THE IMPLICATIONS OF A EUROPEAN CENTRAL BANK'S QUANTITATIVE EASING PROGRAM

This report was produced by a team of graduate students from the School of International and Public Affairs (SIPA) at Columbia University: Adam Goldsmith, Ze Hu, Agamemnon Koutsogiorgas, Ines Mouline, Bernard Park, Chenlu Wang, Dongyue Zou. It is a final report as part of the SIPA Capstone program, under the supervision of Professor Seamus O'Cleireacain.

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Final Report May 1st 2015

PROJECT ABSTRACT:

Project Topic: The Implications of a European Central Bank’s Quantitative Easing Program
Client: Moody’s Investors Service
Project Deliverable: A forward-looking presentation on the effects of the QE program on Eurozone capital markets and select Eurozone economies

The objective is to provide an evaluation of the effects of the European Central Bank’s quantitative easing program on Eurozone financial markets and national economies. The report starts by comparing and contrasting the ECB’s program to other QE programs conducted by the Fed, Bank of England and Bank of Japan. The second part of the report focuses on developing a thorough evaluation of the impact of QE on capital markets through the portfolio and signaling channels. The report presents the impact of the program and its potential spillover effects on several instruments (sovereign, covered and corporate bonds, ABS, equities), and also investigates the implications of QE for various asset holders. By specific request from the client, the last section of the report is dedicated to the impact on the national economies of two periphery countries (Spain and Italy) and two core countries (France and Germany). The analysis is organized along three transmission channels:

1. Interest Rate Channel – To what extent will sovereign debt purchases by the ECB filter through each country’s debt markets, lowering interest rates and increasing bank lending for businesses and consumers?
2. Exchange Rate Channel – To what extent will QE bring about a further real depreciation of the Euro and boost the economy by increasing net exports?
3. Signaling Channel – To what extent will the QE program sufficiently increase inflation expectations and confidence among businesses and consumers?

The report concludes with forward-looking statements on the credit implications of QE for the Eurozone capital market and select countries.
PROJECT OUTLINE

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1. Description of the ECB Program
2. Objectives
3. Program Size and Balance Sheet Size
4. Eligible Asset Classes
5. Capital Market Structure
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7. Policy Rates
8. Economic Environment
9. Duration
10. Overview – Comprehensive Chart

II. Impact of the European Central Bank’s QE program on capital markets

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2. Asset classes and holders of debt instruments
   A. Government Bond Market
   B. Asset Backed Securities
   C. Corporate Bonds
3. Comparison of market indicators before and after QE announcement

III. Impact of the European Central Bank’s QE program on national economies

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2. Germany
3. Italy
4. Spain

IV. Conclusion: Credit Implications of the European Central Bank’s QE program

1. Capital Markets
2. France
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4. Italy
5. Spain
I. Particularities of the European Central Bank’s quantitative easing program: a comparison with the Bank of England, Bank of Japan and the Federal Reserve

Traditionally, central banks have relied heavily on a policy target rate as a way to manipulate money supply and inflation expectations with the goal of price stability. However, since the 2008 financial crisis, central banks around the world have been forced to come up with alternative methods to combat low inflation after their policy rates neared the lower zero bound. The U.S. Federal Reserve (Fed) was the first to jumpstart its quantitative easing program in October 2008, followed quickly by the Bank of England (BoE) in March 2009. The Bank of Japan (BoJ) had tried a form of quantitative easing back in 2004 with mixed results so they waited a while before eventually launching it in October 2010. Now seven years after the Fed started its QE program, the European Central Bank (ECB) has finally jumped on the QE wagon and started its purchasing program in March 2015.

When predicting the potential effects of QE on the Eurozone capital markets and national economies, one is likely to refer to the outcomes of other similar programs undertaken by the Fed, BoE, or BoJ. Yet there are fundamental differences among these programs such as different objectives, timing, program size, market structure, and prevailing economic conditions that will produce varying degrees of success. The following section will briefly compare the ECB’s QE program to the initial QE programs of the Fed, BoE, and BoJ in these key areas.

1. Description
In January 2015, the European Central Bank announced its long-awaited Quantitative Easing program. The ECB plans to purchase a total of €60 billion per month in bonds and debt instruments issued by Eurozone governments and EU institutions. The initial estimate of asset allocation is €44 billion in government bond and agency debt, €10 billion in asset backed securities and covered bonds, and €6 billion in supranational agency debt. The purchases started in March 2015 and are expected to last through September 2016, with the possibility of a prolongation if economic conditions warrant. There are a few guidelines in regards to what the ECB can and cannot purchase. It will only buy investment grade securities with an outstanding maturity of between two and thirty years. The ECB won’t buy more than 25% of each debt issue, and not more than 33% of each issuer’s debt. It also won’t buy bonds yielding less than negative 20 bps.
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On March 9th 2015, the ECB started to purchase bonds issued by euro area central governments and agencies or institutions under its Public Sector Purchase Program. It purchased bonds from all member states except Greece, Cyprus, and Estonia. As of April 10th 2015, program holdings were €61.68 billion, which meets the ECB’s target of €60 billion a month. The purchasing plan appears to be on track.

2. Objectives

One key difference between the ECB and the other three central banks is the objective of their QE programs. The Fed, BoE, and BoJ’s main motivation behind the launch of their respective QE programs was to maintain price stability and boost economic recovery through monetary means. The Fed’s intention was to not only stabilize prices but also increase economic growth, as is evident in its purchasing choices. The biggest blow of the great recession went to the housing market, and the Fed responded by allocating more than 80% of its first round purchases to Housing GSE debt and MBS. The Federal Open Market Committee (FOMC) stated that the goal of the initial LSAPs was to “reduce the cost and increase the availability of credit for the purchase of houses, which in turn should support housing markets and foster improved conditions in financial markets more generally.”¹ On the other hand, the ECB has one mandate only – price stability. Unlike other central banks that might also be concerned with the unemployment rate, the ECB’s QE program is only aimed at addressing the risks of a prolonged period of low inflation. Its program objective is thus more conservative than that of the other three central banks, and as such the success of the program cannot be judged by the same standards as the other QE programs.

