INTEREST RATES THROUGH THE LOOKING GLASS

Strategic Perspectives

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NEGATIVE NOMINAL INTEREST RATES CREATE A LOOKING GLASS WORLD, JARRING LONGSTANDING NORMS AND EXPECTATIONS. Their prevalence raises profound questions about global economic prospects and the operation of financial markets. This edition of our Strategic Perspectives series considers the factors behind these extraordinary developments and the implications of negative yields for investors.

Who's Going Negative

Interest rates in key markets have gone negative, ushering the economy into a looking glass world. Central banks setting monetary policy for one quarter of the global economy – including the ECB and the central banks of Denmark, Hungary, Japan, Sweden, and Switzerland – target negative nominal policy interest rates, breaking through the zero lower bound.

Even where positive, nominal policy rates are extraordinarily low in most advanced economies. Adjusting for inflation, the real Fed funds rate has been negative since 2008, and inflation during this period has been unusually subdued.

The persistence of abnormally low policy rates raises the possibility that, in a renewed downturn, even more central banks may need to resort to negative nominal rates. Indeed, some central banks that currently maintain positive nominal policy rates, including the Fed, are considering the feasibility of adding negative rates to their policy tool chest. But this exploration by the Fed and others is being undertaken as worries mount about the effectiveness and possible unintended consequences of the extraordinary monetary measures already being taken.

The phenomenon of negative interest rates is not limited to short-term policy rates. Sovereign bond yields are negative in nominal terms well out the maturity spectrum, with negative yields prevailing for 8 years in the case of Germany and 10 in Japan and Switzerland, suggesting that markets expect negative nominal rates to persist well into the future (Figure 1). The stock of sovereign bonds with negative nominal yields is approaching $10 trillion, and, in some sovereign bond markets, well over half of the stock of debt carries negative yields.

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FIGURE 1:
Prevalance of Negative Nominal Yields across the Maturity Specturm
Sources: Bloomberg. Data as of May 20, 2016.

Why All the Negativity?

Global interest rates have been in decline for over 30 years. After the mid-1980s, the decline in interest rates was associated with falling inflation as stringent monetary policy wrung inflation out of the economy. More recently, and especially since the great financial crisis (GFC), expectations for slower global trend growth, reduced demand for investment, and an increase in desired savings have joined forces to push yields to unusually low and even negative levels (Figure 2).

Financial crises typically spawn adverse cyclical forces that are more virulent and persistent than those following a typical recession. Downturns associated with financial crises often trigger permanent contractions in key sectors of the economy, including finance, insurance, and real estate. Moreover, capital accumulation slows. Slower investment is triggered by weaker profitability, greater uncertainty about future profitability, tighter credit standards, and a retrenchment in expenditures associated with deleveraging. Finally, structural unemployment increases as a result of a skills gap, often concentrated on a few particularly hard hit sectors. Long-term unemployment leads to an erosion of skills, and eventually a withdrawal from the labor force. This crisis-induced fall in labor force participation compounds the problems of slowing labor force growth caused by demographic factors.

Markets expect abnormally low yields to persist. This view is priced into a number of financial indicators—including nominal and real sovereign yield curves and long-term inflation swaps—and reinforced by the words and actions of major central banks. Ultra-low and even negative nominal yields appear set to be a feature of the investment landscape for some time to come. They will normalize gradually as the cyclical forces that remain strong in some economies wane as they have in the U.S.

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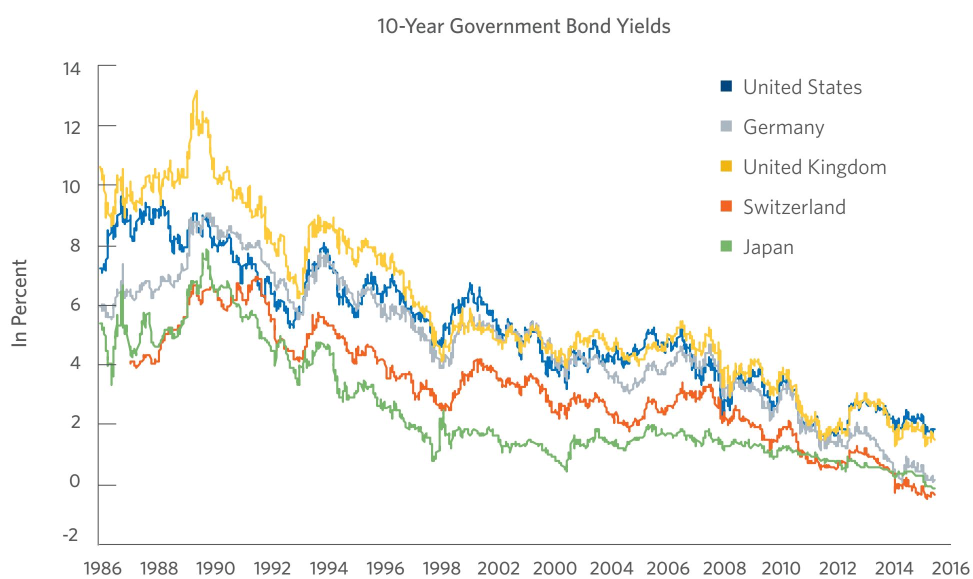
FIGURE 2:
Protracted Yield Decline in Advance Economies
Sources: Bloomberg. Data as of May 20, 2016.



