOCUS > Trends in the European high yield market

Equities

6 Financial flows and European equity markets

Eurozone equities have behaved very well year-to-date, but their valuation has tightened. How can we explain such a situation? Whereas last month we said we were on the verge of a spectacular rebound in earnings, this time, we are leaning toward financial flows, which, after deserting the European markets en masse in the second half of 2014, have returned in force since the year began. Here, we will see who in Europe has profited most from these trends, and how the United States behaved over the same period.

Emerging markets

7 Emerging market sovereign debt: mitigating the serial default theory and identifying “stressed” countries

Even though emerging markets’ exposure to sovereign risk is higher overall than developed markets’ one due to common fragilities, their vulnerability in terms of potential default essentially depends on their economic profile. The developed model, allowing for heterogeneity in EM default patterns, highlights Argentina, Venezuela and Russia as being the most exposed countries, as of 2013 data.

> FOCUS > Modelling: Panel Smooth Transition Regression

Sectorial highlight

8 Low interest rates and Solvency 2: a toxic cocktail for insurers

Due to the decline in interest rates, economic solvency ratios have dropped by as much as 35bp during 2014. However, ratios remain at a comfortable level in most cases.
Asset allocation: Amundi investment strategies

How will assets be allocated faced with the return of risk (economic, financial and political)?

DIDIER BOROWSKI, Research, Strategy and Analysis – Paris

In recent weeks, the bond and equity markets have been in turmoil. The epicentre of the problem is clearly on the side of the bond market, where the spectre of a crash is haunting investors – especially since the Fed is beginning to worry openly about excessively low interest rates and the overvalued stock market. On the equity market, the rise in interest rates was investors’ chance to take their profits.

Market risks are being joined by economic risks: the end-of-cycle in the US and the hard landing in China. Finally, on the political plane, the risks of a Grexit and, more recently, a Brexit have come to the forefront. Should we fear a bond crash, Grexit or Brexit? In a nutshell, our answer is no. Having said that, investors should be prepared for increasing volatility.

Toward a bond crash?

False alarm or serious warning?

Without a doubt it is statements by US fund managers on the abnormally low interest rates and the bond bubble that are behind the recent correction, seen in most of the advanced countries. But what is getting the most attention is that it happened on the German bond market, because the Bund 10-year rate had fallen to 0.05%, and some were even expecting it to fall into negative territory, as we had already seen in Switzerland. In just a few days, it came back to nearly 0.8% (in trading on 7 May) before stabilising around 0.5%, while short-term rates stayed in negative territory.

Interest rates are still too low with regard to all the existing valuation metrics. However, unlike the equity markets, the bond markets cannot suffer a crash when the central banks are at work. The example of Japan shows the extent to which securities-buying programmes are an overly decisive factor for rates. In the eurozone, the ECB’s purchases will keep interest rates very low. The ECB bought only €110 billion in securities (out of a programme of €1100 billion). In other words, 90% of its securities purchasing programme still lies ahead.

All other things being equal, the imbalance between issuance schedules and demand for ECB securities clearly argues in favour of another downturn in German bond yields in the months to come.

The ECB has committed to continuing its QE until September 2016, even if the economy improves sharply. Indeed, it will take time to contain deflationary pressures. The recent rise in long-term rates illustrates the need for anchoring expectations with a long-lasting securities-purchasing programme. Because a failed QE (i.e. a sharp rise in interest rates or the euro) would quash the recovery and fears over the solvency of some States would surely resurface.

The curve steepens again in a gradual reflation phase

That said, regardless of any technical factors that many have caused the recent correction, it is important to note that the correction on the Bund is coming soon after an upward correction of inflation expectations. The five-year inflation swap in five years – a metric touted by Mario Draghi to measure market expectations – has risen sharply over recent weeks. It is striking to note that for the past 18 months, this metric has been closely correlated to oil prices. So everything seems to be happening as though medium-term inflation expectations depended on today’s oil prices...
It is clear that if the price of oil stabilises at current levels ($60), projected (year-end) inflation will be revised upward in the eurozone. But that is clearly unrelated to the medium-term inflation outlook. No more than the decline in oil prices is a vector of deflation, the rise is not a vector of self-sustaining inflation. The ECB will probably have to give more instruction on the fact that it is the trend in core inflation that counts above all. Yet on that side, we expect no notable acceleration by 2016. It will take more than the cyclical recovery that is expected to drive eurozone unemployment down in any lasting way. The second-round effects on wages cannot materialise in a high-unemployment environment. Not to mention that the recent rise in rates, the euro, and oil threatens to weigh down the economy in the nearer term...

What it means for the markets: long-term interest rates in Germany are not poised to come back up for good. Yet this does not mean they are going to fall back down to zero either. Indeed, low but positive bond yields would more closely match a period of gradual reflation.

Fed: toward recognition of excesses in the markets?

The US labour market has firmed up nicely over the past 18 months, and wages are beginning to simmer, especially with skilled jobs. Amid the slowdown in productivity, this means rising unit wage costs, which are a decisive factor in core inflation. Thus, the rest of the cycle should end up materialising in a rise in core inflation. That said, the "Core PCE" has slowed significantly in recent months. And most importantly, the soft patch on activity, seen in the first half of the year, will push the Fed toward prudence (see article 1, United States: toward a recession?).

Still, the debate over macro financial risks is certainly worth watching. A few days ago, Janet Yellen very openly expressed her concerns about the risk of an abrupt rise in long-term interest rates, specifically when the Fed decides to raise key interest rates. In normal times, the Fed’s objectives are macroeconomic only (inflation, unemployment) and it is the business of macroprudential policy to avoid “excesses,” specifically in leverage. That said, both Stanley Fischer and Janet Yellen have admitted in the past that a rise in key interest rates could sometimes be justified for reasons of financial stability. Therefore the Fed’s doctrine in the matter should be closely followed. The short portion of the interest-rate curve, traditionally very sensitive to economic data, could react if the Fed decided to include “extra-economic” factors in its reaction function. However, we are not yet at that point. Remember that Alan Greenspan had begun to worry about the equity markets overvaluation, four years before the IT bubble burst (his remarks about irrational exuberance go back to 1996).

What it means for the markets: unlike the eurozone, a bear flattening of the curve is still likely in the US in the months to come, with the start of monetary tightening that lies ahead. Long-term interest rates should remain contained.

An abrupt upward movement of long-term rates would be short-lived. The taper tantrum seen in 2013 is improbable. Given the lasting weakness of rates in Europe and the QE, many investors will be attracted by the rise in US bond yields. Ultimately, it is the dollar that should most certainly benefit from the reallocation of bond portfolios toward the Treasuries. And given the US economy’s sensitivity to the dollar, the more it appreciates, the longer the Fed will delay raising rates...

Greece: exiting the Economic and Monetary Union (Grexit)

Greece’s exit from the eurozone (Grexit) is highly unlikely, because the stakeholders are dead set against it. European authorities do not want to open the Pandora’s Box of an exit from the euro.

1 The core PCE deflator is the index of Personal Consumption Expenditure (excluding food and energy) in the national accounts; it is preferred over the traditional Consumer Price Index (CPI) for gauging inflationary pressures.
Relations between Greece and its creditors are certainly quite tense. But negotiations are ongoing. The risk of a technical default, the setup of capital monitoring, or more elections (even a referendum on Grexit) is considerably heightened. Public debt is unsustainable in the long term, and restructuring appears inevitable.

However, we still believe that the risk of an exit from the EMU or of a disorderly default is low: the surveys show that the Greek people are still quite attached to the euro, to the point that they will make some concessions. Stakeholders have an interest in continuing their negotiations. This year, the Greek economy may fall back into a recession, with the shock of confidence tied to political uncertainty. And the primary budget balance will probably fall into a deficit this year. The agreement, if there is one, will most likely be reached at the very last moment (end-June). Tensions may increase in the final negotiation phase.

What it means for the markets: even though the ECB’s purchasing should prevent contagion to the other bond markets, there may be unpredictable setbacks on peripheral sovereign spreads. Especially given the level of interest rates that have sunk very low (Spanish and Italian 10-year rates are lower than 10-year rates on Treasuries). In other words, the return of systemic risk related to the Greek situation is unlikely. But, we must prepare for a resurgence of volatility.

United Kingdom: toward an exit from the European Union (Brexit)?

The Conservative victory on May 7 caught all observers off guard who were not anticipating an absolute majority for either of the two major parties. In the wake of results, Prime Minister David Cameron, voted in for another term, confirmed his intention to organise an In/Out referendum on the European Union “by end-2017.” With regard to the legibility and credibility of economic policy, the removal of the fragile coalition is good news, because in that sense it is a vector for uncertainty that is disappearing. Furthermore, this explains the markets’ very favourable initial reaction (a rising currency, rebounding equity market and falling interest rates). Still, the referendum opens the door to uncertainty of another kind (whether or not to stay in the EU). In the polls – which we now know to be unreliable – there is no clear majority on the Brexit. Yet the economic consequences may materialise well before the referendum. They are mostly about confidence (British businesses, foreign investors), and are thus hard to assess. It is the market variables that will crystallise investors’ fears first.

What will this mean for the markets?

- Bond markets: the fiscal adjustment will continue, which is good news for government bond holders. The decline in the public deficit has already been spectacular (falling by more than half since its peak). The deficit, estimated at -4.1% of GDP by the European Commission over fiscal year 2015-16, is projected at -2.7% of GDP over 2016-2017 (the structural deficit would be scarcely higher, and it too would be down sharply). That said, if growth continues to soar, the labour market will tighten further, and inflationary pressures will end up intensifying (somewhat similar to in the US, due to wage pressures caused against a backdrop of weak productivity gains). The theme of a return to inflation could come back to centre stage even faster if the pound should depreciate...

- Foreign exchange market: the new uncertainty is likely to impact the pound in the medium run. Indeed, the current account deficit is 5% of GDP, and the income balance is ever worsening. The UK’s net foreign position has deteriorated quickly in recent years (from 0 in 2011 to -25% of GDP in 2014). In Q4 2014, the current deficit (-5.5% of GDP) was funded to 2.6% of GDP by net FDI inflows. In terms of FDI stock, the UK came in second worldwide, after the US. The bulk of investments are from the other European Union countries. These investment flows are very directly tied to the UK’s membership in the EU. Nearly half of British goods exports and more than one-third of service exports are to the EU. That FDI has just weakened, and the pound could depreciate quickly...
In the months to come, Prime Minister Cameron will seek concessions from Brussels, especially in terms of controlling immigration or safeguarding the City’s interests. As things stand, it is unlikely he will achieve his ends. The consensus that now prevails in Brussels is that the UK has more to lose by leaving the EU than the EU has by letting the UK go. Most economic analyses corroborate the one done in Brussels. So “negotiations” promise to be difficult for Mr Cameron. But he has time before him to find a modus vivendi.

Ultimately, we believe that Conservatives should actively campaign to stay in the EU. It is thus clearly too soon to worry about the potential negative consequences of Brexit.

Central scenario and asset allocations

- We have lowered our growth forecast in the US to 2.4% in 2015 and 2016. We continue to count on the US cycle to continue, though at a more moderate rate than the consensus.

- We have adjusted our growth outlook upward for the eurozone, but there, too, our growth outlook is still lower than that of the consensus, for both 2015 and 2016.

- Finally, although we are keeping our growth forecast for China unchanged, it is after adjusting it sharply downward since the start of the year, and substantially below the Consensus.