3. Program Size and Balance Sheet Size

Program size relative to GDP and Balance Sheet (at the beginning of the program):

<table>
<thead>
<tr>
<th></th>
<th>ECB</th>
<th>Fed</th>
<th>BoE</th>
<th>BoJ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
<td>Mar 2015</td>
<td>Nov 2008</td>
<td>Mar 2009</td>
<td>Oct 2010</td>
</tr>
<tr>
<td><strong>Phase 1 Program Size</strong></td>
<td>€1.14 Trillion (18 months)</td>
<td>$1.75 Trillion (28 months)</td>
<td>£200 Billion (10 months)</td>
<td>¥5 Trillion</td>
</tr>
<tr>
<td><strong>% of GDP</strong></td>
<td>7%</td>
<td>12%</td>
<td>14%</td>
<td>0.76%</td>
</tr>
<tr>
<td><strong>Balance Sheet Size</strong></td>
<td>€2,158 Billion</td>
<td>$2,106 Billion</td>
<td>£182 Billion</td>
<td>¥2,295 Trillion</td>
</tr>
<tr>
<td><strong>Program Size / Balance Sheet</strong></td>
<td>54%</td>
<td>83%</td>
<td>110%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

Figure 1: Size of central bank balance sheet^2

<table>
<thead>
<tr>
<th>Eligible Assets</th>
<th>ECB</th>
<th>Fed</th>
<th>BoE</th>
<th>BoJ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3. Long-term Treasury bonds</td>
<td></td>
<td>4. Exchange traded funds</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. Japan real estate investment trusts</td>
<td></td>
</tr>
</tbody>
</table>

A large portion of the ECB’s purchases will be sovereign bonds. The asset composition of the planned purchases is somewhat similar to the BoE’s program that purchased a very large amount of Gilts. On the other hand, the ECB’s program is

^2 Initial data and chart from Moody’s updated by capstone team.
quite different from the US program in that it had 80% of its phase 1 allocation going to agency MBS. However, overall, the ECB will still purchase less than the US or UK in terms of the portion of outstanding government debt within each respective country or region. The maximum the ECB could purchase under the current program would be around 17% of the outstanding central government debt market in the Eurozone, while the Bank of England purchased 27.5% and the US Federal Reserve 21% (see chart below)\(^3\).

Figure 2: Potential share of central government debt market purchased under QE\(^3\):

### Share of Government Debt Market Purchased under QE

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV</td>
<td>35%</td>
</tr>
<tr>
<td>LU</td>
<td>30%</td>
</tr>
<tr>
<td>CY</td>
<td>25%</td>
</tr>
<tr>
<td>SK</td>
<td>20%</td>
</tr>
<tr>
<td>SI</td>
<td>15%</td>
</tr>
<tr>
<td>PT</td>
<td>10%</td>
</tr>
<tr>
<td>FI</td>
<td>5%</td>
</tr>
<tr>
<td>DE</td>
<td>0%</td>
</tr>
<tr>
<td>MT</td>
<td>5%</td>
</tr>
<tr>
<td>ES</td>
<td>10%</td>
</tr>
<tr>
<td>NL</td>
<td>15%</td>
</tr>
<tr>
<td>FR</td>
<td>20%</td>
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<tr>
<td>IR</td>
<td>25%</td>
</tr>
<tr>
<td>AT</td>
<td>30%</td>
</tr>
<tr>
<td>BE</td>
<td>35%</td>
</tr>
<tr>
<td>IT</td>
<td>40%</td>
</tr>
<tr>
<td>UK</td>
<td>45%</td>
</tr>
<tr>
<td>US</td>
<td>50%</td>
</tr>
</tbody>
</table>

#### 5. Capital Markets Structure

Bond markets play a relatively more important role than banks in the U.S. and the U.K. while banks play a relatively more important role in Europe and Japan. Each central bank chose methods to provide liquidity and to support the financial system that reflected the structure of its respective economy and capital markets.\(^4\)

#### 6. Timing

In comparison to when the other three central banks started their QE programs, the ECB seems to be quite late to the party. The Fed started QE at the onset of the

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financial crisis right when they realized that lowering policy rates can no longer raise inflation back to its target rate. The BoE followed the Fed’s steps and quickly launched its program to maintain price stability and boost aggregate demand. The BoJ relied on direct lending to the banks for a while, but when deflation persisted, the central bank eventually started another round of QE. In comparison, the two countries that reacted quickly to low inflation seem to have bounced back quicker than Japan. One can argue that the longer deflation persists, the harder it will be to increase aggregate demand due to the prolonged lack of confidence. If that’s the case, then the ECB might have missed the best time to act.

<table>
<thead>
<tr>
<th>Launch Date</th>
<th>ECB</th>
<th>Fed</th>
<th>BoE</th>
<th>BoJ</th>
</tr>
</thead>
</table>

7. Policy Rates

As seen in the chart below, the policy rate of all four central banks at the start of their QE programs is close to zero. Even at these low rates, each country’s inflation is still lower than the target rate. The ECB has recently cut its inflation forecast from 0.7% to 0%, nearing a point of deflation. The Fed and BoE’s inflation numbers might seem normal at around 2% but both countries had much higher inflation going into 2008/2009 and experienced a persistent drop in inflation well into 2009/2010.

<table>
<thead>
<tr>
<th>Date</th>
<th>ECB</th>
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<th>BOE</th>
<th>BOJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td>0.0%</td>
<td>2.0%</td>
<td>2.24%</td>
<td>-1.19%</td>
</tr>
</tbody>
</table>

*Rates are dated at the beginning of each QE program.

8. Economic Environment

Comparing inflation and GDP growth offers an insight into the driving factor behind each country’s decision to start QE. During the time when the US and the UK started their programs, both countries had reasonable inflation levels but were experiencing negative economic growth. One can argue that the driving force behind those QE programs was to stimulate the economy rather than raise inflation expectations. On the other hand, Japan was performing relatively well economically, but was dealing with persistent deflation. Thus the key motivation behind the BoJ’s QE program was to increase inflation expectations. The Eurozone is approaching deflationary levels, giving more reasons to jumpstart QE to increase the monetary base and inflation expectations.
9. Duration
Per the ECB’s announcement, the QE program will last at least 18 months with the possibility to continue if conditions warrant. The other three central banks all had additional phases of QE that totaled more than two years; so it is likely that the ECB will continue its program after the tentative 18 months mark.

10. Comprehensive Chart

<table>
<thead>
<tr>
<th>Date</th>
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<td>0.0%</td>
<td>2.0%</td>
<td>2.24%</td>
<td>-1.19%</td>
</tr>
<tr>
<td>GDP</td>
<td>$12.7 Trillion</td>
<td>$14.7 Trillion</td>
<td>$2.3 Trillion</td>
<td>$5.5 Trillion</td>
</tr>
<tr>
<td>GDP Growth</td>
<td>1.5%</td>
<td>-0.3%</td>
<td>-4.3%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>11.2%</td>
<td>6.8%</td>
<td>7.2%</td>
<td>5%</td>
</tr>
</tbody>
</table>

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II. Impact of the European Central Bank’s QE program on capital markets

In this section we hope to predict the effects of the ECB’s QE on the Eurozone capital markets in terms of interest rates, exchange rates, securities prices, and risk preferences.

1. Research Methodology

To determine the availability of sovereign bonds for purchase, we researched the size of the sovereign bond market in the Eurozone and current holders’ willingness to sell. If holders of sovereign bonds are willing to sell, they will reinvest in other products including securities with higher yields in Eurozone and non-Eurozone securities. As a result, their portfolio will be rebalanced and will lead to changes in asset prices and to the term structure of interest rates.

2. Asset Classes and Debt Holders

A. Government Bonds Market

The current size of the Eurozone government bond market is €6.9 trillion. Of the ECB’s €1.1 trillion purchase plan, about €893 billion would be government debt (broken down into €47 billion per month); this means ECB has to source about 13% of Euro-area government bonds outstanding by September 2016.