Looking Glass Finance – Curiouser and Curiouser

Economies remain fragile after the GFC despite many years of zero policy rates and a massive expansion and fundamental transformation of central bank balance sheets. What is a central banker to do? Are negative rates, hitherto widely discounted as an aberration, the answer? Will a looking glass economy in which depositors pay to save and banks pay borrowers to take loans grow faster?

Many central banks think so: negative nominal policy rates prevail in economies accounting for one quarter of global GDP. These central banks, and others considering a step through the looking glass, see nothing terribly remarkable about negative nominal yields. After all, policy rates and longer term rates have frequently been negative in real terms.

But are negative nominal rates really no different? There are many reasons to suppose that pushing nominal yields from positive to negative is problematic, notably the existence of cash, the norms of nominal contracts, and unintended behavioral responses of households and banks when confronted by negative nominal rates.

Cash, Banking, and the Zero Lower Bound

The existence of cash is the main reason why zero has always been assumed to represent the lower bound on interest rates. Cash is a strange beast. If it were a fixed income instrument, we would characterize it as a zero coupon perpetual, every issuer's dream, as it is irredeemable and pays no interest.

This strange beast becomes oddly attractive when the alternative is a bank deposit that bears negative yields. At a certain threshold of negativity, the mattress will appear preferable to bank accounts, despite the inconvenience and the storage, safekeeping, and transportation costs of holding cash. [1]

Innovations to circumvent negative deposit rates may also be encouraged. If negative rates are significant and perceived likely to persist, vaults could be built by trusted counterparties to hold cash and facilitate transactions through the exchange of vault receipts, an age-old form of banking. Note that a variant to a vault receipt already exists. For example, cashier's checks could be used as a store of value and means of exchange to circumvent negative deposit rates.

If too many depositors prefer the mattress or other "innovative" options over deposits, the central bank's main aim – encouraging spending and lending by making savings costly and borrowing cheap – is thwarted. Moreover, mass depositor withdrawals would trigger a banking crisis, seriously undercutting growth prospects. For this reason, most observers think that, as long as cash is available as an independent store of value and means of exchange, there will be a practical limit to how negative rates can go.

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[1] These limits probably apply most to retail depositors. Very large cash transactions by corporations are impractical. For example, $1 million in $100 bills would be 43 inches high and weigh 22 pounds.

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Financial Vehicles in a Looking Glass World

Much of our financial infrastructure is ill-equipped to cope with negative rates. Typical loan contracts and bond conventions assume that borrowers pay and lenders receive interest. Negative rates reverse the flows normally expected between borrowers and lenders, and create troubling outcomes in the case of many familiar financial vehicles.

For example, retail money market mutual funds are normally expected to maintain their value at par. Falling below par, or "breaking the buck", results in a run on the fund and regulatory intervention to prevent damage to a critical source of short-term funding. In a looking glass world, money market mutual funds would be continuously "breaking the buck". As these funds represent an important source of funding for short-term paper issued by corporations and others, a reduction in assets held in money market mutual funds would hurt the operation of the money market, with the perverse outcome of impeding rather than supporting an economic rebound.

In the looking glass world, it really is better to give than to receive.

Managing bond flows would also be problematic and stand convention on its head.

- **In a looking glass world, zero coupon, or "discount" bonds, would be issued at a "premium" to face value.**
- **Negative coupons put issuers in the awkward position of collecting payments from widely dispersed bondholders.**
- **Floating rate notes pose special difficulties, as these may be issued with positive rates but turn negative if the reference rate falls. In that case, issuers would be in the awkward position of tracing bondholders to claim the interest owed them.**
- **Floating rate mortgages are somewhat more manageable as the bank holding the mortgage would have no difficulty tracking down the borrower to pay them interest. Indeed, in Denmark some borrowers with floating rate mortgages are already in the happy position of receiving monthly interest payments from their bank. Their joy at this windfall was no doubt dampened by the Danish tax authorities who quickly ruled that interest expenses are tax deductible for lenders, and interest income is taxable for borrowers. (So much for using the tax code to encourage home ownership.)**

Incentives to Pay and Receive

Negative rates also change the incentives on the timing of receiving and making payments. In the looking glass world, it really is better to give than to receive. When rates are positive, sellers of goods and services are quick to invoice their customers and penalize late payments, while shoppers are keen to defer payments for as long as possible to enjoy the float. When rates are negative, these incentives are reversed as being owed a constant amount by a creditworthy counterparty is preferable to receiving funds in an account bearing negative interest.