Ultimately, though we anticipate that global activity will continue to expand, it will be at a much more moderate rate than before the Great Recession.

Our scenario is not based solely on economic analysis. We have repeatedly said in these columns that it was global potential growth that was slowing down (weak gains in productivity, not enough investment spending to renew the capital stock, an aging population).

Yet on a global scale, public and private debts have continued to grow. Deleveraging of the world economy will have to continue over the next ten years, which – in a weakened growth phase — gives the topic of financial repression a bright future. If global inflation does not start back up, the central banks will have to maintain very accommodating monetary policies to facilitate deleveraging. Right now, no economy could withstand a sharp increase in real interest rates without going into a recession...

The combination of soft growth, controlled inflation (on average, in the major advanced countries), and surplus global liquidity will continue to reinforce the yield-seeking strategies.

From a strategic standpoint, we have no reason to question our asset allocation, which is very favourable overall to the equity markets and the credit market. This allocation, which has for many quarters been focused more precisely on the eurozone, spread products, and the short EUR, is not invalidated.

The signs of financial defragmentation are multiplying in the eurozone (the recovery of bank credit in the private sector and the decline in interest rates granted to SMEs are the most notable components). However, we see that this improvement is now priced-in GDP forecasts.

The economic surprise indice, which was in very positive territory since the start of the year, has become neutral in the Eurozone (see chart 2). Eurozone equity markets, which have had impressive performances since the year began (especially in comparison with the US equity market), may be subject to substantial profit taking if volatility increases.

Portfolios should be prepared for renewed volatility in the months ahead. In these conditions, we have decided, in the short term, to diminish the risk in portfolios, without compromising our allocation, which is favourable to the equity markets.
Before increasing exposure to risky assets, we must:

- in the eurozone, wait to see more tangible signs of recovery, especially with businesses (profits and investment).
- in the US, wait to see the recovery materialise after the soft patch of the first quarter.
- finally, in China, keep a watch out for signs of the economy stabilising after the monetary easing that has been adopted.

### ASSET ALLOCATION SHORT TERM OUTLOOK

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<th>Sovereign Bonds</th>
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<td>Eurozone (core countries)</td>
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<th>Corporate Bonds</th>
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<td>High Yield Europe</td>
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<th>Equities</th>
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<td>Europe excl. eurozone</td>
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<td>Japan</td>
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<td>US dollar</td>
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<td>Sterling</td>
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<td>Emerging market currencies</td>
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(--) Significantly underweighted (UW)  
(-) Underweighted  
( Neutral)  
(+) Overweighted (OW)  
(++) Significantly overweighted

### PORTFOLIO TYPE

**Equity portfolios**

- Reduction of risk:
  - Beta of portfolio neutral at best
  - More neutral geographical allocation
  - Prefer Eurozone equities
  - Stay long Japanese equities
  - Stay neutral to underweight US
  - Emerging markets: country selection is key
  - Within emerging markets:
    - overweight Mexico, Peru, India, South Africa, Indonesia and Thailand
    - neutral Brazil, GCC, Russia and China
    - underweight Turkey, Malaysia, Colombia, South Korea, Greece, Taiwan and Chile
  - No currency bias on the short term

**Bond portfolios**

- Preference for US vs. Eurozone
- Short duration on core Eurozone but long on peripheral countries
- Curve flattening trades
- Maintain overweight position in credit. Some preference for the US credit
- Overweight TIPS
- Emerging debt:
  - Prefer hard currencies debt (long USD)
  - Prefer local debt only on a case to case basis
  - Maintain long USD and GBP, short JPY and EUR

**Diversified portfolios**

- Risk reduction but remain constructive on equities
- Prefer Eurozone and Japanese equities
- Stay neutral US equities
- Neutral on EMG equities, prefer commodities consuming countries
- Maintain long position on corporate bonds (USD and EUR) for carry purposes
- Diversification into US credit
- Keep overweight position on sovereign bonds of peripheral Eurozone countries vs. core (i.e. Germany)
- Positive on emerging debt in hard currencies
- Maintain long USD and debt in hard currencies, short JPY and EUR
Risk Factors

**MAY**

**FED: A MISUNDERSTOOD MONETARY POLICY**

The labour market has recovered significantly over the last 18 months, and wages are beginning to simmer. The Fed is beginning to worry about the microfinancial risks of an abrupt rise in long-term interest rates in a context of overvaluation on the equities side. Yet the cyclical first-half “soft patch” will cause the Fed to take its time raising key interest rates.

**RISK LEVEL**

MODERATE RISK

**EUROZONE: AN EARLY END TO THE QE**

The ECB has committed to continuing its QE until September 2016, even if the economy improves dramatically. Indeed it will take time to contain deflationary pressures. Furthermore, the recent rise in long-term rates illustrates the need for anchoring expectations with a long-lasting securities buying programme. A failed QE (i.e. a sharp rise in interest rates or the euro) would quash the recovery. Fears over the solvency of some States would surely resurface.

**RISK LEVEL**

LOW RISK

**EUROZONE: OVERESTIMATION OF ECONOMIC GROWTH**

*(QE AND OIL)*

The EZ is enjoying a conjunction of positive factors: broad QE, depreciation of the euro, a decline in oil, and an easing of financial conditions. The recent rise (in oil, the euro, and interest rates) does not change the game. However, the Consensus has already quite clearly revised its growth outlook upward since the year began. From a market standpoint, the risk now is in being disappointed by the scope of the recovery. Changes in business investment, especially, will need watching.

**RISK LEVEL**

MODERATE RISK

**GREECE: EXITING THE ECONOMIC AND MONETARY UNION (GREXIT)**

The relationships between Greece and its stakeholders are tense. But negotiations are ongoing. The risk of a technical default, a restructuring of debt (which is unsustainable), the setup of capital controls, or more elections (even a referendum on Grexit) has increased. However, the risk of an exit from the EMU still seems low: polls show that the Greek population is still quite attached to the euro, to the point that the Greeks will make some concessions.

**RISK LEVEL**

MODERATE RISK

**UNITED KINGDOM: EXITING THE EUROPEAN UNION (BREXIT)**

The Conservatives’ sweep of the elections on May 7 means there will be a referendum on Brexit (one of the Cameron campaign’s key promises) «by late 2017», which could open the door to a referendum on Scotland’s status in the Kingdom (Scotland wants to stay in the EU at all costs). In the surveys, there is no clear majority emerging on Brexit. Thus the UK is moving into a phase of political uncertainty. But it is too soon to worry about the potential negative consequences of Brexit.

**RISK LEVEL**

LOW RISK

**OIL: CONTINUED REBOUND**

The rise in oil prices (nearly 50% since its low point at $45) is mainly a correction from an overreaction to the downside. On a fundamental level, the supply-demand balance continues to argue for a lower price than in recent years: on the one hand, because supply is structurally more important, and on the other, because demand will be lower (weaker global trade, greater energy efficiency than in the major emerging countries).

**RISK LEVEL**

LOW RISK

**CHINA: A SHARPER DOWNTURN**

China’s challenge is to control credit and shadow banking, reduce debt and doubtful receivables, and return to stronger productivity and growth potential. China has the means to support such a – long – transition, but the task is particularly difficult. The PBoC will pursue its monetary policy easing.

**RISK LEVEL**

MODERATE RISK

**EMERGING ECONOMIES: A MORE PRONOUNCED DECLINE IN GROWTH**

The end of the American QE did not drag down the emerging markets, and the expectations of a rise in US key rates later on – late-2015/early-2016 – seem well-anchored. Conversely, some countries’ fundamentals are worrisome: a severe recession in Russia, a recession in Brazil, a marked slowdown in China, inflationary pressures in certain countries, close ties with China, etc. To us, the risk of the downturn accelerating in 2015 for all of the emerging countries seems limited, but should be watched very closely.

**RISK LEVEL**

MODERATE RISK

**A BOND CRASH**

Long-term bond yields have rebounded sharply over recent weeks, specifically in the eurozone, and particularly in Germany. It seems the severity of the movement can be attributed to technical factors. Interest rates had fallen improbably low (0 in Germany for 10-year bonds). That said, the relative rarity of German paper will weigh down its yields. Given the portfolio-rebalancing impact, this should keep long-term bond yields from rising sharply in the rest of the eurozone... as well as the United States.
## Macroeconomic picture

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<thead>
<tr>
<th>AMERICAS</th>
<th>MAY</th>
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<tr>
<td><strong>UNITED STATES</strong></td>
<td>Gradual rebound after the sharp decline witnessed in Q1.</td>
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<td></td>
<td>&gt; GDP increased by 0.2% in Q1, dragged down by a decline in energy-sector investment and a poor showing from foreign trade. The figures covering the early part of Q2 that have already been released show an improvement, albeit at a somewhat disappointing rate.</td>
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<td>&gt; Households, which have considerably reduced their debt in the last few years, are nonetheless likely to continue to benefit from the improving job market and falling fuel prices.</td>
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<td>&gt; The recovery will continue in 2015, but the pick-up will be limited by persistently weak investment, the impact of the rise in the dollar and the continued sluggish wage trend.</td>
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<td>&gt; The Fed will normalise its policy, but very slowly: the first rate increase might not come until the end of 2015.</td>
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<th>RISK FACTORS</th>
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<td>&gt; Growth potential stunted for the foreseeable future (“secular stagnation”)</td>
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<td>&gt; Contagion of the emerging world’s economic and/or financial hardships</td>
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<td>&gt; Excessive rise in the dollar</td>
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<th>BRAZIL</th>
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<td>&gt; The COPOM voted to increase rates by another 50 bp, which puts the Selic at 13.25%. However, the most recent quarterly inflation report, published in March by the BCB, leads us to believe that this is the end of the cycle.</td>
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<td>&gt; Despite an extremely negative economic and political backdrop, Brazil continues to enjoy high capital inflows, which are doubtless motivated by a strong carry effect.</td>
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<th>EUROPE</th>
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<td><strong>EUROZONE</strong></td>
<td>Continued recovery, sustained by the evolution of the monetary and fiscal policy mix.</td>
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<td>&gt; Initial Q1 figures are encouraging. Consumption, in particular, reacted well to the decline in oil prices, while bank lending is also sending encouraging signs.</td>
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<td>&gt; The recovery will continue in 2015, underpinned by the ECB’s highly accommodating monetary policy, the scaling back of austerity policies and the continued positive impacts of the declines in the euro and oil prices.</td>
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<td>&gt; Inflation will only increase very slowly. The economic upturn and the ECB’s asset purchase programme should nonetheless prevent a self-sustaining deflationary spiral.</td>
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<td>&gt; Political risk remains high (Greece, and even Spain at the end of the year).</td>
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<td>&gt; Increasingly intense deflationary pressures</td>
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<td>&gt; Political risk (rise of anti-institutional parties at elections slated for 2015)</td>
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<tr>
<th>UNITED KINGDOM</th>
<th>Continued recovery despite the disappointment of Q1 (GDP growth of just +0.3%).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; The ongoing recovery should continue in 2015. Increased consumption and the rise in real estate (despite a slowdown) will remain important factors. Increased business investment should enable gradual rebalancing. The improved economic backdrop in the eurozone will be beneficial to UK exports.</td>
</tr>
<tr>
<td></td>
<td>&gt; The job market is improving: real wages are finally rising. The drop in inflation reduces the urgency for higher key rates, which are unlikely to occur before the end of 2015.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>ASIA</th>
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</thead>
<tbody>
<tr>
<td><strong>CHINA</strong></td>
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<tr>
<td>&gt; In China, signs that activity is slowing down are becoming increasingly apparent – at +7%, Q1 GDP growth hit a six-year low, the decline in the HSBC Manufacturing PMI continued in April, industrial output and retail sales were below expectations and, finally, the trade surplus contracted.</td>
</tr>
<tr>
<td>&gt; Faced with this significant slowdown, the Chinese authorities are continuously ramping up their measures to stimulate the economy, including reducing the reserve requirement ratio, and cutting the required downpayment when purchasing a primary residence. Furthermore, rumours of a possible QE by the PBoC have filtered through and, even though the Chinese authorities immediately denied it, such a scenario cannot be counted out.</td>
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<table>
<thead>
<tr>
<th>RISK FACTORS</th>
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<tbody>
<tr>
<td>&gt; Quicker than expected deterioration in loan quality</td>
</tr>
<tr>
<td>&gt; Drop in external demand</td>
</tr>
<tr>
<td>&gt; Increasing deflationary pressures</td>
</tr>
</tbody>
</table>

| **INDIA** |
| > In India, the policy mix seems to be working. Despite the inclement weather conditions, inflation and activity have held up. |