Figure 3: Size of Eurozone government bonds outstanding

5 ECB data
7 Graph produced by capstone team based on data from the ECB.
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Our analysis shows that the supply will fall short. The net issuance of Eurozone sovereign bonds in 2015 is expected to be €221.2 billion, less than the amount in 2014 due to reduced government spending. Germany plans to curb the amount of conventional bonds outstanding by €8 billion, and in Spain the net issuance target for this year is €55 billion, down significantly from net sales of €97 billion in 2012. With these figures in mind, the net issuances minus the ECB purchases would be negative €248.8 billion in 2015, reflecting a shortfall in the supply of new bonds. To reach its purchase goal, the ECB will need to source Euro government bonds from current holders.

Figure 4: Net issuance of Euro government bonds

![Net Issuance of Euro Govt Bonds](chart.png)

Breaking down the current holders by residence, about 64% of them are domestic investors, with banks, insurers and pensions holding the biggest stakes. The remaining 36% are foreign investors including Eurozone cross-holdings. These investors, aside from banks, are global asset managers constrained by their investment mandates, and global central banks that build up their reserves with traditional European safe assets.

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8 Based on calculations by Deutsche Bank

9 Based on data from the ECB and calculations by Deutsche Bank.
Monetary Financial Institutions (MFIs)

MFIs are big holders of government bonds. MFIs held €1.85 trillion government bonds at the end of February 2015\(^\text{12}\). Sovereign exposures make up about 9% of all bank assets. Figure 7 shows that, despite the sale of bonds at year-end to lock

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\(^{10}\) Based on data from Morgan Stanley Report, “European Loans and Deposits Tracker: Will ECB be able to achieve its €60 billion QE target?” February 2015.

\(^{11}\) Graph produced by capstone team based on ECB data

\(^{12}\) Based on ECB data
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profits, MFIs were net buyers of Eurozone bonds in 2014 and in the beginning of 2015.

Figure 7: MFI holding and flow of government bonds

Banks in general are reluctant to sell government bonds. Because of new regulations such as LCR, NFSR, TLAC, etc., they need to maintain liquid balance sheets and have limited room to reduce high quality liquid assets. Dutch banks ING and Rabobank, as well as BNP Paribas, for example, have stated they were unwilling to sell government bonds and that the decision was mainly related to new financial regulations instead of monetary policy. Bank’s net interest margins normally decrease under QE, another disincentive for banks to sell government bonds; as their sovereign bond portfolios increase in value from the program, it will offset the reduction in profits from their lending business. In Japan and the U.S., QE left interest margins low for an extended period of time.

Insurance Companies
According to a Morgan Stanley report, insurance companies see no major change to existing insurer investment practices as a result of QE due to their primary need to match assets to technical liabilities.

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13 Graph produced by capstone team based on ECB data
14 “ECB’s Draghi wants to buy bonds, but who will sell”, Reuters, February 20, 2015.
http://www.reuters.com/article/2015/02/20/us-markets-ecb-bonds-idUSKBN0LO0VP20150220
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Pension Funds

Figure 8 shows the asset allocation of pension funds by country. Overall, bonds account for about 50% of their portfolios due to the risk-averse nature of pension funds. Frequently, regulations demand a large allocation to safe assets in order to account for long-term liabilities. Mercer’s 2013 survey findings suggested that plans might increase their allocation to both domestic and non-domestic corporate bonds; however, actual 2014 allocations remained roughly unchanged from 2013 values.

Looking at allocation trends from 2004 to 2014, there is a gradual reduction in equity allocation due largely to a decrease in tolerance for volatility.\textsuperscript{16} Historically, reductions in equity holdings are usually associated with an increase in bond allocations; this has been done to better match liabilities and reduce the volatility of the overall portfolio. For this reason we see it highly unlikely that pension funds will shift away from their current bond allocations.

Figure 8: Pension Fund Strategic Asset Allocation by Country\textsuperscript{17}

\textsuperscript{16} Mercer, 2014 European Asset Allocation Survey

\textsuperscript{17} Mercer, 2014 European Asset Allocation Survey
Foreign investors

Given the reluctance of domestic holders to sell, the ECB will probably have to rely heavily on foreign investors to source enough bonds for its asset purchase program. Non-resident Euro area investors and non-Eurozone investors have been the biggest buyers of Euro area debt. They have about half of their assets invested in Euro sovereign bonds and own 36% of this market. Investors from America and Asia have been big players of the convergence trade while Japanese investors have added to their holdings of Euro government bonds since the beginning of the BOJ’s QE to escape a depreciating yen.

However, the increasing spreads between Euro government bonds and other sovereign bonds may send foreign investors away. U.S. bonds continue to offer more-attractive yields and are poised to go higher on market expectation of a Fed interest rate hike. Additionally, a stronger dollar against a QE-depreciated Euro makes American bonds especially attractive.

Figure 9: Yields of 10-Year Government Bonds in US, Japan and ECB composite

Source: Bloomberg

Japanese government bonds have also become more attractive as a high percentage of Eurozone bond yields are negative. However, passive foreign investors such as Japanese life insurers may not want to sell. Euro-denominated assets are core holdings for them and they need to maintain their Euro exposure.

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18 Terminology example: a French investor in Spain is a non-resident Euro area investor and an American investor in Spain is a non-Eurozone investor.
19 Betting on periphery Eurozone bonds converging to core.
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For non-resident Euro area investors, Eurozone bonds, especially the investment-grade ones the ECB wants to purchase, are still good assets for safeguarding cash. Non-Euro denominated investments might offer slightly more attractive yields, but the foreign exchange risk associated these alternatives make them riskier.

B. Asset Backed Securities

Issuance of asset-backed securities remains very limited in Europe and the market has shrunk dramatically since the financial crisis. In 2014, the total issuance of securitized products in Europe was €0.2 trillion. RMBS represented about 60% of total securitized products in Europe for the first three quarters of 2014.

The ECB announced its decision to start an asset-backed securities purchase program (ABSPP) on September 4th 2014. The expanded asset purchase program (QE) includes the ongoing purchase programs for asset-backed securities (ABSPP). Under the ECB’s current program, it will purchase senior and only guaranteed tranches of ABS. The proposal to buy guaranteed mezzanine tranches has faced opposition from countries including Germany and France. On the other hand, critics contend that the ECB will need to buy riskier mezzanine ABS tranches if it plans to give banks capital relief and increase bank lending20.

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Figure 10: European securitization issuance

Figure 11: Composition of European securitized products

Source: AFME
Source: AFME
C. Corporate Bond Market

The ECB will not be purchasing any corporate bonds but hopes to see some spillover effects into this market. Looking at past results from other countries’ QE programs, the Bank of England did find that there was some money moving from the government bond market into the corporate bond market. However, the Eurozone corporate bond market is fairly small, only 1/6 the size of the US market at about €1.4 trillion. Furthermore, institutional investors currently hold 48% of their assets in government bonds but only 7% in corporate bonds. For this portfolio rebalancing to happen, the Eurozone regulators would have to overhaul some major regulations that mandate certain risk weights and asset distributions.

3. Comparison of market indicators before and after QE announcement

Yield Curve

Figure 12: 10 year government bond yields

Source: Bloomberg

From the anticipation period of QE through after the announcement, there has been a significant decrease in nominal yields throughout the Eurozone. Strictly post announcement the decrease has been negligible, but this is most likely due to a slight rise in periphery yields from increasing fears of a Greek default. Now about a quarter of euro area sovereign debt has a negative yield and more than two-thirds of investment grade debt yields less than 1%\(^{23}\). The 10-year German government bond.