With these incentives, American consumers would be induced to prepay credit card bills using idle cash otherwise being eroded by negative interest. April 15 would lose its significance as prepaying taxes to the IRS and other authorities would provide another way to circumvent negative rates. Similarly, tax refund checks would be deposited in a negative interest account at the last possible moment. The gaming of payments following unfamiliar incentives would no doubt create unforeseeable disruptions and inefficiencies, and thus detract from the central bank's intended effect.

Mixed Messages and Perverse Incentives

If introduced, negative interest rates could be perceived as a sign that the situation is dire and central banks desperate. In the face of a perceived calamity, households and businesses are more likely to tighten purse strings rather than adopt free spending ways, prolonging the slump that the central bank is seeking to reverse. In the worst case, a self-perpetuating deflationary cycle could result.

A further difficulty is the impact on the health of banks and other financial institutions. To avoid deposit withdrawals, cash hoarding, and other perverse behaviors by households, most banks have so far been reluctant to pass on negative rates to retail depositors. As a consequence, their profit margins have been squeezed, undermining their capacity to lend.

Central Bankers in the Looking Glass

Standing convention on its head is the mirror image of the deliberate and measured actions that are the watchword of typically staid central bankers. Many appear to be having second thoughts about the unforeseen consequences of negative nominal rates, realizing that the shift from negative real to negative nominal rates is much more than an incremental step along a continuum. Still, negative nominal rates do have benefits, especially by triggering an expansionary depreciation of the exchange rate and signaling determination to boost employment and inflation. So far, the most potentially disruptive effects of the looking glass world have been avoided, mainly because households have largely been spared from negative rates. Whether these disruptive forces can be held at bay indefinitely as rates fall more deeply down the rabbit hole is an open question.

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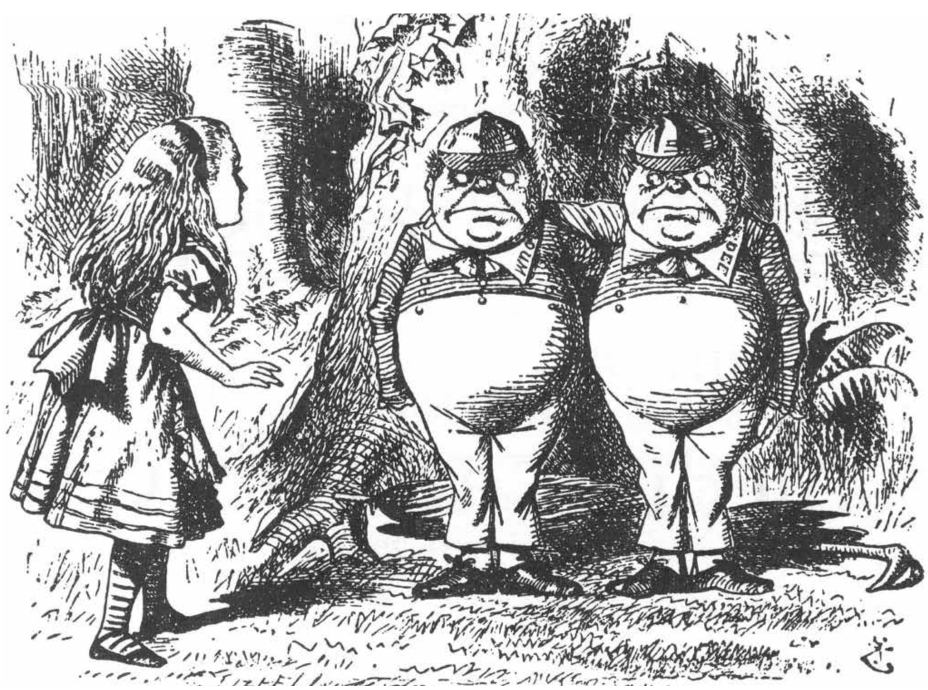

Conclusion

Negative interest rates are quite foreign to accepted norms and expectations, create unintended consequences and perverse behavior, and stand the conventions for common financial instruments on their head. That one quarter of the world's economies are operating under negative rates demonstrates the virulence of the forces with which central banks are grappling. The persistence of negative rates below a critical threshold would have unforeseen consequences for payments systems and financial institutions.

Aware of these difficulties, some economists are considering ways to eliminate cash, or fundamentally transform its nature. Possibilities include replacing cash with electronic money to facilitate imposing negative interest rates, taxing currency, or having a variable exchange rate between the withdrawal and redepositing of cash. Such measures would themselves be fraught with uncertainty and likely to cause unintended consequences.

At the end of Lewis Carroll's classic story, Alice awakes on a riverbank—her adventures in a looking glass world were only a dream. As the cyclical forces contributing to abnormally low yields dissipate, the world's central bankers will also leave the strange, topsy-turvy world they have entered and awake to a more familiar reality.

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