The phenomenon of negative bond yields

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The implications of negative interest rates could be substantial for investors, companies and policy makers. The longer rates stay negative, the more distortions will appear in financial markets. This paper examines the phenomenon of negative bond yields and interest rates, especially in Europe and Japan. The analysis suggests that certain trends are already in place which could ultimately lead to severe distortions.

DRIVERS OF NEGATIVE YIELDS

Over the past 12 months, negative interest rates and bond yields have become more prevalent across Europe and, to a lesser extent, Japan. Previous occasions when this occurred have been very short-lived (2008 and 2011) and limited to short-dated maturities, such as US three-month Treasury bills. However, the current episode is much deeper, broader and more sustained. This paper examines the key drivers of this phenomenon and provides an analysis of the implications it could have for financial markets and beyond. These include money market funds (MMFs), insurance company regulation and changes in investor behaviour. It also looks at various feedback loops which have the potential to complicate the situation further.

While there is a tendency to relate negative yields to QE policies, today's experience should be put into a longer-term context. There has been a general decline in short- and long-term interest rates in most countries over the past two decades, a fall that accelerated after the 2008 financial and 2011-12 Eurozone crises. Structural drivers include:

- the appearance of large savings gluts, exemplified by current account surpluses in the likes of China, Germany and Japan (Figure 1);
- a long-term decline in global productivity growth; greater regulation of financial services and a retrenchment of bank credit;
- a depression in the corporate appetite for risk; and,
- demographic considerations, such as the impact of ageing populations on long-term savings and the natural interest rate.

The IMF's latest World Economic Outlook warned that the world’s growth potential took a big hit after the financial crisis and is likely to lag for years. In addition, negative interest rates reflect attempts by policymakers to fight deflation tendencies. Among the major central banks, the ECB led the way when it reduced its official deposit rate into negative territory in

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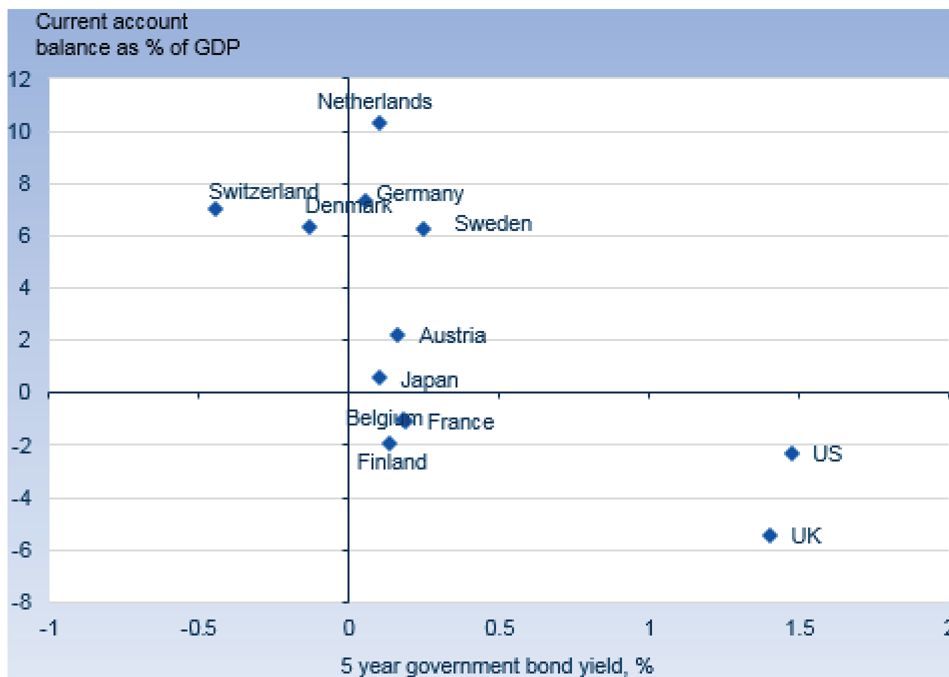
June 2014. Additionally, other European central banks have used negative official rates as a way of quelling capital inflows into their currencies. Denmark, Sweden and Switzerland fall into this camp, and there has been speculation that Norway may need to follow suit.