<table>
<thead>
<tr>
<th>RISK FACTORS</th>
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<tbody>
<tr>
<td>&gt; Rise in commodity prices</td>
</tr>
</tbody>
</table>

| **JAPAN** |
| > Gradual recovery following disappointing figures |
|  | > After two negative quarters, growth became slightly positive in Q4, but investment remains sluggish. |
|  | > A few signs of improvement are appearing in terms of wages (but primarily at large companies). |
|  | > The increase in income, the drop in oil prices, the government’s stimulus plan and “wealth effects” associated with the rise in equities should allow consumption to increase gradually. |
|  | > Due to the improvement in the economic outlook and the stability of inflation expectations, an extension to the BoJ’s asset purchasing plan does not seem imminent. |

<table>
<thead>
<tr>
<th>RISK FACTORS</th>
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<tbody>
<tr>
<td>&gt; Exposure to the slowdown in China</td>
</tr>
<tr>
<td>&gt; Inflation back in negative territory</td>
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</tbody>
</table>
Macroeconomic and financial forecasts

MACROECONOMIC OUTLOOK

- United States: the expansion phase is not over yet. After rebounding significantly in Q2 and Q3, economic activity slowed down in Q4, and stagnated in Q1. The environment still favours a continued increase in consumption (improvement on the labour market, lower oil prices) and a rebound in corporate investment (following the sharp decline in the energy sector). Low oil prices have caused inflation to fall significantly, although other disinflationary factors are also at play (rising dollar, continuing poor wage dynamics).

- Japan: a slow exit from deflation. After two quarters of recession, growth was again positive in Q4. Changing wages is the key to the recovery, after households saw their purchasing power erode (increase in the price of imported products due to the decline of the yen and the VAT effect).

- Eurozone: recovery against the backdrop of very weak inflation. The figures are gradually improving. Faced with the risk of deflation, the ECB has launched a major asset purchasing programme. The eurozone should see an increase in political uncertainty (continuing impasse in Greece, elections at the end of the year in Spain and Portugal).

- Brazil: the figures from recent months are far from encouraging and the level of interest rates is not likely to help the recovery. In December, we were forecasting a recession with negative growth of 0.5%. We are revising our forecast down and are now expecting a deeper recession, with a 1% contraction.

- Russia: The Central Bank of Russia cut its key rate by 150bp, from 14% to 12.5%. The divergence between the Fed and the other advanced economies’ central banks and the better growth perspectives will continue to underpin the US dollar, even if the room for appreciation is lower than some months ago.

KEY INTEREST RATE OUTLOOK

- FED: the first fed funds hike will occur at the end of 2015, partly because of political reasons. The tightening cycle will be slow and its amplitude limited.

- ECB: the ECB will buy €60 bn per month in assets including sovereign bonds until September 2016, and potentially for longer if the inflation enough has not improved enough. It will keep a zero interest rate policy for years.

- BoJ: the qualitative and quantitative easing (QQE) policy will last for long.

- BoE: the first BoE hike will happen after that of the Fed.

LONG RATE OUTLOOK

- United States: the rise of US long-term interest rates will be slow and limited. The traditional bear flattening, associated with a rise in key rates, already began and will continue, in particular on the short-end of the curve.

- Eurozone: after the rise of long-term yield of core countries, we believe that the downward pressure linked to the ECB’s QE will resume. Peripheral spreads will tighten further.

- United Kingdom: the rise of UK long-term interest rates will be slow and the bear flattening will continue.

- Japan: the BoJ controls all the Japanese yield curve. As long as QE continues, there is no reason for rates to move significantly.

CURRENCY OUTLOOK

- EUR: still downside bias on the EUR/USD as the non-Eurozone investors will sell their Eurozone government bonds to the ECB than the Eurozone investors (regulatory constraints). The EUR/USD parity should come back to a trading range 1.00/1.10.

- USD: the divergence between the Fed and the other advanced economies’ central banks and the better growth perspectives will continue to underpin the US dollar, even if the room for appreciation is lower than some months ago.

- JPY: the yen is expected to continue to weaken, because of the aggressive BoJ policy and of the weak macroeconomic developments.

- GBP: moderately to the upside, versus the euro. Fundamentals are improving more quickly in the United Kingdom than in the eurozone.
Activity stagnated in the first quarter of 2015. The slowdown was partly expected, due to the harsh winter. Last year, growth fell into negative territory and then rebounded sharply in the second quarter. Still, the weather does not explain the entire situation – far from it. The dollar’s appreciation drags down growth directly (via its impact on exports) and indirectly, via its negative impact on corporate margins, which in turn weigh down business investment. In fact, then, the dollar’s appreciation has an impact on activity that is comparable to a tightening of monetary conditions.

Meanwhile, consumer spending remains solid, but the savings rate is rising in spite of the improvement seen on the labour market, the downturn in oil prices, and an asset base (finance and real estate) that is gradually returning to its 2007 peak. Behind the observed cyclical slowdown, it is the end-of-cycle question that is now being asked. For US activity has been rising steadily for the past six years, which makes for a very long expansion cycle with regard to the average post-war cycle. That said, any country can have quarterly setbacks, and they do not necessarily mark a downturn in the cycle. So what are we dealing with?

**A cycle that is unique in post-war history**

In practice, the length and scope of the cycle must be considered at the same time. Despite the length of the expansion cycle, this recovery is proving to be the softest in post-war history. Nearly seven years after the start of the “Great Recession,” economic activity is not yet back to its “potential” (i.e. the United States still has a negative output gap). This is unprecedented in the history of post-war cycles. No doubt one would have to consider the 1930s to find an episode of this kind (though that era’s statistical system provides an inadequate basis for measuring growth potential and making any comparison).

Most components of final demand have taken longer than in a traditional cycle to regain their pre-crisis level. This can be explained by the nature of the Great Recession. Indeed, it takes much longer to rise out of a recession when it is accompanied by a banking and financial crisis. The long-term work done by C. Reinhart and K. Rogoff on the impact of economic and financial crises does much to inform this point: “GDP growth and housing prices are significantly lower and unemployment higher in the ten-year window following the crisis when compared to the decade that preceded it”. In terms of cycle, we could probably interpret their remarks by saying that it takes more than one decade to close the output gap.

Based on the CBO estimates on potential GDP and its pace of growth, and upholding our own growth outlook, the output gap is not expected to close until 2019! In the 1930s, the Fed waited until 1937 to start tightening its monetary policy; history holds that this was an error because the tightening triggered another recession.

Comparisons with past post-war cycles should be made cautiously. Furthermore, that is what makes the current situation so hard to analyse. It is now impossible to tease apart what belongs to the economic cycle (direct and indirect impact of dollar trends or falling oil prices, for example) from more structural factors (lower potential growth due to the crisis).

Indeed, it is hard to explain in this cycle why business investment has not been more dynamic in spite of especially favourable conditions (high profits, low interest rates) and an aging capital stock. The slowdown in productivity gains (observed) and the weak investment dynamic bode ill for future growth potential, even before considering the impact of the aging population. Ultimately, cyclical and structural factors are working together and cannot be untangled, given the singularity of the current cycle.
> What do the statistical approaches on growth in the second quarter of 2015 say?

The purchasing managers’ indices (ISM, PMI, etc.) used by most economists to assess very short-term growth did not predict the scope of the slowdown seen in the first quarter.

Therefore it is useful to look at other approaches. Abundant empirical literature has developed over the past 15 years to statistically infer the current quarter’s growth using economic data published over that same quarter. The work done by regional Fed gives a good illustration. Thus we can cite:

- The index calculated by the Chicago Fed using a set of 85 existing monthly indicators. It is a matter of extracting the «common component» from this set. This index (built to be less than zero when growth falls below its potential) shows that Q2 started out with slower than potential growth (estimated at 1.7% by the CBO in 2015).
- The Atlanta Fed’s work that developed a method to extract an estimate «in real time» of the current quarter’s growth using the highest-frequency data (here too with a purely statistical approach). The advantage over the previous method is that the data that are still missing do not prevent a very regular update of the estimate. The statistical information is continually incorporated into calculations for assessing GDP growth.

The method developed by the Atlanta Fed deserves all the more attention because it correctly estimated growth in Q1 (0.2% vs. 1.0% expected by the consensus). Today, this indicator (which has been available for Q2 since the beginning of May) shows growth of around 0.8% on an annualised basis for Q2! In both cases, the current consensus appears much too optimistic for the second quarter (still with 3% annualised growth anticipated in Q2).

These are not predictive models: they are not useful for ascertaining momentum in economic activity beyond the current quarter, and cannot be substituted for an analysis of the determining factors of demand (or supply). Yet their contribution is not insignificant. First, because, in periods of structural change, the traditional forecasting models (calibrated on past data) are more fragile. Second, because growth (yearly average) for the current year is more than 4/5ths known by the end of the first half. At this point in the year, projections for the second half weigh more heavily on the following year’s growth (yearly average) than on that of the current year. Finally, statistical approaches give valuable insight on the «surprise» in store for the financial markets (via its impact on monetary policy anticipations).

Consumer spending and residential investment: the last leg of the cycle?

The drop in corporate profits, which is in large part tied to the dollar’s rise, does not necessarily signal the end of the business cycle. It may presage a rebalancing move in the share of wages in added value.

Insofar the investment recovery has been soft in this cycle, despite record profits, investment spending will stay flat with the turnaround in margins. That said, even if the investment rate is at its highest, there has been no over-investment in the United States, except for the energy sectors (the correction of this over-investment is the reason for its decline in Q1). For production facilities are aging, and businesses must continue to invest, if only to keep the capital stock in shape. In the end, everything will depend on the trend in global demand. In an environment where external demand will be less dynamic (slowdown in global trade, appreciation of the dollar), the key clearly lies with global demand.