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\(^{23}\)“ECB QE alchemy transforms junk bonds”, Financial Times, April 2015.
http://www.ft.com/intl/cms/s/0/baeb1bdc-e1ad-11e4-bb7f-00144feab7de.html#axzz3Y96jQLWc
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Yields have hit all-time lows. This has pushed investors to seek lower-rated higher yielding bonds or bonds with much longer maturities. For instance, with the 30-year German bond yields hitting fresh lows, investors are moving across the curve to longer-term bonds, which results in a flattened yield curve.

Figure 13: German Yield Curve

![German Yield Curve](source)

Source: Bloomberg

5Y/5Y Forward Swap Rate

Figure 14: 5Y/5Y Forward Swap Rate in Eurozone

![5Y/5Y Forward Swap Rate](source)

Source: Bloomberg
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The entire premise of QE is to raise inflation expectations, and the 5Y/5Y rate has become among the most favored measures of medium-term inflation expectations since Draghi’s Jackson Hole speech. The 5Y/5Y rate experienced a decline in the second half of 2014 due to weak economic data and lower oil prices; lower energy prices translated into month-over-month headline deflation and raised fears of a deflationary spiral. However, since the announcement of QE, the measure has been trending upwards, pointing to a modicum of success for the ECB.

Foreign Exchange
ECB QE has placed downward pressure on the Euro. The search for higher yields by investors, pushing money into non-Euro denominated assets, will further weaken it. In other words, the Euro has become a funding currency for carry trades.

Figure 15: EUR/USD Exchange Rate

Source: Bloomberg

Stock Price Index
The ECB’s QE program was announced on January 22nd, 2015 and the actual purchase started on March 9th, 2015. But the anticipation of the program started to build since summer 2014. As a result, we observe that the STOXX Europe 600 Index has been rising since October 2014. Since the announcement, the index continued to rally and reached record highs.
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Figure 16: STOXX 600

![STOXX 600 Chart](image1)

Source: Bloomberg

Figure 17: DAX

![DAX Chart](image2)

Source: Bloomberg

The market is very optimistic on German stocks. The DAX has broken more than 20 records in two months after the initial announcement and its valuation is now at a five-year high.24 Option traders seem especially confident, pushing implied volatilities to multi-year lows and lowering hedging costs.

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III. Impact of the European Central Bank’s QE program on national economies

1. France

Introduction
After showing resilience through the crisis France has witnessed a slow recovery process over the past years. The economy faces employment gaps and the competitiveness of French firms has been declining over the past years due to factors that even predate the crisis. In 2014 real GDP growth in France was 0.4%,\(^{25}\) (stable compared with 2012 and 2013), HICP inflation rate was 0.6%\(^{26}\) (down from 1% in 2013 and 2.2% in 2012) and the unemployment rate was hovering around 10.3%\(^{27}\). The government’s budget deficit was 4%\(^{28}\) of GDP (still above the EU’s budget deficit target) and the country’s debt to GDP ratio rose again in 2014 to 95%\(^{29}\).

On the other hand, the yield curve for French government bonds significantly decreased during 2014. Yields on 10-year OATs dropped by about 100bp between mid-summer 2014 and the ECB’s QE announcement in January 2015 (“the QE anticipation period”) and by a further 25bp between the announcement date and mid-April 2015. Yields on 3-year bonds dropped from 0.41% in January 2014 to -0.13% in February 2015 (nearing zero in mid-summer and turning negative during the last few months that lead up to the ECB’s QE announcement or during what we consider to be “the QE anticipation period”). In comparison to this, we believe the potential of further drops in yields between now and the end of the QE program to be relatively smaller.

\(^{25}\) Eurostat: Real GDP growth in the EU countries

\(^{26}\) ECB, Statistical Data Warehouse, HICP annual average rate of change

\(^{27}\) INSEE: Unemployment Rate (all age categories, includes overseas territories)
http://www.insee.fr/fr/bases-de-donnees/bsweb/serie.asp?idbank=001688527

\(^{28}\) INSEE: 2014 Budget Deficit
http://www.insee.fr/fr/themes/info-rapide.asp?id=37

\(^{29}\) INSEE: At the end of Q4 2014, the Maastricht debt accounted for 95% of GDP
Interest rate channel
Given that one of the desired results of the sovereign bond-purchasing program of the ECB is to reduce the cost of borrowing for firms and households, it is important to consider the evolution of bank lending rates and credit flows in France and see whether the drop in sovereign yields actually filters down to businesses and consumers in the form of cheaper or more accessible credit. This is all the more important given that SMEs represent 59% of the country’s value added and their share of worker employment is around 63%. SMEs also tend to rely heavily on bank lending for their financing needs; they represented for instance 54% of banks’ outstanding credit to businesses in December 2014.

The rumor of QE and the increased likelihood of an imminent ECB announcement partially contributed to considerably decreased yields on France’s government

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30 Graph reproduced from Agence France Trésor – Monthly Bulletin

31 European Commission, Small Business Act Fact Sheet: France, 2014:

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bonds in 2014.\textsuperscript{33} However the decline in bank lending rates has been more modest in comparison. Nevertheless, between October 2014 and January 2015 the cost of credit to non-financial corporations experienced a noticeable decrease. The average interest rate\textsuperscript{34} of various short-term (< 2 years) loans to businesses dropped from 1.74\% to 1.49\% and medium- to long-term interest rates (> 2 years) also decreased from 2.28\% to 2.02\%.\textsuperscript{35} These movements in bank lending rates were felt to a certain extent by SMEs, and 34\% of them reported having benefited from lower financing costs during the first quarter of 2015 (compared to 29\% in the previous quarter).\textsuperscript{36} Overall three out of four SMEs reported a drop or stability in their cost of financing since July 2014.

At the same time, while nominal interest rates witnessed a decrease of about 50bp, an analysis of real bank lending rates in France shows that since October 2014, the decrease in French government yields didn’t translate into a decrease of real bank lending rates. However since January 2015 we can start to see what might become a reversal in that trend, with both real lending rates for businesses and real mortgage rates going down. If this downward trend were to be confirmed over the next months, this would be positive news for businesses and households. An analysis of new lending flows shows a positive picture as well with flows of new mortgage loans and new business loans over 1 million euro increasing since October 2014. On the other hand the flows of new lending to NFCs with values of up to 1 million Euros remained flat over that same period.

\textsuperscript{33} Throughout this analysis it’s important to remember that we are only partially associating lower nominal yields with QE. We recognize that other macroeconomic circumstances were simultaneously happening (such as lower inflation expectations, lower oil prices) which also contributed to bringing nominal yields down.

\textsuperscript{34} Weighted average interest rate across loan size categories.

\textsuperscript{35} Banque de France, “Taux des crédits aux entreprises, Janvier 2015”, April 2015.