Figure 1: Current account balances and yields
Bond safety cushions (1996-2013)



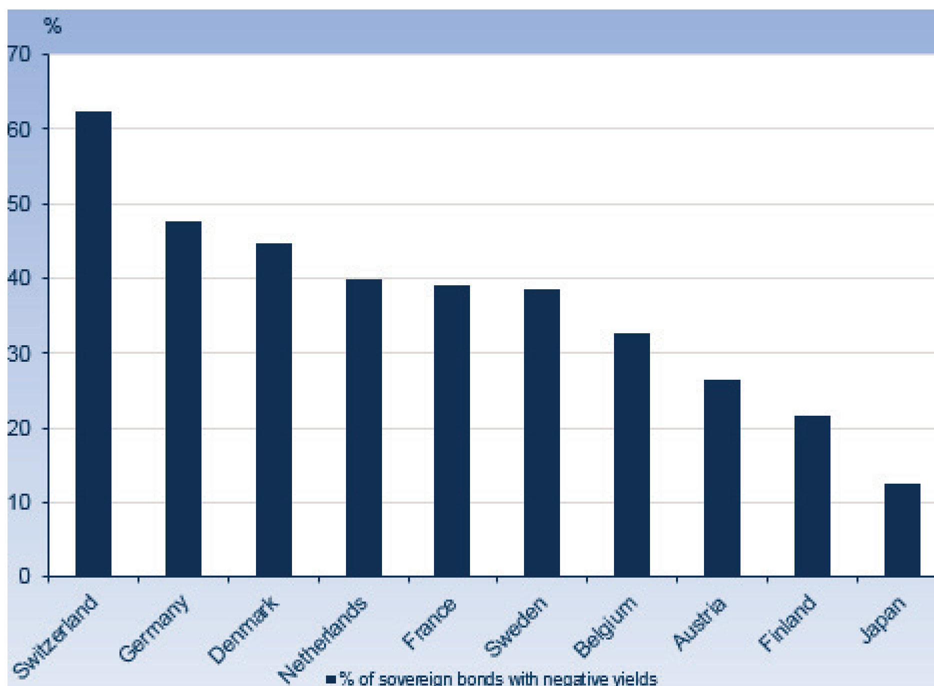
Sources: State Street, Eurostat, US BEA, Bank of Japan, Bloomberg (as of 8 May 2015)

Negative bond yields also reflect the relative supply of, and demand for, bonds. There are also the unintended consequences of regulations, such as Solvency 2. This has resulted in large parts of the European insurance and banking sectors being forced to hold more government debt. Specifically, it can be argued that low interest rates, thanks to central bank actions and the legal requirement for certain financial services companies to hold extra bonds, have led to the mispricing of liabilities. In these circumstances, an adverse feedback loop can easily develop, as falling yields encourage a structural demand for higher-yielding assets, which in turn drives yields lower. In February, Moody's warned about the impact a toxic mix of long-term guarantees, low interest rates and fewer long-term assets could have on smaller life insurance companies in parts of Europe.[1] The unintended and potentially adverse consequences of such policies are becoming more apparent to central bankers, as typified by statements from the Bundesbank's Jens Weidemann.[2]

While QE in the US and UK accompanied large public sector borrowing requirements, this is not the case with European QE. Putting aside France and Italy, which still run sizeable deficits, most Eurozone members have considerably reduced their debt issuance. Indeed,

Germany is currently running a small public sector surplus.[3] This means that when holders from a Eurozone country sell a government bond to a Eurozone central bank, they have fewer liquid options in which to invest. As a result, around 25% (some €2 trillion) of the European government bond market currently has negative yields, with maturities stretching out to eight years in Switzerland. Including Japan, over $4 trillion of sovereign bonds, or about 15% of the JP Morgan Global Government Bond Index, have sub-zero yields (Figure 2).