- The labour market is still healthy: The improved situation on the labour front is probably the most convincing element for the US economy. The indicators built by the regional Feds, which summarise the trends in many, many variables, continued to improve over Q1.
- Purchasing power: a supporting factor. The compensation component of the Employment Cost Index (ECI) accelerated (+0.7% in Q1 after +0.5%
in Q4), despite the stagnation in activity and the downturn in profits. It is a much more reliable measure, on the macroeconomic scale, than hourly earnings from the monthly jobs report. This latter measurement, which shows that the wage increase is slowing, is in fact biased, since it mainly concerns unskilled jobs. Indirectly, this means that the labour market’s vigour is beginning to have an effect on certain job segments (skilled jobs). In real terms, acceleration of compensation is also notable, even without factoring in the decline in oil prices (which is temporarily boosting purchasing power).

If we add job creation to the increased compensation, the rise in total payroll promises to be brisk. In other words, added value sharing is rebalancing in favour of consumers (and probably the middle class). Job creations, higher wages, and the drop in oil prices (to which consumers are very sensitive) are the reason for the high consumer confidence, which is at its highest level since 2007.

- Property effects: still on the docket. The stock market has been in a stall since the year began. However, net household wealth (as a % of GDI) is close to its 2007 high. The rise in the savings rate in Q1 (from 4.5% to 5.5%) seems temporary to us (see graph). The increase in households assets is on a fairly solid base. Though equities look overvalued with regard to traditional metrics (PE or cyclically-corrected PE), the same cannot be said for real estate, which is playing a larger role in consumption.

- Residential real estate: a long haul engine. Although the household accessibility index has fallen in the past two years, it is still 30% higher than its long-term average, despite the rise in housing prices. Yet the share of residential investment in GDP (3.3% in early 2015) remains decidedly below its long-term average (4.6%). We estimate it will take several more years to normalise the situation, given the creation of new households. Thus residential construction should contribute positively to growth, for at least as long as financial conditions are favourable.

Inflation and monetary policy: what is the consequence?

Core inflation is very low and has even been slowing down since the year began. That said, the start of acceleration in wages that we are seeing, paired with a slowdown in productivity, could soon drag down unit labour costs. On a 12 month horizon, then, it is likely that upward pressure will be seen on core inflation (which will nonetheless stay well below the Fed’s target). Such a movement, combined with the impact of the rise in oil prices, would be enough to encourage the Fed to opt for “less-accommodative monetary conditions” by raising its key interest rates. But before it does, the Fed should make sure that consumption is solid. It will be prudent rather than proactive. The spectre of the 1937 monetary policy error continues to loom over the Fed. The Fed will not take the risk of triggering a too-quick tightening of monetary conditions, because the economy is too fragile to bear too rapid a rise in real interest rates.

Ultimately, the first quarter is a real soft patch, which is probably not finished questioning economists about the forces at work. The consensus for 2015 growth (at 2.8%) does not factor in the persistent weakness in activity in Q2. However, it seems too soon to us to be counting on an end to the cycle. Rebalancing the added value sharing in favour of wages should allow consumer demand to drive growth and push businesses to continue investing (accelerator effect), starting in the second half. From a fundamental viewpoint, there is no reason the US economy should fall into a recession (unless bond yields soar or the equity market plunges). There are no excesses to purge (neither on the side of investment nor on the side of private debt). Yet there is also no (or no longer) any reason for activity to grow much faster than the potential. The consensus among economists seems too optimistic, for both 2015 and 2016.
US: the equilibrium real interest rate is lower than in the past

NICOLAS DOISY, Strategy and Economic Research – Paris
BASTIEN DRUT, Strategy and Economic Research – Paris

Returning to the Taylor Rule to calm the « Audit the Fed » movement

Recently, members of the Fed repeatedly mentioned using (and returning to) simple monetary policy rules, such as the Taylor Rules (Janet Yellen on March 27, James Bullard on April 15, Loretta Mester on April 16, Eric Rosengren on April 16, etc.). This cannot be a coincidence, particular given that the formula they choose is often identical, even though there are many ways to write Taylor rules:

$$ R_t = R^* + \pi_t + 0.5 (\pi_t - 2) + (U^* - U_t) $$

where $R_t$, $R^*$, $\pi_t$, $U^*$ and $U_t$ respectively represent the fed funds rate, the equilibrium real interest rate, inflation, the equilibrium unemployment rate (NAIRU), and the unemployment rate.

With the 2016 Presidential election on the horizon, one cannot help seeing in this return to the Taylor rule a pro forma concession to the supporters of the « Audit the Fed » movement, who want the U.S. Congress to have its say in American monetary policy, and believe that policy should be founded more on simple, mechanical monetary policy rules, such as Taylor rules. We reiterate here that Janet Yellen has said several times that she is against auditing the Fed.

The concession is only pro forma, because the equilibrium real interest rate and the equilibrium unemployment rate are two unobservable variables. Even if they return to a Taylor rule, the members of the FOMC will retain some elbow room, by exploiting the fact that the equilibrium real interest rate and the equilibrium unemployment rate vary over time. To take one example, in her March 27 speech (« Normalizing Monetary Policy : Prospects and Perspectives »), Janet Yellen indicated that by setting these two variables at 2 % and 5.5 %, respectively, then the fed funds rate should be at almost 3 % right now (Taylor rule 1 in the graph opposite). But she also explained that the Fed is now assuming that both variables are currently at 0 % and 5 %, respectively, which would justify a fed funds rate at around 0.25-0.50 % currently. This rule would indicate that the fed funds rate would be around 0.75 % at end-2015, 1.50 % at end-2016, and 2 % at end-2017 (Taylor rule 2 in the graph opposite).

It is clear that estimating the equilibrium interest rate is crucial to understanding American monetary policy in the years ahead. Below we will examine the factors which indicate that it is lower than before.

Natural rate of interest vs equilibrium real interest rate

The natural rate of interest is generally defined as the short-term real interest rate that allows economic activity to reach its potential (see the reference paper by Thomas Laubach and John Williams, « Measuring the Natural Rate of Interest »). It is interesting to note that over the past few years, the Fed has made greater use of the term « equilibrium real interest rate », which it defines as the real fed funds rate consistent with « the economy achieving maximum employment and price stability over the medium term. »

The equilibrium real interest rate corresponds to the first term of the Taylor rule equation. Economic theory holds that it is not constant over time, and that it fluctuates based on changes in agents’preferences and technological changes, and more generally, based on « economic fundamentals ».

Laubach and Williams developed a methodology using Kalman filters, which simultaneously estimates the natural rate of interest and potential GDP growth.

Our work indicates that the sustained increase in the capital intensity of production appears to be forcing a downward trend in the real prime interest rate towards lower levels, assuming equal growth.
Based on their estimates (see graph opposite), the natural rate of interest is slightly below 0 %. However, as shown in a Fed study (« Estimating Equilibrium Real Interest Rate in Real Time », Clark and Kozicki, Kansas City Fed), there is serious uncertainty about how to estimate parameters when applying the Laubach-Williams methodology.

As various members of the Fed including Janet Yellen have stated, there are reasons to believe that the equilibrium real interest rate dropped during the Great Recession. These reasons include the high degree of uncertainty regarding economic forecasts, which limits investment decisions for businesses and major purchasing decisions for households, due to:

• stricter conditions for households to access real estate financing
• the need for households to deleverage
• historically tight fiscal policy

The equilibrium real interest rate is lower than before

Besides the fact that it is required reading at the Fed, the John Taylor rule in its original formulation (i.e. as presented in his original article1) is very interesting in how it links together the policy rate, inflation, and growth (instead of unemployment2). This is why this formulation is used here to explore and estimate the natural real interest rate (i.e. underlying or equilibrium):

\[ r = p + 0.5y + 0.5(p - 2) + 2 \]

where \( r \) is the policy rate, \( p \) inflation over the previous year, and \( y \) the difference between current and potential GDP growth. Furthermore, the inflation target is explicitly set at 2 %, while the real interest rate is explicitly set at the same 2 % level, with the understanding that this version’s estimate period covers the years 1984-92.

Assuming that potential growth in the U.S. economy is about 2 % (a figure that many estimates agree on), the year 2014 might, with an initial estimate of 2.4 %, be characterised as having a slightly positive output gap, but ultimately is close to its long-term equilibrium. In a literal application of the rule, the slight « surplus » growth relative to 2 % potential appears to be 20 bps of monetary tightening, which would offset a 25 bps decrease justified by core inflation that is undershooting its target by ½ %, after coming out to about 1½ % for the year 2014. All in all, this simple analysis of the Taylor rule tells us that in 2014, the Fed’s nominal policy rate should be (a little over) 3½ %, or an equilibrium (or underlying) real rate of 2 % (as normatively suggested by John Taylor) plus core inflation (not counting energy and food) of 1½ %.

Another way to employ the Taylor rule is to assume that the 2 % figure retained by Taylor for his equilibrium real rate is arbitrary, and to instead try to deduce it from where the U.S. economy is in its long-term equilibrium, with inflation and growth practically at their respective targets (2 % in both cases): this gives an equilibrium real rate equal to the opposite of the inflation rate, namely -1½ %. In fact, a series of econometric analyses of long-term relationships between the policy rate, inflation, and growth (as well as the rate of return of capital and the distribution of value-added between production factors) seems to confirm the idea that the equilibrium rate is significantly negative3.

2 Besides faithfulness to the original, opting for output growth (rather than unemployment) sidesteps problems of how to fairly distribute value-added between labour and capital, i.e. with stable shares set according to productivity gains by each production factor on average. In simple terms, the original Taylor approach assumes the stability of labour and capital shares of value-added, an assumption implicitly made by the widespread choice of a macroeconomic Cobb-Douglas function. All of the findings in this article fit into an analytical framework, ensuring their faithfulness to the original formulation of the Taylor rule.
3 A detailed technical and analytical presentation of these econometric findings will be presented in a Focus to be published soon.
Thus, an econometrically simple linear model makes it possible to show a correlation ranging from 45 % to 60 % between the real policy rate (i.e. minus core inflation – not counting energy and food – over the previous year) and the GDP growth rate since 1960 and 1985, respectively. The various models and estimation methods are very informative in that they also indicate that since 2000, the Fed has needed to keep its policy rate at a level at least 2 % lower (compared to what it would have been over the period preceding 2009) to obtain the same growth rate/inflation rate. In simple terms, inflation is far from sufficient to lower the real policy rate below the level that would allow activity to accelerate, which would appear to be about -2 % or so (if not -3 %).

Likewise, an econometrically similar model shows that, in a slightly modified version of the Taylor rule (one that takes into account the growth of apparent productivity gains from capital), the Fed’s policy rate is in line with the economic rate of return of installed productive capital; this means, in particular, that at its current level, the Fed’s policy rate does not appear to be accelerating or slowing the profitability of capital compared to its equilibrium trend. Combining the second finding with the previous one (in which the Fed must keep its policy rate 2 % or 3 % below the level historically required to keep price growth and production growth close to their respective trends) indicates that surplus production capacities still persist. This is because combining the findings indicates that the sustained increase in the capital intensity of production (i.e. the stock of capital relative to production) appears to be forcing a downward trend in the real (i.e. inflation-adjusted) prime interest rate towards lower levels, assuming equal growth.

**Inflation is too low to offset a policy rate that is too high, even at 0 %, which raises a monetary policy dilemma for the Fed**

The observation that, at -1½ % using core inflation, the Fed’s real policy rate is too high, proceeds logically if not mechanically, from inflation being not high enough, because the nominal policy rate is stuck at 0 % and may have trouble dropping significantly into negative territory and staying there a while. This impasse seems to call for the reactivation of the substitute traditionally used by the Fed to overcome the obstacle of the zero lower bound, namely quantitative easing. However, as demonstrated by the impact of QE-2 and especially QE-3 (as well as that of the « Taper Tantrum », as a reaction), this strategy tends to inflate financial bubbles, and thereby financial instability, potentially causing the Fed to fail to meet its other mandate.