\textsuperscript{36} Banque de France, „Quarterly survey on the access to bank financing of companies in France, First quarter 2015“, April 2015.
Figure 19 (a) and (b): Real bank lending rates in France

French Government Bond Yields (nominal) and Bank Lending Rates to Businesses (real)

French Government Bond Yields (nominal) and Mortgage Rates (real)

37 NB: Real rates are calculated by subtracting Bloomberg’s break-even rates, which are a measure of expected inflation over the next 3 years from corresponding nominal bank lending rates (obtained from the national central bank’s database).
Given the small improvements witnessed in bank lending since the “QE anticipation period” and despite the considerable drop in sovereign yields, we can expect QE to have relatively minor positive effects and expect very slow improvements in bank lending.

**Exchange rate channel**

We think that the exchange rate channel is the one most likely to have an economic impact at the level of the national economies due to a weaker Euro. Since summer 2014 the Euro has devalued considerably against a basket of other currencies. In theory this would help boost net exports but would also increase the price of imports and thereby produce inflation. The main question is whether this nominal depreciation will translate into an effective depreciation of the Euro for France or will the import inflation lead to higher unit labor costs. Based on the BIS data, France’s effective exchange rate has been depreciating, particularly faster since December 2014. However over 2014, the country’s unit labor costs have been rising.

Although we consider QE to have the strongest direct impact on the Euro’s nominal exchange rate, we believe that the impact of QE via the exchange rate channel will be positive but limited by the fact that a significant portion of the country’s trade is within the Eurozone and that its main imports are commodities that cannot be substituted domestically to reduce the country’s import bill (for instance 15% of the

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38 Graph produced by capstone team based on data from national central bank.
country’s imports are petroleum and hydrocarbon related goods). In 2014, 46% of France’s exports and 49% of its imports were with the Eurozone. Its largest non-Eurozone trading partners were the UK, the US, and China.\(^{39}\) When considering France’s product mix, we notice that France’s largest export category are aeronautical products (12% of total exports), which tend to have low price elasticities. On the other hand, automobiles and auto-parts, which have higher demand elasticities, also represent an important export category (close to 10% of total exports) and the French automotive industry could reap benefits from a devalued Euro. A weaker euro has been welcomed by several multinational companies, especially French pharmaceutical firms with large sales outside the Eurozone.\(^{40}\) On the other hand French automakers which are mostly reliant on Eurozone sales are expected to benefit less and could potentially stand to lose from this move in exchange rate unless a weaker euro can help them boost their share of sales outside the Eurozone and achieve more international sales diversification. These two industrial examples show first that French multinationals and firms that are able to expand their sales outside the Eurozone are those that stand to gain the most, and second that the positive benefits on the country’s trade balance will be limited by France’s large share of trade within the Eurozone.

**Signaling Channel**

In theory QE is expected to help raise confidence in the economy and thereby increase investment and consumption spending, which will lead to growth and inflation. It is hard to untangle the effects of QE from other national considerations of businesses and consumers that also impact their confidence. However, what we observe is that business confidence has been depressed over the past few months. Industrial and services business confidence declined in March and is currently around its 2014 beginning of year values. Consumers on the other hand are clearly more optimistic and confidence has been on the rise and above its 2014 average value since January 2015.\(^ {41}\)

\(^{39}\) Département des statistiques et des études économiques, “Le chiffre du commerce extérieur – Année 2014”, February 2015

\(^{40}\) The Economist, “Green shoots, risk of frost”, April 11th 2015

\(^{41}\) European Commission, Economic Sentiment Indicator Data, April 2015.
2. Germany

Introduction
According to the Deutsche Bundesbank, Germany’s real GDP in the final quarter of 2014 increased strongly by an adjusted 0.7%\(^42\) compared to the preceding three-month period, when only very modest growth had been recorded. Given that corporate sentiment did not begin to rebound until November, it is remarkable how quickly and, in particular, how strongly economic growth in Germany picked up towards the end of last year.

The labor market in the fourth quarter of 2014 was characterized by both a stable upward trend in employment and a marked decline in unemployment. The upturn in the labor market continued and gained strength, with January seeing an increase of 42,000 jobs.\(^43\) In addition, based on the HICP inflation data, the low inflation level of 0.1%\(^44\) in March 2015 and historical low volatility point to stable household income expectations. Overall, the German economy will continue to benefit from the

\(^{42}\) Deutsche Bundesbank statistics
\(^{43}\) Deutsche Bundesbank monthly report in March 2015
\(^{44}\) ECB HICP Data
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economic upturn in the current year, especially private consumption from the
exceptional fall in crude oil prices.

\textbf{Interest rate channel}

With respect to the interest rate channel, there is no doubt that Germany’s big banks are better capitalized than many of their European peers, and the ECB’s QE program would allow more leeway to lend to businesses and individuals. However, when it comes to business loans and based on initial data through the end of 2014, and after the announcement of the ECB’s QE program, banks’ new lending to businesses in Germany has remained flat. Even though flows of new lending to enterprises in January 2015 have slightly increased by €3.2 billion compared to last year, the ECB’s announcement in January has not led to any significant increases in new lending. This can be interpreted as German corporations not being ready to start borrowing in order to invest in machinery or equipment, most likely due to weak expectations for global economic growth. Also, SMEs will most likely take considerable time to change their investment strategies. In accordance with this view, the external finance gap, which measures the perceived difference at the firm level between the need for external funds and the availability of funds, will most likely be negative.

Figure 22 (a) and (b): Real bank lending rates in Germany\textsuperscript{45}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure22.png}
\caption{German Government Bond Yields (nominal) and Bank Lending Rates to Businesses (real)}
\end{figure}

\textsuperscript{45} These rates are calculated by subtracting Bloomberg "breakeven" rates, which are a measure of expected inflation over the next 5 years, from 5 year nominal bond yields
Exchange rate channel

Germany is the second largest exporter in the world, with exports accounting for a third of its economic output and a trade surplus of 7.4% of GDP.\(^{46}\) We expect Germany’s net exports to witness a further perceptible rise in 2015, especially from tapping into the emerging market demand that is 39.3%\(^{47}\) of Germany’s exports (as of December 2014).

Germany’s main exports are: cars (17% of total shipments), machinery and equipment (15%), chemical products (10%) and computer and electronics (8%). Germany’s main export partners are: France (9% of total exports), the United States (8%), the United Kingdom (6.9%) and the Netherlands (6.4%).\(^{48}\) Germany’s main imports are crude oil and natural gas (10% of total shipments) and cars (9%). Others include: computer and electronic (9%), chemical products (8%) and machinery and equipment (8%). Main import partners are the Netherlands (9.9 % of total imports), China (8.2%), France (7.1%), and the United States (8%).\(^{49}\)

\(^{47}\)Bloomberg
\(^{48}\)Trading economics: http://www.tradingeconomics.com/germany/exports
\(^{49}\)Trading economics: http://www.tradingeconomics.com/germany/imports
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The expansion of exports and the decline in energy import prices accelerated the overall improvement in the trade balance in 2014, so this phenomenon is likely to continue in 2015 with the additional depreciation of the Euro due to the QE program. Although major imports such as crude petroleum and petroleum gas have very low price elasticities and offer little opportunity for intra-Eurozone substitution, we expect Germany's trade balance to further improve due to a significant boost in exports as a result of the Euro’s depreciation.