Figure 2: More negative yields



Sources: State Street, Bloomberg (as of 8 May 2015)

Despite the recent steepening of the global bond yield curve, there is a growing realisation that negative yields (at least, at present, for shorter-dated maturities out to around five years) could exist for some time to come. The ECB has confirmed that it will continue QE until September 2016, and that it will buy debt with yields as low as -0.2% (matching the official deposit rate).[4] Denmark has already had three years' experience of negative deposit rates.[5] The Swedish bank governor has said that its new negative yield policy would probably be in effect through most of 2016.[6] To put ECB QE into context, it is just the last in a long line of programmes that have forced massive amounts of liquidity into the financial system. This liquidity glut is not likely to disappear quickly, considering that both the US and UK central banks have indicated their preference for a very gradual hiking cycle. All this should keep pressure on the shape of yield curves for an extended period of time.

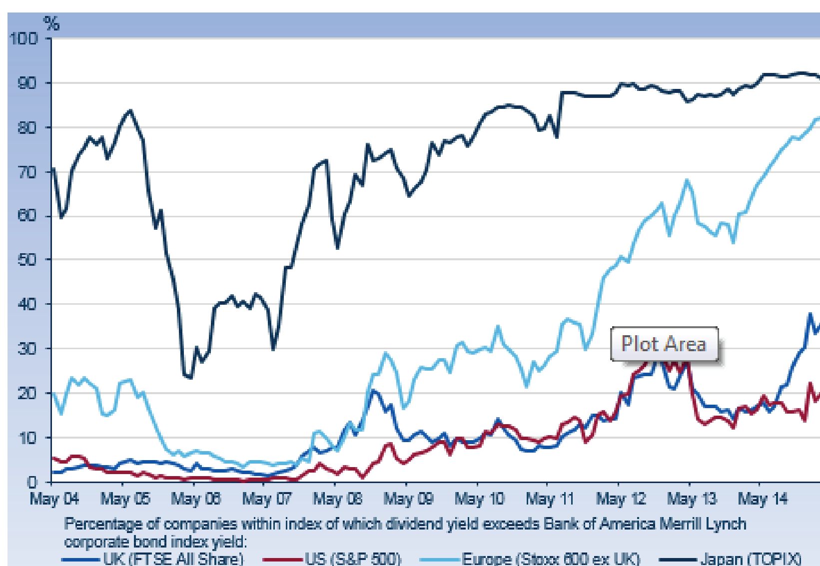
The next section of this paper considers the implications of this unusual situation for investors, financial services, non-financial companies and, finally, policymakers. It is

important to emphasise that behavioural factors, such as risk aversion, could have a greater influence on the decision making or actions of some of these groups. Put another way, the behavioural consequences may appear strange or be rather difficult to discern in such unknown territory.

IMPLICATIONS FOR INVESTORS

Relative valuations will encourage more investors to look at equities, real estate and credit rather than government bonds with a negative yield. The European and Japanese equity markets are already seen as a more attractive investment option, partly because of improvements in underlying economic and corporate conditions. However, dividend yield is becoming a stronger market driver, as income-hungry investors look for companies with high and sustainable cash flows. Figure 3 shows the percentage of firms with dividend yields higher than their corporate or sovereign bond yield. From a more academic standpoint, asset prices are ultimately set by a discounting mechanism - therefore, as the discount or risk-free rate moves towards zero, asset prices theoretically rise to infinity. This may partly explain the surge in many European equities in spring 2015. Bond market proxies among equity markets could be particularly affected, notably certain tech or utility stocks. Similarly, ultra-low or negative bond yields substantially affect real estate pricing; the experience of the Danish housing market is a classic example.[7]

Figure 3: Percentage of firms with dividend yields higher than corporate or sovereign bond yield



Sources: Datastream, Bank of America Merrill Lynch, Standard Life Investments (as of 30 April 2015)

Low, negative and volatile bond yields will also discourage investors from traditional benchmark or balanced fund investing, and encourage a preference for strategic or unconstrained styles. For example, when seeking investment opportunities in order to profit tactically from an uncertain environment, themes such as rolling down yield curves and playing the shape of the curve become even more significant. It is important to recall that bonds with a negative yield usually have a current price well above redemption value, so an investor holding them to maturity can expect to lose money. This has particular implications for sovereign wealth funds and central bank foreign exchange reserve managers, many of which have mandates that limit the use of such bonds.