To that end, the harmful side effects of this purely monetary reflation strategy indicate the need to complete the American macroeconomic policy mix with at least two additional tools:

1. fiscal stimulus to complement the continuation of monetary accommodation, and for good measure and to strengthen the inflationary effect of that fiscal stimulus,
2. a strengthening of financial regulations.

As these two changes are still remote (assuming they are politically feasible), the status quo seems to represent the best option for the Fed. Otherwise, given the structural elements listed above, continued monetary tightening at this point would bring the risk of slower growth and inflation.

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4 Likewise, in 2001-04, the Fed had to keep its policy rate about 1 % below what it had previously been doing (i.e. in the absence of the long-term consequences of the financial bubble of 2000 bursting) to maintain the same inflation/growth combination.

5 This is done by introducing apparent productivity gains from capital into the regressions (or Y/K where Y represents GDP and K the capital stock) which proves to be the inverse of the capital intensity of production (or K/Y, meaning the quantity of capital per unit produced). Having done this, possible distortions of the distribution of value added between capital and labour are reintroduced into the analysis, meaning the possibility that the actual remuneration of either one of these factors is less (or greater) than what its productivity would justify (instead of the rule of equalising the remuneration of the factors at their marginal productivity specific to the classical macroeconomic Cobb-Douglas production function). From this perspective, it is the same approach as substituting the unemployment rate for the growth rate, as the former may contain distortions of the sharing of value added that production growth (by definition) does not take into account.
In any event, in the absence of short-term inflationary pressure (as the risky case is actually assumed to be the opposite one, with possible second-round effects from the drop in energy prices), there is a great risk of seeing the current real rate increase when it should be staying at its current level, or even decreasing. To that end, besides a possible overestimation of the neutral rate by Janet Yellen (who puts it at 0 %, following on from the work of John Williams, whose methodology is « mechanistic » where we see it being around -2 % to -3 % instead), choosing a NAIRU of 5½ % seems just as arbitrary, as it underestimates underemployment and therefore, the chronic negative demand effects associated with a low (full) employment rate of the working-age population (and not the active population, the fraction of that population that is not discouraged enough to leave the labour market).

The harmful side effects of this purely monetary reflation strategy indicate the need to complete the American macroeconomic policy mix with at least two additional tools:
1. fiscal stimulus
2. a strengthening of financial regulations

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\[ ^6 \text{Indeed, in his work with Laubach, Williams uses a Kalman filter to extract estimates of the natural real rate and the potential growth rate, an agnostic method as it only requires technical settings that are complicated to economically justify and sidesteps all theoretical modelling and considerations.} \]
Despite the economic recovery in the United States underway since 2009, business investment is in a slump. This is puzzling after nearly a decade of extremely accommodative monetary policy: the fed funds rates have been virtually zero for seven years and the Fed has purchased $3.5 trn in assets since late 2008. In the two previous cycles, the Fed raised its Fed funds rate around two years after the resumption of non-residential investment. While the Fed will move toward hiking the fed funds rates in late 2015, private sector non-residential investment still accounts for only 12.7% of US GDP, well below the highs of previous cycles, and even contracted in Q1 2015 (its worst quarter since 2009). We therefore feel justified in deploiring the fact that such aggressive monetary policy has had so little impact on private investment.

The environment is favourable

Corporate fundamentals are enjoying overall good health and are in no way impeding a dynamic recovery in investment. Corporate earnings posted strong growth in previous quarters: today profits make up more than 10% of GDP, an unprecedented level. In addition, margins are at record-setting highs. Balance sheet items are also favourable: debt remains far below peak cycle levels and cash on hand has reached amounts that have never been seen before.

Furthermore, financing conditions via bank lending and especially via the markets have been very accommodating. Bear in mind that US corporations get their funding mainly through the bond market. The transmission channels of monetary easing are therefore more efficient than in Europe. What’s more, corporations have enjoyed stronger investor appetite, stimulated by a low rate environment and ample liquidity. Financing on the bond market over the past few years has been easy and comparatively cheap.

Businesses have been able to raise massive amounts of capital on the financial markets

If measured only by the massive amounts of capital companies have been able to raise over the last few years, the Fed’s accommodative monetary policy stance has been very effective:

- On the primary bond market, the volume of new non-financial issues set a record in 2014 at more than $1.1 trn. The size of the IG bond market has almost doubled since the collapse of Lehman Brothers, reaching $4.7 trn last year. As a result, there has been a sharp increase in gross corporate debt in many sectors of the US economy.

- On the equity market, businesses are increasingly turning to share issues for funding, with more than $300 bn raised in 2014. These issues were mostly the work of existing listed companies.

Relative to the massive amounts of capital raised, investment expenditure has proved to be something of a disappointment.

However, the rebound in business investment remains disappointing

It is very important to note that businesses have widely different attitudes about investment depending on the sector. Although some sectors have levels of investment far above their pre-crisis levels (mining sector, agriculture, natural gas and electric power suppliers), other sectors have levels of investment that are well below their pre-crisis levels (real estate, accommodation and restaurants, and water supply).

As a side point, it has to be mentioned that the mining sector, strictly speaking, is responsible for at least 15% of the increase in non-residential investment since
the all-time low recorded in Q4 2009 and perhaps significantly more if you factor in all the ancillary activities. Falling oil prices and, more broadly, the uncertainty about their future will weigh on investment in the mining sector.

In light of the modest increase in business investment expenditure, we might reasonably question the usage of the capital that has been raised.

**Businesses have primarily shown a preference for share buybacks...**

Businesses have piled up record amounts of cash on their balance sheets over the past few years, reaching $2 trn at the end of 2014 (vs. $820 bn in 2006). A significant portion of this liquidity is frequently held overseas to avoid double taxation of profits. This trend is expected to intensify unless the US authorities adopt a more stringent tax system. This cash is concentrated primarily:

- in the high-tech (38% of the total), healthcare (14%), convenience goods (9%) and energy (8%) sectors;
- in companies such as Apple ($147 bn), Microsoft ($68 bn), Google ($48 bn), Pfizer ($47 bn) and Cisco ($46 bn).

An increasing portion of this liquidity is being channelled back to shareholders in the form of dividends and share buybacks. The higher the levels of cash combined with low debt continue, the stronger the shareholder pressure will be. The high-tech, healthcare and convenience goods sectors are at issue here. It is important to understand that businesses went into debt to finance shareholder dividends. The Fed’s unconventional monetary policy has driven bond yields to all-time lows, widening the gap between the cost of borrowing and the cost of equity.

Share buybacks have accelerated, reaching the soaring levels seen prior to the crisis. US businesses now divert more than 30% of their cash flows into buying back their shares. In fact, the portion of revenue set aside for buybacks has doubled in the past ten years while investment spending has declined from 50% to 40%. Total share buybacks have increased by more than $2,000 bn since 2009.

**...and M&A transactions**

The M&A market has also clearly been revived, especially in the United States. Volumes have returned to peak cycle levels. This is mainly the result of the proliferation of large-scale transactions in the healthcare, telecommunications and energy sectors. The market recovery has also been characterised by an explosion of cross-border transactions, an efficient means of using capital held in foreign countries.

Corporate cost-cutting is taking precedence over business investment. Against a backdrop of sluggish economic growth, safeguarding revenue and margins remains a challenge for businesses. Executive motivation is very different from that avowed before the Lehman bankruptcy. They have to contend with low demand and deflationary pressures, which are putting a heavy strain on margins. Acquisitions are in line with the industrial strategies of cost-cutting, consolidation and winning market share.

**The uncertain business climate is influencing investment decisions**

As we have just seen, access to financing is not the reason why US companies are investing so little. There is no doubt that they are taking advantage of favourable funding, but mostly to finance share buybacks or M&A transactions. A far more plausible explanation for such low levels of business investment is that the Great Recession has been permanently etched into the memory of business leaders, who are now far more hesitant about making irreversible investments. It is now clearly established in economic theory that uncertainty reduces the responsiveness of investment to demand shocks and therefore the responsiveness of firms to any given policy stimulus (“Uncertainty and Investment Dynamics”, Bloom, Bond and Van Reenen, *Review of Economic...*)
Studies). One of the most frequently used measures of economic policy uncertainty by major international institutions is that developed by Baker, Bloom and Davis (www.policyuncertainty.com), where one of the indicators counts the frequency of the terms “uncertainty” or “uncertain” in articles discussing the economy in major US newspapers. This indicator is still well above its pre-crisis levels and, more generally, its levels between 1995 and 2007.

Business leaders are still relatively pessimistic about the economic outlook and harbour doubts about the profitability of any plans they might have. Surveys of small business leaders (NFIB Survey) confirm that very few of them, in absolute terms and compared to previous decades, are planning capital outlays and/or think it is not an opportune time to expand. The most frequently cited reason for not investing or expanding more was the weak economy. Almost none reported that financing was a problem for them.

Some sectors, particularly high-tech, healthcare and convenience goods, are reporting record amounts of cash on their balance sheets, coupled with low debt. These businesses benefited from the exceptionally favourable financing conditions resulting from unconventional monetary policies. The large amounts of capital raised on the markets were used to buy back their shares, raise dividends and finance acquisitions. The cash that is often held in foreign countries will continue to grow. This is rational behaviour in the context of sluggish world growth. Expectations of soft growth and uncertainty account for the low level of business investment.
Draghi confirmed that QE will be fully implemented

As we have already outlined in previous publications, the size of the ECB’s extended purchase programme is impressive: as the ECB intends to buy €60 bn of assets every month (most of which will be government bonds) until at least the end of 2016, at a time when eurozone public debt is rising only slowly. This programme has already had a dramatic impact on sovereign bond yields and will have an even stronger impact over the next few months and quarters, when the market participants most likely to sell bonds to the ECB will have liquidated their exposure. The struggle to find sovereign bonds from some countries will be more intense than ever.

The ECB imposed some constraints on itself and the national central banks regarding the Public Sector Purchase Programme (PSPP): they can only buy central government bond securities (no subnational entities), the residual maturity must be between 2 and 30 years and the yield must be above the ECB’s deposit rate, i.e. minus 0.20%. This limits the stock of securities eligible for the PSPP. These constraints will be highly problematic for German sovereign bonds as only 64% of German public debt is attributable to the central administration (a very atypical situation in the eurozone) and as German yields are already below minus 0.20% on the shortest maturities of the 2-30 year segment. The share of the German central administration debt held by the Eurosystem will be around 20% at the end of the PSPP. As a consequence, there will probably be a market squeeze on some segments on the eurozone fixed-income market: difficulty buying some securities, extremely low yields and possibly a significant loss of liquidity.

The squeeze of the core government bond market and the very last correction: state of the art and the “what if” question

This being said, last week saw quite a rapid and dramatic rise in bond yields, not only in the Eurozone but in other advanced areas, too (US, UK, Canada, Australia, etc.). Profit taking, stretched valuations, rise of oil prices and partially easing deflationary fears are among most cited factors behind this remarkable move. To some extent, rising uncertainties on the back of stalling Greek negotiations exacerbated the natural “gravity” to which German yields appeared subject until few days ago. Bearing that in mind, however, end of April’s numbers showed that more than 30% of bunds’ market value was trading below the -20 b.p. threshold, the minimum yield target for the ECB’s QE. Though 45% of German bund yields were already negative on January 21, the day before the ECB’s QE announcement, no German bunds were yielding below this threshold on that date, yet!