Signaling channel

Lastly, for the signaling channel, the QE impact is supposed to be transmitted to the real economy through an increase in inflation expectations and confidence in the economy. According to the historical consumer confidence series, Germany’s consumer confidence index hit a 13-year high in early 2015. This record is partly based on a 25-year record low unemployment rate of only 6.5% (generally considered full employment in Germany), and on expectations of wage increases. In tandem with rising consumer confidence, Germany’s business confidence index also rose in March for the fifth consecutive month, reaching its highest level since July 2014. Overall, the high levels of both consumer and business confidence in the German economy seem to indicate positive expectations about future growth, and possibly future price growth.

Figure 23: Confidence indicators in Germany

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European Commission, Economic Sentiment Indicator Data, April 2015.
3. Italy

**Introduction**

Italy is in trouble. Unemployment is 12%, youth unemployment is 41%, the debt to GDP ratio is 135%, and the economy is the same size it was 15 years ago. Non-performing loans make up 16% of the books of major banks, sizeable structural inefficiencies distort markets, and a protest party holds a substantial number of seats in their legislature.

On the positive side, the ECB has saved Italy from financial meltdown with policy and guidance since 2012. In mid-2014, with sovereign yields at records lows, a steadily depreciating Euro, and reforms slowly gaining traction, it seemed Italy could pull itself out of its malaise. However, the specter of deflation has gripped the Eurozone with prices in Italy steadily falling through the end of 2014. The ECB’s QE program has the potential to reverse this worrying trend and improve the general economic situation for a country that is in desperate need of assistance. In the following three sections, we discuss the three channels QE could work through and our reasoning on its effectiveness through each.

**Interest rate channel**

From initial data through the end of March 2015, the anticipation of QE followed by the commitment of QE from the ECB is associated with slight decreases in the real rate offered by Italian banks, and very slightly increases in the amount of lending. Association rather than causation is what we stress, as sophisticated econometric analysis disagrees if nominal bond yields have been brought lower by lower inflation readings or if it was actually QE. Realistically, because there is probably causation in both directions, we will never have definitive causal evidence. Therefore, we focus our analysis in Italy on the economic environment surrounding lower nominal bond yields.

Since the beginning of 2014, real interest rates on government bonds have steadily decreased with nominal rates, from 1.5% at the beginning of the year to around .50% now. With this decrease in real government borrowing costs, there has been a slight and steady decrease in the real interest rate offered by banks to businesses and consumers. If QE were to have its intended effect through the interest rate channel, one would expect to see real bank lending rates move in tandem with the

51 All data is from the Bank of Italy or Italy’s National Institute of Statistics.
52 These rates are calculated by subtracting Bloomberg “breakeven” rates, which are a measure of expected inflation over the next 5 years, from 5 year nominal bond yields.
nominal interest rate. While there is a slight downward trend following the nominal rate, the decrease in real rates to business is half the decrease in real rates paid by the government; the decrease in mortgage real rates is even smaller. We interpret these findings in two ways: One, banks saddled with the highest percentage of non-performing loans in Europe are increasing their margins at the expense of expanding new business (as visible for the near zero increase in lending volume). Two, lower real rates, even if it were only half the 100bps decrease of government rates, should have spurred increased borrowing; instead, the response was anemic. This points to more complicated demand-side issues, such as the already highly-leveraged balance sheets of Italian businesses and, as we discuss later, pessimism.

Figure 24 (a) and (b): Real bank lending rates in Italy

![Graph showing Italian Government Bond Yields (nominal) and Bank Lending Rates to Businesses (real)]
Exchange rate channel
The exchange rate channel offers slightly more hope than the interest rate channel, but overall it won’t be Italy’s savior. Given the movements of the Euro between just before the announcement of QE and now, it is plausible to attribute at least part of the depreciation to the ECB. However, the hopes of export and import substitution...
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Led growth appear to be misplaced. 40% of Italy’s exports are to Eurozone or Euro-pegged countries and 42% of its imports are from these countries. On the export side this leaves a little room, but Italy is a developed country that exports high value added products. These products generally have low price elasticities of demand and should respond minimally to a depreciated currency. On the import side, Italy’s two largest import categories are minerals (including energy) and metals, almost none of which come from the Eurozone. Add in precious metals and that represents 58% of Italy’s extra-Eurozone imports. These commodities are not present in Europe and therefore offer almost no ability for import substitution.

However, analysis of producer prices of intermediate goods sold to Italian companies shows no increase as the Euro has weakened. This being said, oil prices have also halved in the period of Euro depreciation (in dollar terms, they’ve only gone down 35% in Euro terms); we feel higher producer prices due to a weaker currency are being masked by much lower energy prices. Indeed, unit labor costs showed moderate increases in the final two quarters of 2014. Therefore, it is safe to say Italian business have been benefitting in this time of currency depreciation, but only partly as a result of it. As energy prices return to their 5-year averages, as energy futures markets currently point to, the benefit to businesses will decrease as higher prices filter through the economy. As the ECB is solely responsible for price stability, the bank will see this as a victory but businesses will be less cheerful.

**Signaling channel**

Here we see that QE might be having positive effects on the real economy. Since January of 2015, when the QE program was highly anticipated and then announced, we have seen positive jumps in nearly all confidence indicators. Aggregated by economic importance, the main indicator rose from 98.9 in December 2014 to 106.1 in March, the highest reading since before the crisis. Additionally, as mentioned in prior sections, long term, market-based inflation readings show a rise in expected inflation since the end of last year. If Italy continues to liberalize its labor market and modernize its banking system, these positive psychological changes have a real chance of spilling over into the real economy.

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53 This data is from the 2012 MIT observatory of economic complexity. Most economists agree that Italy’s exporters have redoubled their efforts to find international buyers of their goods over the past few years, but whether it is intra or extra Eurozone is difficult to ascertain as Italy’s National Institute of Statistics does not break out trade by Euro Area/Non Euro Area.
4. Spain

Introduction
After years of recession since the beginning of the debt crisis in 2010, Spain has finally turned the corner and its economy is growing again (1.4% GDP growth in 2014). The reformed banking sector is healthier, and sovereign yields have reached record lows (1.79% in 2014 for 10-year bond). However, Spain is still facing deep-rooted structural problems related to its rigid labor markets and lack of competitiveness. The largest issue that Spain faces is its rampant unemployment, which reached 24.4% and more than 50% youth unemployment in 2014. In addition, incomes have fallen dramatically, productivity growth is low, and the deleveraging of high debt burdens has affected Spain’s growth trajectory. The QE program undertaken by the ECB can impact the Spanish real economy through three main mechanisms: inflation, the interest rate channel and the exchange rate channel.

It is expected that if QE achieves inflation rates consistent with the ECB target rate, Spain’s recovery would be further supported. Lowering real labor costs would become easier given the nominal wage rigidity of Spain’s economy. Inflation would also lower the real burden of Spain’s high private debt and lending rates. Finally, fiscal consolidation efforts would become more manageable as the real cost of

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54 European Commission, Economic Sentiment Indicator Data, April 2015.
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interest payments as well as the debt ratio would be greatly reduced with inflation close to the ECB’s target rate.55

Interest rate channel

One of the objectives of the sovereign bond-purchasing program by the ECB is for lower interest rates to filter through to the real economy and both raise the quantity and reduce the cost of borrowing for firms and households.