For example, some smaller reserve managers usually have a restrictive maturity range, while achieving changes to benchmarks can also be a slow process. In order to pick-up extra yield, many of these managers are therefore moving out of the core into the periphery of European bonds. By contrast, larger reserve managers are bound by liquidity constraints and consequently have to buy negative yielding assets. As a result, many are allowing natural attrition to reduce the weighting of their euro-denominated assets. Indeed, IMF data suggests that since European bond yields turned negative last year there has been noticeably less rebalancing by central bank accounts into the euro.[8]

A further danger for investors can be described as risk creep. This means that as yields fall, investors migrate out of core bonds and into lower quality credits, thereby adding risk to their overall portfolios. Even after the recent sell-off, bond market valuations are abnormally stretched. Looking ahead, a sharp reappraisal of the outlook for nominal yields, whether because the real or the inflation component alters due to the perceived success of ECB QE policies, would mean the re-pricing of bonds could have a materially adverse effect on balance sheets. This will especially be the case should investors misprice the degree of liquidity in bond markets, which is not currently at all high, or take on too much leverage to try and achieve desired returns.

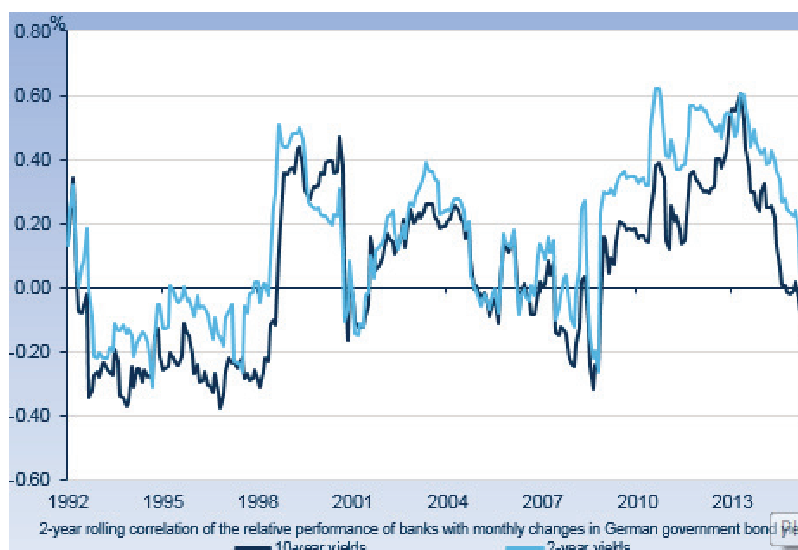
IMPLICATIONS FOR FINANCIAL SERVICES COMPANIES

Negative interest rates have obvious implications for the operations of money market funds (MMFs). The recent experience of negative yields has already created problems with legal contracts, fees, accounting practices and banking technology. The IMMFA has reported that many European fund managers have consequently modified their fund structures to allow them to operate in such a negative yield environment.[8] So far, the response from investors has generally been to accept the disadvantages of modestly negative returns against the benefits of the preservation of capital, credit diversification and the provision of liquidity. The question remains how the sector would cope if the costs became much greater.