The graph n°2 shows that, together with German government bonds, Finnish and Dutch government bonds also recently fell into the “non-eligible zone” before the recent correction, respectively with 13% and 8% of their overall debt outstanding. “What if” questions posed by journalists to Draghi in the latest press conference about the “scarcity” issue, therefore, arise from the assumed continuation of this trend over the coming months. The graph may be of some help to answer this question: a remarkable portion of core government bonds and agencies’ and supra-nationals’ QE-targeted securities was trading very close to the -20 b.p. threshold. To be more precise, 19% of German bunds, 27% of Dutch debt, 26% of French OATs and 18% of agencies and supra-nationals QE-eligible securities were trading within 10 b.p. of the threshold. The overall value of this portion of debt represented around 21% of overall core government and quasi government bonds.
we are writing, as of May the 6th, however, market conditions look quite different: the graph n°3 shows how the portion of bonds trading below the “non-eligibility” zone has halved in Germany (passing from 30% to 15%) and disappeared in Finland and the Netherlands. At the same time, the portion of bonds close to the threshold of -20 b.p. has fallen, too, from 21% to 11%. Therefore, in light of current repricing the issue of bond scarcity clearly eased.

At the same time, if the yield squeeze goes on, Germany looks to be in the frontline in the process of moving to a “scarcity position” under the capital key rule, more so than other countries. The expected balance of supply and redemptions of German bunds, furthermore, means that Germany is one of the few countries least at risk of experiencing a growing outstanding debt. Keep in mind that at the beginning of May, only 10% of the extended Asset Purchase Programme (APP) has been implemented. Put another way, 90% of ECB’s QE has still to be implemented.

Therefore, what to expect?

Comparing the QE to a just-started marathon, Draghi underlined the ECB’s strong commitment to fully implement the entire programme, dismissing “tapering” scenarios. He rightly pointed out that concerns on liquidity and scarcity are “premature” at this stage, implicitly also dismissing that, depending on the programme’s effectiveness, these issues won’t have to be addressed in the future. To some extent, our reading is that the more the effective the program is in compressing yields, also thanks to expected net issuance trends, the more its implementation technicalities may need to be revisited at some point in the future. In this respect, Draghi outlined that, if needed, the design of the programme is flexible enough to be adjusted. Among eventual options, a further cut in the deposit facility was firmly excluded, but other adjustment options probably remain on the table: among them, revisiting some of the constraints, such as the maximum 25% limit for a single issue or a larger universe of high quality issuers. In terms of the latter, the ECB already somewhat answered the question in the last meeting, adding a new list of agencies to the QE universe for a total outstanding debt of around EUR 100 bn. In the meantime, let the QE proceed and do its job.

“90% of ECB’s QE has still to be implemented”

“Draghi underlined the ECB’s strong commitment to fully implement the entire programme”
The low default rate regime lasted for a very long time: 2014 was no exception

In Cross Asset September’s issue of last year we focused on High Yield default rate cycle features and perspectives: we underlined the apparent paradoxical divergence between macro and financial trends of the current default cycle which looks the most benign of the last three decades in spite of Great Financial Crisis occurring. 2014 was no exception at all and was another year of low default “regime”: as the reported graph shows, in eleven of the last twelve years, B-rated and BB-rated annual default rates were not only well below average but they were also close to almost marginal levels. The only notable exception was 2009, the post-Lehman default year, with its short-lived spike.

Moving from short-term (one-year rolling) measures of default rates to longer-term measures (default rates cumulated over five years) the picture, in fact, looks even brighter. The last annual default study published by Moody’s shows that the latest 2010-2014 cohort to complete a 5 year period recorded the lowest cumulated default rate since a long time for both BBs and Bs names. In fact, BB-rated companies cumulated just a 2.1% default rate in 2010-2014, a low number not recorded since the 1988-1992 period: at the same time, B-rated bonds reached a 7.5% cumulated default rate, with previous low recorded in the 5-yr ending 2004. Just to put these numbers in historical perspectives, 5-yr cumulated default rates’ long term averages, depending on the period taken into account, are respectively between 9% and 10% for high quality speculative grade (BB-rated) and between 20% and 23% for the B-rated companies. Each year the cohort is formed of issuers with the same rating category and then its composition is kept stable for calculations, independently of following rating changes that may occur in the 5 years: under this respect it’s a more comprehensive measure of default rates, as it includes in the calculations also the indirect effect of rating migration.

Post Lehman crisis default rates still mainly a CCC story among HY issuers

As the following graph shows, over the last few years that followed Lehman’s crisis, default rates were mainly a low quality (CCC-rated companies) story among speculative grade issuers. BB spreads, in particular, continue to overcompensate for actual default rates and remain attractive despite low absolute levels, in absence of a renewed risks of a spike in default cycle.

Top-down factors leading European HY default rates

In September’s piece we came to conclusions which seem to have been confirmed by the trend in the last two quarters: in particular, the link of HY default rates with macro growth and monetary policies and the role of financial conditions and bottom up factors in supporting a persisting low default environment.

a. Financial conditions

Actually, in the last two quarters among developed areas, it was the Eurozone that recorded the most important changes in both financial and economic conditions. First of all it was the case of financial conditions, as ECB “pre-communicated” QE by late Q4 last year to then finally announce and launch it in Q1 this year. As a consequence, the remarkable depreciation of the single European currency, by itself, represented and still represents a tangible improvement in overall financial conditions. Then, according to ECB bank lending surveys, last two quarterly sets of results showed a widespread improvement in all major Eurozone countries, both in terms of bank lending standards and applied rates on one side and also in terms of recovering loan demand, on the other side. Though the general level of standards are
still relatively tight by historical standards, the net percentage of banks declaring to tighten credit conditions to firms has recently increased. The success of the third TLTRO, which allocated around double the volume of liquidity expected by consensus, seems to be coherent with these trends, as periphery banks were more active than in the disappointing December TLTRO. This time, for example, one third of the overall new liquidity was requested by Italian banks. Finally, on the financial conditions side, the distress ratio, or the measure of openness/tightness of the HY corporate bond markets proved to be quite resilient to negative effects from US energy names, which greatly suffered at end of last year from the fall of oil price. The distress ratio is represented by the percentage of bonds trading at “distress levels”, namely at or above 1,000 b.p. spread over government bonds. US HY distress ratio rose from 4%/5% to a 13% level, because of its exposure to the oil and energy sector and because of negative effects from stronger USD on exporting companies. On the contrary, EUR HY distress ratio has remained more stable and moved up from 1%/2% to still very low levels of 4%. Finally, one important effect produced by ECB QE announcement was the return of remarkable inflows into funds and ETFs dedicated to EUR speculative grade bonds: these flows contribute to maintain favorable funding conditions and reduce risks of rising market stress.

b. Macro trends

With respect to September last year, the momentum of macro surprises significantly improved in the Eurozone: Q4-2014 probably saw deflationary worries and concerns about a possible third recession peaking. Then Q1-2015 saw quite an improvement in indicators of economic surprises and the recovery of leading indicators. As it leads defaults, the composite PMI represents one of the input factors of our regression model, though failing to achieve the same level of statistical significance typical of financial conditions, both banking and bond-market related.

> Trends in the European high yield market

**VALENTINE AINOZU, Strategy and Economic Research – Paris**

Outstanding HY has nearly tripled over the past five years. There are two key reasons for this: the downgrading of Investment Grade issuers and, more recently, a spate of first-time issuers. This growth has led to profound changes in the composition, quality and risk profile of HY corporate bonds.

The European HY market is gaining in maturity:

- Long concentrated, the Euro High Yield universe now has more than 200 issuers from 32 countries. The top five issuers make up no more than 12% of the index compared to an average of 20% in 2010.

- The financial sector now makes up one-quarter of the index. Before 2005, only non-financial issuers were in the HY market. A remarkable proportion of the European HY market is now made up of fallen angels: many financial issuers were downgraded as HY, including Banca Monte dei Paschi, the third-largest Italian bank, in December 2012. This segment also includes many subordinated debt securities (Tier 1 and lower Tier 2).

- A higher average rating. The category of BB-rated securities increased essentially because of the fallen angels. Today they make up more than 67% of the index, up from just 61% in 2010.

- Lesser exposure to cyclical sectors. In 2015, less than half of non-financial issuers belong to cyclical sectors, compared to more than two-thirds in 2006.

Staying selective is recommended, particularly with issuers who are tapping to high yield market for the first time. They often offer a less solid financial profile than those of traditional high-yield issuers.
Our regression on European HY defaults

On the back of these considerations, we re-run our regression model which projects default rate over a four quarter horizon. The reported graph shows that a stable picture for European default rates looks the result of recent trends of considered factors, namely the composite PMI, the percentage of banks tightening lending standards and the distress ratio. According to Moody’s data, Q1 ended with European default rates at 2.2%, slightly higher than Q4-2014 close at 1.8%. Moody’s expects the same default rate to close 2015 at 2.4%. According to our regression, the default rate could even be lower than today in four quarters’ time from now, at around 1.6%/1.8%. As we pointed out in previous publications on this topic, European HY companies have proven to be quite resilient to negative macro and financial effects produced by the sovereign crisis for a number of reasons, mainly linked to the defensive composition of its universe (for example: size, business model, ratings, countries represented). These factors explain the gap between modelled and actual default rates that has taken place (see the graph) after the sovereign crisis.

To conclude this part, we’d like to underline that the combination of macro growth momentum and financial conditions still look supportive for European HY speculative grade. In order to experiment a spike in defaults, a negative shock from a sudden recession and/or a sudden and rapid tightening in financial conditions would be needed. Both of these scenarios, however, in light of recent macro indications and ECB on-going QE look unlikely at the moment.
Financial flows and European equity markets

IBRA WANE, Strategy and Economic Research – Paris

Eurozone equities have performed very well year-to-date, outperforming those of other regions as well as other asset classes. However, with their past results still mediocre and their valuation tightening, how can we explain such a situation? Whereas in last month’s Cross Asset we stated we were on the verge of a significant rebound in earnings\(^1\), this time we are leaning towards financial flows to distinguish their role in market appreciation.

Before delving into these flow concepts, let us step back a little to the previous discussion on earnings. The conviction that eurozone profits should rebound powerfully in 2015 now seems more and more accepted. Thus, according to the Ibes Consensus, the net-up ratio of Sell-Side analysts – a ratio that measures the net index of upward earnings revisions – is not only back in positive territory for the first time in 37 months and at a 60-month high, but has also pulled ahead of all the other regions.

As regards flows, first we will discuss the trends in Europe between major asset classes (equities and bonds) since early 2013, and then we will concentrate on equities alone, using an increasingly detailed regional prism.

Thus, regarding the major asset classes, Graph 1 shows that cumulatively over the entire period, equities and bonds have both benefited from positive flows, for a total of $116 billion for equities and $85 billion for bonds, i.e. a net balance of more than $30 billion in favour of equities. Yet in addition to the overall balance, which gives equities the edge, it is most important to focus on the different sequences in time.