In Spain, we observe that the ECB’s policy rate is not being fully transmitted into lower lending rates for households and firms, especially SMEs that comprise 70% of Spanish firms, in terms of employment. Specifically, even though real bank-lending rates for small enterprises (< 1 million) have been falling, they are still at a relatively high level: 3.8% in February 2015, down from 4.4% in February 2014. For larger companies (> 1 million), we can see that real bank rates again have been slightly falling, reaching 1.7% in February, down from 2% from last year. For households, real mortgage rates were 2.3% in Feb 2015, slightly falling from 2.5% from last year. While we can see a slight decrease in real bank lending rates since the announcement of the program in January and even from its anticipation this past summer, these rates remain relatively high, revealing the fragmentation of the banking system.56

As expected, the quantity of loans has steadily been falling, with loans to businesses falling by 13.4% in 2013 and 5.8% in 2014. For households, lending for house purchases has dropped by 4% in 2013 and 3.4% in 2014 while lending for consumer durables has dropped by 21.3% in 2013 and 1.4% in 2014. While these numbers reflect domestic banking sector problems, they also likely reflect the financial fragmentation of the European banking system. For example, the IMF has estimated that European banks have reduced their exposure to Spain by half since 2007. For the interest rate channel to work in Spain, financial fragmentation has to be significantly reduced in order to improve monetary policy transmission. Thus, while we expect interest rates for new business loans and mortgages to keep on falling as a result of the ECB’s QE program and the ongoing recovery of Spanish banks, the impact to the real economy will be minimal without significant banking reforms at the Eurozone level.57

56 Bank of Spain statistics
57 Bank of Spain statistics
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Figure 27 (a) and (b): Real bank lending rates in Spain

**Spanish Government Bond Yields (nominal) and Bank Lending Rates to Businesses (real)**

**Spanish Government Bond Yields (nominal) and Mortgage Rate (real)**

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Moody’s Investors Service
Exchange rate channel
Since the announcement of QE, the Euro has depreciated by 7% against the US dollar. Depreciation in the domestic currency helps the economy by making exports more attractive and increasing import prices, thus creating inflation. With Spain systematically running trade deficits, due to high imports of fuel and high value added goods, we expect QE to improve Spain’s trade balance and significantly boost exports.

Spain’s main exports are: manufacturing products except cars (50% of total exports), food (13%), cars (11%), and fuel (5%). Spain’s main exports partners are France (18% of total exports), Germany (15%), China (10%), Italy (8.5%), and the Netherlands (6%). Even though Spain mainly exports to countries in the European Union (66% of total exports) and the Euro area (52%), since the Eurozone crisis started there has been an expansion and broadening of Spain’s export base. With demand within the Eurozone dramatically dropping since the onset of the financial crisis, Spain has increasingly relied on countries such as China, the United States, the United Kingdom and Turkey, for its exports. With exports to countries outside the Euro area close to 50% of total exports we thus expect the depreciation of the Euro to strongly boost exports, and improve Spain’s trade balance.

58 Trading economics: http://www.tradingeconomics.com/spain/exports
Spain’s main imports are: fuel (19% of total imports), food (7%), machinery (6%), and cars (4%). Euro area countries are Spain’s main import partners, with France (11% of total imports), Germany (8%), Portugal (7%) and Italy (6%) being the largest. However, Spain’s imports from China, the United States, and the United Kingdom are also increasingly important. With higher import prices as a result of the Euro’s depreciation, there is likely to be substitution towards cheaper local products from consumers, further improving Spain’s trade balance.

In conclusion, we expect the depreciation of the Euro to have a significant effect on the Spanish economy, with a large boost in exports improving the trade balance and increasing aggregate demand.

**Signaling channel**

Since the QE program was announced, both business confidence and consumer confidence indicators have increased, reflecting strong confidence in the prospects of the Spanish economy, now that QE is in place. Looking at Figure 30 we can clearly observe a large increase in both business confidence indicators, especially services, as well as in the consumer confidence indicator, since the last quarter of 2014. The business confidence in services index rose to 15.5 in March 2015 from 5.6 in October 2014, and the industrial confidence index rose to 7.9 from 2.8 in the same time period. The rise in consumer confidence has been even more impressive, with the index reaching 18.8 in March 2015, up from 5.3 in November 2014. While this rise in confidence can be partly attributed to the announcement of QE and an increase in inflationary expectations, it is also largely a result of the impressive recovery of the Spanish economy since structural and fiscal reforms were implemented. The belief in the success of the QE program in creating inflation and thus supporting Spain’s recovery adds to the growing perception that the Spanish economy is finally improving and that the country’s structural and fiscal problems are effectively being tackled. It will be interesting to look at the trend of these indicators further in the coming months, when the ECB will have completed the initial phase of its QE purchases.\(^{60}\)

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\(^{59}\) Trading economics: http://www.tradingeconomics.com/spain/imports

\(^{60}\) European Commission, Economic Sentiment Data, April 2015
Figure 29: Confidence indicators in Spain

European Commission, Economic Sentiment Indicator Data, April 2015.
IV. Conclusion: Credit Implications of the European Central Bank’s QE program

1. Capital Markets
   A. Assets
      Sovereign Bond
      Credit Outlook: Positive
      The sovereign bond prices may keep rising as the ECB struggles to source enough bonds to meet its monthly purchase quota. Further reasons to expect this result are: First, low yields may make sense to investors when they look at the real bond yields, which are adjusted for the inflation rate. Second, with Greece remaining an issue, investors are willing to pay for safety and there are not many alternatives across global markets. Third, the ECB’s strong commitment to the bond purchase program allows for further profit potential for those willing to sell before maturity. To sum up, the sovereign bond price has not reached the point where investors are fully compensated yet and thus ECB has to keep bidding.

      Asset Backed Securities
      Credit Outlook: Positive
      Since there are more buyers of ABS products, the market of ABS products will become larger and more active.

      Covered Bond
      Credit Outlook: Positive
      As part of our research, the team reached out to several European market analysts who follow the program closely and have a vested interest in the outcome of QE. When asked what’s the most likely alternative investment for bond sellers, many mentioned covered bond. There seems to be a growing interest in this asset market and we believe a portion of the capital will flow into covered bonds. The spillover effect will increase demand, drive up price, attract new issuance, and increase the total market size.
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Stocks
Credit Outlook: Positive
Indices of Eurozone stock markets have been rising since October 2014 and there is evidence that fund managers are deploying cash and going back to equities. Because of the falling yields, the present value of future cash flows will increase. But we need to note that in the long term, the QE program may actually reduce pressure on governments to enact structural reforms. And since bond markets and stock markets have different risk profiles, institutional investors will not simply shift from one to the other.

Corporate Bond
Credit Outlook: Neutral
As part of the spillover effects, investors in sovereign bond might redeploy their capital into corporate bonds. However, the size of the European Corporate Bond market is very small compared to the U.S., and there is no evidence of an increase in demand in this market. The number of corporate bonds issued is unlikely to change much in the near term due to the dominance of banking institutions as the primary credit source.