Concerns have also been raised about the impact negative rates will have on banks' net interest margins (NIMs). At this stage, the impact is small. Euro area banks' excess reserve assets have fallen to around €100 billion.[8] Therefore, a negative 0.2% overnight rate costs the banks around €200 million – a modest sum in the context of the sector's total profits. This adverse driver looks to have been more than offset by the desire among investors for companies paying good dividends. The European financial sector currently has a dividend yield of some 3% and has grown dividends by around 8% over the past three years.[8] Another explanation is the many drivers of NIMs – in particular, the yield curve banks face is still relatively steep. It is therefore interesting to note that there is no consistent correlation between the relative performance of European banks and changes in German bund yields (Figure 4).

The impact of negative borrowing costs on the demand for loans is difficult to untangle. On the one hand, negative borrowing costs should encourage demand for credit, thereby stimulating investment activity. Conversely, negative deposit rates could be interpreted as a symptom of a banking system trying to shrink or deleverage. Negative yields may therefore be a strong indication that these are not normal times, and consequently encourage consumers and businesses to hold cash for precautionary purposes. Due to distorted relative price signals, negative rates also disrupt the normal financial intermediation between savers and debtors. A further unintended consequence of negative yields could be the extra pressure put on retail banks, many of which will find it more difficult to attract deposits in relation to investment banks. This is because the latter are able to benefit from some of the positive aspects of negative yields, such as companies increasingly issuing debt in order to fund M&A activity.

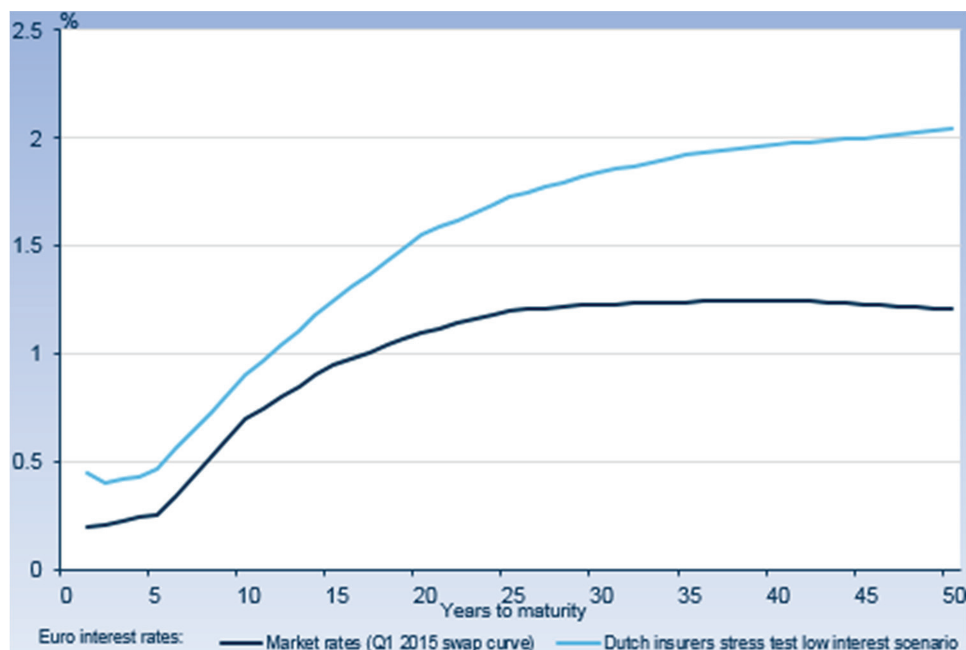
Figure 4: Banking against correlations



Sources: Datastream, Goldman Sachs (as of April 2015). Figure shows Correlations between relative performance of Europen banks and changes in German bund yields.

A deeper worry is the situation facing European insurance companies. The long-term business case supporting many financial stocks must be reassessed when the carry from government bonds is so low. This is particularly the case for firms undertaking annuity, endowment or pension business with guaranteed nominal returns. The Dutch regulator (DNB) has already issued warnings in its Overview of Financial Stability[9] that "the situation at life insurance providers gives cause for worry as their recovery options are limited... so, the DNB has asked insurers to develop strategic scenarios" (Figure 5). The German government has hinted that it will grant more regulatory leeway to large financial intermediaries, such as life insurers and capital funds. The phasing of any such regulatory relief could be important for markets. However, unless the pressure is released slowly – and soon – then there is a further risk of market volatility as and when regulatory reform appears.