Thus we can clearly see that the big starting signal for inflows on European equities was given by the Fed (!), when, in May 2013, Ben Bernanke began mentioning the impending slowdown in asset buying (pre-tapering). By suggesting that US growth was becoming solid enough to consider a gradual tightening, the former Fed Chairman not only gave US equities a helping hand, implying that rate risks were becoming asymmetrical, but also spurring on eurozone equities, given the difference in agendas between the two central banks\(^2\) and the then-massive undervaluation of the eurozone markets. The same graph on US assets, which we are making available to our readers, shows that the initial impulse for US equities had been combined with a simultaneous outflow on bonds, while no such thing happened in Europe; bonds there stayed reasonably attractive, with rates falling steadily.

Graph 1 also shows that the buzz over European equities lasted until summer 2014 before turning around abruptly, then ultimately regaining momentum beginning in mid-January 2015.

First off, this characteristic tempo corresponds to the piling-up of concerns, between the unexpected slowdown in the core of the eurozone, the worsening of geopolitical tensions, and the questions over the post-tapering phase in the autumn of 2014. The drop in the IFO index and of industrial output in Germany has itself raised many questions since the delayed impact of the Q1 2014 slowdown in the US, not to mention the misfires of the Chinese economy. In addition, the fact that the questions were directly about Germany, and no longer just the periphery, has given even more attention to events in Ukraine (the annexation of Crimea, the Donbass uprising, the destruction of the Malaysia Airlines airplane near Russia), since Kiev is barely an hour’s flight from Berlin.

After a tricky second half of 2014, when the debate over the failed recovery and a return to deflation loomed, the ECB ultimately freed the markets\(^3\).

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\(^{1}\) Article 8 of the April 2015 issue of Cross Asset Investment Strategy: Listed companies’ earnings and foreign exchange rates: currencies will play a decisive role in 2015

\(^{2}\) Meanwhile, ECB Chairman Mario Draghi had decreed in July 2012 that every effort would be made to save the euro.

\(^{3}\) As regards flows, first we will discuss the trends in Europe between major asset classes (equities and bonds) since early 2013, and then we will concentrate on equities alone, using an increasingly detailed regional prism.
by resorting to a massive and potentially open-ended asset-buying programme in mid-January 2015. Investors reacted instantly, from mid-January to April 22, 2015, by putting $57 billion in additional flows toward European equities, more than twice what they put toward bonds ($25 billion), although bonds had far outpaced equities in the second half of 2014.

From a geographical standpoint, Graph 2 shows that European equities have been in a counter-current with US equities since last summer. Thus, in the second half of 2014, when the latter were still on their winning streak, generating some $50 billion and +4% in additional increases for the MSCI United States, Europe’s take fell by more than $30 billion, and the MSCI Europe lost 2%. Conversely, beginning in mid-January, European equities took off again, with +$57 billion in gains against -$64 billion for US equities and a +15% gain vs. +5%.

With the spotlight on this rebound in European equities’ appeal, the question is who profited most. Graph 3 clearly shows that while Japan and Europe were evenly matched in gains and the US and the Emerging Markets suffered some losses, the situation in Europe was not uniform. For example, within Europe, we can differentiate between countries according to their central bank’s policy and the exchange rate. Thus, the eurozone and Sweden, where the central banks have been more accommodating, had greater flows than Great Britain or Switzerland, where the currency appreciated. Finally, within the eurozone, the concept of core/periphery seems to be fading: Germany, France, Spain and Italy are all posting high inflows, with a slight advantage for Spain.

After such a rebound in volumes on European equities, can it go further, or should we consider that the movement is nearing its end? Although, in the short term, between the threats of Brexit and Grexit, the fleeting disappointment over US growth and, from there, the euro’s rebound, we should certainly be more prudent, on a 12-month horizon the inflows on European equities should continue apace. Technically, after years of outflow, the scope of volumes on equities ultimately remains limited. On the monetary front – so important to the direction of flows – even though the Fed, which is faced with disappointing US growth in the first quarter, should be in no hurry to tighten its policy, the ECB presents even greater visibility with a purchasing timetable until September 2016 at least. With rates determined to stay low for a long time, and a euro that will remain competitive, European equities, which are offering dividends of around 3% as well as solid earnings outlooks, should continue to be a draw.

“After six undecided months, the ECB freed the equity markets in mid-January 2015”
Emerging market sovereign debt: mitigating the serial default theory and identifying “stressed” countries

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There seems to be a consensus nowadays that emerging market countries globally have insured themselves against sovereign default risk through time. Nevertheless, due to the numerous sovereign default episodes in the emerging countries in recent decades, they have long been considered as condemned to default repeatedly over the course of time. However, as emerging market countries are a very diversified group and present varying types and extents of economic weaknesses from country to country; such results have to be nuanced, in order to break them down based on time horizon and country profile. The methodology presented here to discriminate into different vulnerability regimes enables us to identify countries that are more exposed to sovereign default, depending on their economic profile.

Do emerging market countries' specificities lead to a “typical” default pattern?

Emerging market countries have some specific features that make the explanation of their sovereign default episodes more complex than for developed countries and therefore worthy of study. To begin, higher volatility of their economic variables and imperfect information make their economies less predictable. Mimetic behaviours occurring on sovereign debt markets and not necessarily reflecting the economic fundamentals can then more easily lead to self-fulfilling crises, which can eventually drive a country to sovereign default. Besides, economic policies tend to be less credible in emerging market countries (less anchored monetary commitments and more pro-cyclical budgetary policies, notably due to weaker automatic stabilisers). Finally, they are also characterised by the so called “original sin”, corresponding to a need to resort to short-term external debt. This last particularity makes these countries more sensitive to currency depreciation, which increases their foreign currency denominated debt burden. Their exposure to currency risk depends on the extent to which they rely on foreign financing and on their exchange rate regime. If currency stability has to be maintained, it limits money creation possibilities, unless there is a sufficient international reserve buffer to satisfy both needs. For these reasons, emerging market countries wanting to monetise their debt face some impediments, because they are constrained either by their fixed exchange rate regime or by currency mismatches which are strengthened by currency depreciation (in the case of a more flexible exchange rate regime).

In this framework, the “serial default” characterisation1 introduced by Reinhart and Rogoff (according to which inflation and default history are good predictors of a future potential new default episode2), should probably be shaded. In fact, after the massive default events of the 80s and 90s (notably in Latin America, Emerging Europe and Africa), some emerging countries have evolved towards more domestic debt, less inflationary pressures, more countercyclical economic policies and/or more generally improved debt management. Nevertheless, not all of them have necessarily been able to do so at the same pace. As there are some countries having insured themselves against the fragilities mentioned above, we tried to identify them as being the ones having left the “debt trap”3, defined by Sachs as being an absorbing state, from which it is difficult to escape. The idea is that a country can be more or less exposed to sovereign default (the origins of which can be of a diverse nature) through specific channels, depending on its economic specificities.

Emerging market countries present characteristics which increase their exposure to sovereign risk compared to developed ones (notably less predictable economies due to volatility, less credible economic policies, and “original sin”).

However, they shouldn’t be considered as a homogeneous group presenting the same default behaviour, as the latter primarily depends on their economic features and they aren’t all concerned by these fragilities to the same extent. The model we present provides a way to identify, through time and across countries, which countries are in deteriorated situations likely to drive them towards sovereign default, depending on the economic environment. On the basis of 2013 data, the most vulnerable countries appear to be Argentina, Venezuela and, to a lesser extent, Russia (vulnerability of all three countries is increasing on the basis of 2014 data).

Some countries are able to learn from their past default errors

Different sources of sovereign default depending on the country’s features

The idea is to look at the axes that enable us to discriminate country-year observations into vulnerability regimes which differ in terms of the factors that can explain sovereign default. Not surprisingly, the lines of approaches appearing to be the most accurate are linked to the emerging markets’ specificities described above: external debt as a share of total exports, domestic savings’ ratio, interest payments compared to public revenues and international reserves as a share of short-term external debt. The advantages of the four corresponding models presented in Box is that they allow to:

1. highlight the axes able to discriminate country*years observations into distinct vulnerability regimes;
2. determine the threshold values defining the frontiers of the vulnerability regimes, along the axes underlined;
3. look at the characteristics that accompany more severe sovereign defaults: these characteristics are different depending on the regime to which they belong.

According to the first model based on external debt on exports for instance (as a threshold variable discriminating the observations into different regimes, see Box), we highlight three different types of sovereign default behaviour. Most countries are in the first regime, characterised by an external debt lower than 258% of exports. For them, a major default is more likely to happen essentially if they face inflation pressures, have a high public debt, and if they did not default recently. The countries whose external debt ratio is in an intermediary range (between 258% and 385%) are characterised by a different framework; they benefit from this “learning effect” even more. This goes against the “serial default” view, as it shows that some countries are able to learn from their past default errors, tending to face less severe defaults in the future if they had already coped with default in a recent past. Finally, the potential default of countries whose external debt on exports exceeds the 385% threshold goes along with different economic features than for the other regimes. This regime corresponds to extreme external debt situations. These countries could potentially be considered as serial defaulters if they already defaulted in a recent past, as the recent default effect plays in the opposite direction for them. They are also likely to suffer an all the more serious sovereign default if they have to cope with inflation pressures, a depreciating currency, have a high public debt ratio and a deteriorated S&P rating.

This type of model shows that the characteristics going along with an important sovereign default have historically not been the same, depending on the external debt position (in comparison to total exports). Moreover, it underlines the fact that the countries having the highest external debt ratio are not necessarily the ones for which the expected default is the most severe.

Similarly, the other models (based on the three other axes cited above) also enable the sample to be broken down into different vulnerability regimes (differing in the sovereign default pattern). Therefore, according to its position along these axes, a country can be more or less prone to sovereign default depending on its economic profile.

A mosaic of less and more vulnerable states across countries and time: some countries still on the viewfinder

These four frameworks allow us to classify countries into different regimes depending on their position on these axes and to see if some of them have moved from one regime to another through time. As a matter of fact, some

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4 Whose external debt ratio does not exceed the 385% of exports threshold, which is estimated through the model.

5 Like Argentina in the 1980s and 2000s for example.
countries globally have moved along these axes through time, towards “a priori” less vulnerable regimes. This is for instance the case for Peru, Chile and Bulgaria, which all suffered severe defaults around 1990 and are no longer expected to default on the basis of 2013 data, using any of the four models presented above.

On the contrary, believing in this framework, some countries do remain prone to a relatively severe default. In fact, if we look over the 44 countries included in the most accurate model (based on external debt on exports), we can identify three for which the predicted amount of debt being in default is higher than 2% of GDP. These are Argentina, Venezuela (both being the most vulnerable), and then Russia as regards 2013 data. Looking at 2014 data, Ukraine also comes out as a vulnerable country. If we look at the model relying on domestic savings, Uruguay, Vietnam and Romania also present a predicted default barely higher than 2% of GDP (for 2013). What is interesting is that these countries are not necessarily in the “a priori” most vulnerable regime regarding the axis highlighted (characterised by high external debt on exports or low domestic savings), but present stressed values on the economic variables to which they seem to be sensitive (depending on the one specific vulnerability regime to which they belong).