B. Institutions
Pension Funds / Insurance Companies
Credit Outlook: Negative (short-term), Neutral (medium to long-term)
Pension funds and insurance companies allocate on average 50% of their portfolio to government bonds. The ECB’s QE program is likely to decrease yields and weaken the euro, translating into an increase in liabilities and possibly deficits for many funds. There’s nothing much plan sponsors can do to mitigate this adverse shock to their portfolio in the short-term because switching to alternative assets requires a change in mandate that will take time to pass. Many companies are hesitant to make any rash decisions at this point because the true impact of QE is still speculative at best. In the short-term, what’s more likely to happen is companies will use their capital reserves to ride out the low yields. This will increase liabilities and lower cash reserves, which will become problematic for funds that are not well capitalized.

In the medium to long-term, if there is evidence of a structural change in the market, funds will then reevaluate their risk preference and possibly pass changes to their mandated asset allocation schemes. If low yield persists in the bond market, they

http://www.ft.com/intl/cms/s/0/5b91e3b2-4b9d-11e2-887b-00144feab49a.html#axzz3XQP43Wyy
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will likely switch to alternative assets rather than the equity markets due to its volatility.

Monetary Financial Institutions
Credit Outlook: Neutral
The ECB’s QE program will have mixed effects on Eurozone banks. Assets that banks hold will have higher value and therefore banks will have stronger balance sheets. Since the QE program purchases mid-term and long-term assets, long-term interest rates will most likely go down more than short-term rates, narrowing their net interest margins. As banks derive much of their profit from maturity transformation, this will certainly have a negative impact. Bank lending will not necessarily increase because demand for bank funding, especially in environment with already low rates, is mainly determined by economic outlook.

2. France
We expect the European Central Bank’s quantitative easing program to be overall credit positive for France. There are several levels on which France would benefit from QE although the impacts are expected to be small. First the government clearly benefited to the extent that yields on French government bonds fell drastically since mid-2014 when the ECB’s QE program started to be anticipated by the markets and continued to fall since the ECB’s announcement in January. Although the low sovereign yield environment is positive for French borrowers, we do not expect it to completely trickle down the bank lending channel and translate into significant lower borrowing costs for businesses and consumers or increased lending to businesses and SMEs. Second the depreciation of the euro, which started in anticipation of a QE program by the ECB and strengthening expectations of a forthcoming Fed hike, is supporting French exporters. A weakening of the euro is all the more supportive of French exporters given the country’s competitiveness losses and could help offset the negative consequences of France’s relatively higher unit labor costs.

3. Germany
We expect the QE program to be overall credit positive for Germany. The German economy is expected to grow by 1.6% in 2015, according to Bloomberg economists. Since Germany has an open economy and the highest sensitivity of export growth to currency fluctuations, the QE-induced depreciation of the Euro is expected to be more productive in Germany than in the rest of the Eurozone. Furthermore, the index of German business confidence has risen for five straight months and consumer optimism is at a record high. Job security and wage growth are now feeding the consumer’s spending mainly due to the ECB’s low interest rates.
However, it is still unclear that the low interest rates are reaching German corporations’ investment, especially in SMEs. In addition, the pension system is taking a hit from the drop in yields: more assets are needed as liabilities have soared from the discount rate if ECB delays or prolongs the QE period. Nevertheless, we expect that the three main transmission channels of QE will positively impact Germany’s economic outlook.

4. Italy

Italy’s problems date back to long before the Eurozone crisis, and even before the common currency was implemented. Boom times of the 70s, 80s, and 90s were largely financed by deficit spending and allowed for the economy to grow around significant structural obstacles. Upon joining the Eurozone Italy was able to continue on its profligate path by riding the low interest rate bonanza brought by a credible, external central bank. The crisis that began five years ago ended the illusion of broad safety and ended the party for Italy. The hangover is here. As any hangover sufferer will tell you, coffee is no cure but rather an instrument to allow the patient a higher level of functionality while he or she cleans up from the night before. Such is the case with QE; it will not solve Italy’s problems, but perhaps give it some breathing room to fix them. These problems are as numerous as they are serious:

- Byzantine labor laws have created a business environment overrun with inefficient and debt-ridden SMEs. Generally, the more employees a firm has, the more difficult it is to fire anybody, even for cause.
- Licensing laws have allowed restricted professions to proliferate and raise the cost of doing business while limiting employment. Notaries in Italy make over €200,000 per year, and that’s down from 2008 when it was over €400,00063.
- The legal system is hopelessly slow. It Italy it takes over 1200 days to enforce a contract compared to an OECD average of 400.
- The structure of the legislature makes forming a stable government difficult. A lack of stable governments is thought to be behind Italy’s past inability to reform.
- Regulations in the banking sector prevent the formation of banks as joint stock companies and encourage ownership by highly politicized foundations. This makes corporate governance weak, and is largely responsible for the

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low profit margins and high ratio of non-performing loans – the highest in Europe at 16%.64

- The tax code needlessly disincentives workers and hurts businesses. The labor tax wedge is well above the OECD average (48% vs. 36%) and corporate taxes are the highest in Europe.

For the time being, our outlook on Italy’s credit is stable, thanks in part to QE. Additionally, progress on reforms is building, and there have been moderate yet incomplete successes. However, a failure to follow through on reform could diminish the market’s perception of Italy while at the same time not allowing Italy the nominal GDP growth it needs to stabilize its already massive debt burden. For future indicators of credit worthiness, we suggest watching developments in the following three areas:

1. Work related to clearing the backlog of cases related to NPLs.
2. Constitutional changes to shrink the Senate and hand more power to the Chamber of Deputies
3. Tax reform

5. Spain

We expect the QE program to be overall credit positive for Spain. The country has turned the corner and after reforming its ailing economy, is growing again. In fact the Spanish central bank expects an impressive growth rate of 2.8% for 2015. Labor market trends are improving, banks are much healthier, and sovereign yields are at record lows. However, the unemployment rate remains unacceptably high (23.7% for Q4 2014), and productivity growth has been sluggish. Spain’s main credit weaknesses are its high levels of both private and public debt. If QE can in fact achieve its target of bringing inflation close to the 2% target rate, this could help in bringing down Spain’s debt burden. Even though we don’t expect QE to really filter through to lower bank lending rates and more loans to SMEs, the depreciation of the Euro could significantly help the Spanish economy. Since Spain has diversified and broadened its exports both in terms of products and partners so that now the majority of Spain’s exports go to countries outside the Eurozone, we expect QE to boost exports and improve the current account, which could gradually reduce Spain’s high debt burden. For the above reasons, we recommend an upgrade in Spain’s rating.

Appendix 1: INFLATION EXPECTATIONS – SURVEY OF MANUFACTURERS

MANUFACTURING INDUSTRY SELLING PRICE EXPECTATIONS
ECB BUSINESS SURVEY RESULTS - MARCH 2015

Appendix 2: UNIT LABOUR COSTS

European Commission, Business and consumer survey, March 2015
OECD, Unit labour costs and labour productivity dataset, April 2015
Appendix 3: REAL EFFECTIVE EXCHANGE RATES

Real Effective Exchange Rate

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67 BIS, Effective exchange rate dataset, April 2015
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