Figure 5: Problems with stress tests[10]



Sources: DNB, EIOPA (as of Q1 2015)

IMPLICATIONS FOR POLICY MAKERS

Negative yields cause a range of additional difficulties for policymakers – for example, how to respond to the cross border capital flight as investors leave negative-yielding countries for better returns elsewhere in Europe. This explains the upward pressures on the currencies of Sweden, Switzerland and the UK, as well as the US. All four nations are reacting either by altering interest rates, trying to talk down their currencies or by accepting that interest rate increases might need to be delayed.

Looking ahead, a zero interest rate policy might replace QE within the central bank armoury. Until recently, policymakers saw a zero-bound for official interest rates, meaning monetary policy was viewed as impotent when official or market rates approached zero. This reflected many concerns, including that the operations of MMFs would become more difficult in such an environment. After all, even the recent experience of negative yields has created problems with legal contracts, had accounting and tax payment/credit implications, as well as posing challenges for banking technology. However, a paradigm shift might be occurring. Central banks appear more willing to frequently use negative rates in order to achieve their target of lowering the inflation-adjusted rate of interest to levels which encourage borrowing by businesses and households. Therefore, in the next recession, it will be interesting to see whether more central banks use a policy of negative rates, especially to encourage dis-saving by consumers and corporates. Such a policy, if implemented, could drive a consumer, construction and real estate boom.

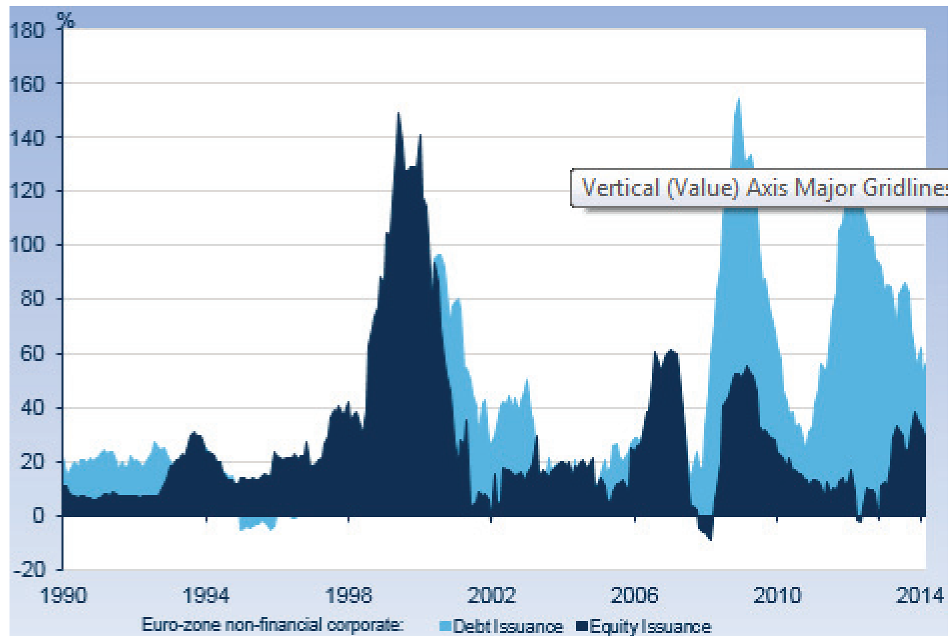
In principle, European governments are a clear beneficiary of negative yields. Finland and Switzerland have successfully issued bonds with a negative yield,[11] thereby reducing future debt-servicing costs. The attraction for other governments to follow suit is clear. For example, political leaders could use the bonds to fund expensive long-term infrastructure projects, which will help drive down unemployment and consequently improve a government's popularity.