Looking at the characteristics of the three most vulnerable countries according to the model based on external debt on exports (see breakdown of the expected amount of debt being in default, Graph 4), we can see that, on the basis of 2013 data:

- Argentina comes out to be the country for which the predicted default is the highest among the countries of the sample (6% of GDP according to this model)\(^6\). As Argentina’s external debt accounts for around 170% of its exports in 2013, it is –as are the large majority of the observations included– located in the “a priori” less vulnerable regime according to this axis. Nevertheless, Argentina’s individual characteristics\(^7\),(which could be linked to substantial restructuring in the past, and limited access to international debt markets for example) explain a generally higher amount of debt in default than in other countries. Then, the features appearing to drive this result are a high public debt ratio (around 40%) and very dynamic prices (11% year-on-year in 2013). After having defaulted heavily in 2002 and faced a major debt restructuring several years later, Argentina was consigned to default again on its external debt in 2014 due to “vulture funds” (i.e. funds having bought the restructured debt and asking for the entire reimbursement, despite the 70% cut accepted by the other creditors involved in the restructuring) asking for their money back. Even though this default is partly due to legal reasons (pari passu clause), this model seemed to be able to underline a stressed situation, based on 2013 data. In fact, according to 2014 data, the predicted default is more important than the year before, due to greater currency depreciation and higher public debt (to a lesser extent).

- Venezuela is apparently in the same situation. It has a rather sane ratio of external debt (around 130% of exports), but is still expected to default rather heavily according to the model (on 3% of its GDP). In fact, even if it benefits from strong individual features (which could be due to the closeness to the United States and the easy outlet it can constitute for oil exports for example), Venezuela suffers much more from inflation pressures (41% year-on-year) than Argentina, and also more from high public debt (55% of GDP) and currency depreciation (of 46% relative to the US dollar in a year), in 2013. When looking at the 2014 data, this situation seems to deteriorate even more, primarily due to greater inflation and currency depreciation pressures. This is the illustration of the current extreme situation in Venezuela, whose currency recently heavily depreciated.

- Russia comes out as the country for which the predicted default is the highest among the countries of the sample (6% of GDP according to this model).

\(^6\) This conclusion is also true for the three other models, as regards Argentina.

\(^7\) Country fixed effects, for the individual characteristics not already taken into account in the other variables included in the model.

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**Argentina, Venezuela and Russia come out as the most vulnerable countries in 2013**
The estimated model is a Panel Smooth Transition Regression developed by Gonzalez, Teräsvirta, and v. Dijk (2005)\(^1\). The dependent variable \(y_t\) is the amount of sovereign debt in default (as a share of GDP), and the framework is as follows:

\[
y_t = \mu_i + \beta_0 x_{it} + \sum_{j=1}^{r} \beta_j x_{it} g(q_{it}, c_j) + u_{it}
\]

With \(\mu_i\) being the country fixed effects, \(r\) the number of transition functions \(g_j\) from one regime to another, \(x_{it}\) the vector of explanatory variables (dummy for recent past default, annual change in exchange rate, year-on-year inflation, public debt ratio, external debt on exports and S&P rating), and \(u_{it}\) the error term. The transition function \(g_j\) depends on the threshold variable \(q_{it}\). The four relevant models respectively rely on the following threshold variables: external debt as a share of total exports, domestic savings’ ratio, interest payments compared to public revenues and international reserves as a share of short-term external debt. It is continuous, bounded between 0 and 1 and related to the parameters as follows:

\[
g_j(q_{it}, y_{it}, c_j) = \frac{1}{1 + \exp[-y_j(q_{it} - c_j)]}
\]

With \(c_j\) being the thresholds delimiting the different regimes and \(y_j\) the parameter characterising the smoothness of the transition (very smooth if \(y_j \to 0\) and abrupt if \(y_j \to +\infty\)). In this particular case, it looks like a logistic function, approaching 0 when \(q_{it}\) is close to 0 and approaching 1 when \(q_{it}\) is high enough. This transition function allows the coefficients \(\beta\) linked to the explanatory variables to differ, depending on the value of the threshold variable \(q_{it}\). If the transition is rather abrupt, the coefficient characterising the observations of the first regime (for which \(q_{it}\) is lower than the threshold \(c_j\)) is \(\beta_0\), whereas the observations of the second regime (for which \(q_{it}\) exceeds \(c_j\)) are characterised by \(\beta_0 + \beta_j\). As an example, the results of the model taking external debt on exports as a threshold variable are summarised herein:

<table>
<thead>
<tr>
<th>Dependent variable : amount of debt being in default (% of GDP)</th>
<th>Threshold variable q: External debt (% of exports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regime 1</td>
<td>Regime 2</td>
</tr>
<tr>
<td>Thresholds c</td>
<td>q &lt; 258</td>
</tr>
<tr>
<td>Part of the sample</td>
<td>91%</td>
</tr>
<tr>
<td>(\beta_0)</td>
<td>(\beta_0 + \beta_1)</td>
</tr>
<tr>
<td>Recent past default</td>
<td>-0.695*</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>0.027</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.108**</td>
</tr>
<tr>
<td>Public debt</td>
<td>0.042***</td>
</tr>
<tr>
<td>Ext.debt/Exports</td>
<td>-0.005</td>
</tr>
<tr>
<td>S&amp;P rating</td>
<td>-0.069</td>
</tr>
</tbody>
</table>

Note: The majority of observations, for which external debt is lower than 258% of exports, are broadly characterised by the slope \(\beta_0\). The observations for which external debt lies between 258% and 385% of exports are broadly characterised by the slope \(\beta_0 + \beta_1\). The “extreme” observations, for which external debt is higher than 385% of exports, are broadly characterised by the slope \(\beta_0 + \beta_1 + \beta_2\). Actually, each observation is characterised by a specific slope, varying more or less smoothly between these slopes characterising the extreme parts of each regime. The interpretation of these results is developed in the main text.

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depreciated, essentially due to the fall in oil prices (as oil accounts for around 90% of the country’s exports).

- Finally, we would also underline the fragility of Russia, as this is the only other country presenting a predicted amount of debt in default higher than 2% of GDP in 2013, as regards the external debt model. Indeed, Russia suffers from its own country effect, which is the second highest among all countries included in the sample (after Argentina). This could be due for example to the fact that Russia’s economy is not particularly diversified, importantly relies on natural resources to fund interest payments. Inflation and public debt (resp. 7% year-on-year and 14% of GDP in 2013) also play in favour of an amount of debt in default which is likely to be higher. On the contrary, Russia’s S&P rating, which was fairly high in the end of 2013 (BBB) and containing information relative to market expectations, plays favourably, diminishing the expected amount of debt being in default.

Though none of the three countries cited above has effectively defaulted in 2013, the important idea here is to identify (through the description of the factors included in the model of sovereign debt being in default) the deteriorated economic situations which are likely to end in a sovereign default, even if the latter does not occur immediately. In this framework, this model underlined, on the basis of 2013 data (strengthened by 2014 data) the weaknesses of Argentina, Venezuela and to a lesser extent Russia, and could constitute a tool which would enable us to track an emerging market’s exposure to sovereign risk.

“2014 data also reveals Ukraine as particularly fragile”

As of 2014 data, Ukraine also comes out to be vulnerable in terms of potential sovereign default.
Low interest rates and Solvency 2: a toxic cocktail for insurers

ESTHER DIJKMAN DULKES, Equity Analysis – Paris

After three years of outperformance (2012-2014), the insurance sector slightly underperformed the market year-to-date (+11% vs. +14%). The sector’s YTD performance has been partially driven by positive surprises in FY14 results publications in terms of capital return (ordinary and special dividends, share buybacks). Indeed, all insurers under our coverage met or beat expectations in terms of dividend yield / capital return, except for Allianz (where the positive surprise had already occurred in November 2014, when the new dividend policy was announced) and CNP Assurances. After the FY14 results season and with dividends now having been paid, the market has started to focus on the potential negative impact from low interest rates.

Low interest rates have a detrimental impact on insurers’ fundamentals

In terms of underlying fundamentals, low interest rates have a negative impact on the sector in two ways:

- They are leading to a slowdown in earnings growth. The exact impact on the P&L account is difficult to estimate, but has been ciphered by AXA at -4% per year cumulative.

- They have a negative impact on economic solvency ratios. Indeed, economic solvency ratios fell by as much as 35bp during 2014. The fall in economic solvency ratios can be explained by lower interest rates and higher interest rate volatility, which each had a ‘double whammy’ negative impact, leading to 1/ an increase in capital requirements, and 2/ a decline in available capital (through a reduction of Value in Force). The pressure on economic solvency ratios has been most visible for actors that write traditional life insurance business with guarantees (CNP Assurances) and notably those that write (long duration) German traditional life policies (Generali, Allianz, Munich Re), as well as actors that own long duration liabilities through their UK annuity business (L&G, Prudential).

An urgent need to improve the life insurance business mix

With German Bund yields now having fallen below 20bp (!) and with Solvency 2 going live in January 2016, the need for life insurers to shift their business mix away from capital-intensive spread business into fee business (unit-linked, asset management) or underwriting risk business (protection and health) has become highly urgent. In this respect, AXA can be considered a “first mover”, while companies like Allianz and Generali have been slower to adopt this change.

Economic solvency ratios remain at a comfortable level

Notwithstanding the drop in economic solvency ratios reported over 2014, the ratios remain well above 150%.

These reported headline ratios are not necessarily the same under Solvency 2 as these are still subject to many uncertainties, including:

- the discount rate (volatility adjustment, matching adjustment),
- the treatment of equivalence (its approval and the determination of conversion rules),
- diversification benefits (companies are applying great freedom in calculating diversification benefits),
- sovereign risk charges, and
- management discretion to manage the outcome of the Solvency 2 ratio.

Due to the decline in interest rates, economic solvency ratios have dropped by as much as 35bp during 2014. However, ratios remain at a comfortable level in most cases. We therefore see no risk to the sustainability of dividends, which are paid out of free cash flow generation anyway. Our comfort level on dividend sustainability has come down though and we also believe that room to return excess capital to shareholders has been reduced in some cases.
We expect more visibility on actual Solvency 2 capital positions towards the end of this year. At this stage, the published economic capital ratios are the best proxy for individual insurers’ Solvency 2 capital positions. Overall, we do not expect Solvency 2 ratios to deviate materially from the headline solvency figures published today.

It seems that the minimum acceptable solvency level is to stabilise around ~140% for the Standard Formula and around ~160% for the Internal model. The reported economic solvency ratios (well above 150% in most cases) therefore confirm the solidity of insurers’ balance sheets.

**Dividend sustainability is not at risk**

We conclude that we see no risk to the sustainability of dividend growth for most groups (which are paid out of free cash flow generation anyway). However, our comfort level on dividend sustainability has diminished over the last months following the publication of lower economic solvency ratios. And we also believe that the decline in reported economic solvency reduces insurers’ room to return excess capital to shareholders in some cases (Allianz for example).

**Which insurers are likely to outperform in such an environment?**

The insurers that will do best in this environment are the ones with:

- a solid capital position;
- strong sustainable cash generation;
- little exposure to long term guarantees.

Investors are likely to move away from pure life insurance players, where lower interest rates are leading to downward revisions of earnings estimates. They are likely to move into non-life players and diversified insurers, which are less exposed to low interest rate risk and benefit respectively from significant diversification benefits under Solvency 2 (in the case of diversified insurers) or a re-appreciation of underwriting earnings (in the case of non-life players), as the market seems willing to pay a higher multiple for recurring underwriting earnings.

“An urgent need to improve the life insurance business mix”
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