IMPLICATIONS FOR COMPANIES

Certain firms could be similar beneficiaries. Ultra-low - if not actually negative - corporate bond yields could open the way for a further wave of debt issuance. The proceeds could be used to refinance more expensive existing debt, fund share buybacks or finance M&A opportunities. There have already been reports of US companies seeking to raise funds in euros rather than dollars while looking for acquisitions in Europe.

The drawback for investors is that negative rates could encourage a wave of financial engineering, whereby share price trends move away from underlying economic fundamentals. A surge in sales of corporate bonds to fund share buybacks would add to pressures on companies' balance sheets and increase risks to holders of corporate debt. Figure 6 shows the recent pick-up in bond versus equity issuance in Europe. Investors will need to consider the implications carefully. For example, should they look at increased activity as a negative signal (that firms are diverting funds away from capital investment) or as a positive signal (that companies expect productivity to increase even though investment has not been especially strong)?

Figure 6: Upping the debt stake



Sources: Datastream, Goldman Sachs, ECB (as of Q1 2015)

CONCLUSION

There have been numerous examples in the past where borrowing costs have been negative in real or inflation-adjusted terms. There are considerable implications for investors in Europe and beyond should negative yields become embedded. There are also issues for the general public. For example, the introduction of negative deposit rates at banks could eventually see the public start to hoard paper currency. As far as companies, investors and policymakers are concerned, there are already certain trends in place that could ultimately lead to severe distortions. For one thing, there is a risk that negative yields encourage financial engineering – in particular, issuing debt with a negative yield would be extremely attractive for firms who use the proceeds to finance share buybacks or M&A activity.

It is debatable whether negative nominal rates do much to promote economic growth and inflation, although they may help stabilise expectations. However, negative rates do inflate asset prices, especially equities, and residential and commercial property. Both theory and experience suggest that portfolio shifts – and eventually bubbles – also have room to develop. In particular, negative rates create problems for certain financial firms, such as European insurance companies, who find it more difficult to meet product guarantees. Meanwhile, risk creep becomes more of a factor as portfolios move away from core assets. Lastly, market volatility could become more pronounced, with small changes in the discount rate having very large effects when the risk-free rate is close to or below zero. In this

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respect, if negative interest rates become entrenched in the rates structure, then changes in investor behaviour may become more important drivers of markets.

In summary, it is warned that negative yields have the potential to create greater gap or divergence between the economic cycle and the asset cycle. In turn, this could create asset bubbles – which will undoubtedly burst when the lender of last resort steps back.

ENDNOTES

1. Draghi's QE strains German life assurers, Financial Times

2. Bundesbank president Jens Weidmann steps up criticism of QE, Financial Times

3. Statistical Data Warehouse, European Central Bank

4. Draghi Seen Dispelling Duration Doubts About QE Program, Bloomberg Business

5. Negative deposit rates: The Danish experience, Bruegel

6. Sweden Pushes Rates Deeper Into Negative Territory, The Wall Street Journal

7. Currency War Feeds Denmark's Housing Boom Amid Extreme Rates, Bloomberg Business

8. Negative Interest Rates and Euro-Denominated Prime Money Market Funds, Institutional Money Market Funds Association.

9. Overview of Financial Stability, De Nederlandsche Bank

10. The low level of interest rates is affecting the buffers of financial institutions, especially those of insurance companies, fuelling concerns about the sustainability of their business models. The European stress test for insurance companies, executed in 2014, has provided an understanding of the interest rate sensitivity of this sector and confirms the large impact of a scenario of prolonged low interest rates. Although the adverse interest rate scenario used in the test was assumed to be hypothetical, it has already materialised: the yield curve has already dropped below the level assumed in the scenario. Figure 5 highlights the rates at which Dutch insurers have been stress testing (light blue line) and current market rates, which are lower.

11. Negative Yields on Eurozone Sovereign Bonds Becoming New Normal, The Wall Street Journal

IT'S OFFICIAL: You have to pay the Swiss government to take your money for the next 10 years, Business Insider UK

Germany sells five-year bonds at negative yield, Financial Times

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