

# Can Interest Rates Decline from Historic Lows?

## Executive Summary

- The last time interest rates were as low as they are today was during the 1930s and 1940s. That phase was characterised by the aftermath of the Great Depression and the misguided constraints of a disintegrating gold standard.
- On the surface, the US, UK and parts of Europe do look like Japan in the early 1990s. Equilibrium real interest rates are now negative. The challenge for policy-makers is that nominal rates cannot decline below zero. If expectations turn deflationary, the central bank will find it impossible to run a monetary policy sufficiently loose to reinvigorate spending and stabilise prices. A long history of strong inflation-fighting credibility can actually become a central bank's biggest burden in the fight against deflation. Audacious policy like quantitative easing is considered temporary and fails to influence inflation expectations.
- Inflation expectations remain positive outside of Japan and would have to fall substantially before the necessary conditions of a Japan-style deflation trap are satisfied. If inflation expectations were to decline, central banks would have to credibly commit to a regime shift in policy-making, including the possibility of adopting a price-level target. Policy dogmas are difficult to break, however.
- Nevertheless, it appears the Fed and BoE are now narrowly focusing on managing inflation expectations higher. This suggests that it is unlikely that interest rates can fall much further from current historic lows.

Low government interest rates do not necessarily imply inflationary monetary conditions; indeed, a low nominal interest rate may be a sign of expected disinflation and restrictive monetary conditions. With this in mind, recall that the last time interest rates were as low as they are today was during the 1930s and 1940s (Exhibit 1). That phase was characterised by the aftermath of the Great Depression and the misguided constraints of a disintegrating gold standard. For example, in response to Britain's suspension of gold convertibility in September 1931, the Federal Reserve (Fed) was forced to raise interest rates in the face of soaring unemployment and real GDP contracting by about 9% annually. The US suffered 12% deflation the following year and averaged roughly 2% deflation during the remainder of the decade.

So, the quick answer to the title question is that there is little scope for further declines unless one assumes significant deflation in coming years. This does not necessarily mean a deflationary spiral or even a second recession, in which declining prices and economic growth reinforce each other's downward descent as in the US and Europe in the 1930s. Rather, modest deflation and a stable environment of growth that is below potential would be sufficient, as in Japan recently. The remainder of this paper investigates the essential nature of a Japan-style deflation trap and asks whether one could develop in the US, UK or in Europe.<sup>1</sup> Only then can one properly answer the title question.

## Japan's Lost Decade(s)

Japan has been stuck with persistent deflation for the past 15 years, but the disinflationary process began more than 20 years ago (Exhibit 2). Equity and housing bubbles burst in 1989, leaving the financial system dangerously undercapitalised and setting off a prolonged phase of private sector deleveraging. By 1995 disinflation had officially turned into deflation. The GDP deflator has averaged -1% per year since. Consumer prices have been closer to flat, but have still recorded a negative year-over-year (YoY) change in eight of the past 15 years. Real GDP growth has averaged just 0.75% per year and the 10-year government bond yield has declined from 6.5% to near 1.0% over the same period. Markets expect at least another decade of deflation. It is important to note that deflation has been limited. Rigidities in the extent to which wages can decline, a gradual deterioration in productive capacity, and the natural equilibrating effect of falling prices all limit the magnitude of deflation. It is important to note that growth, especially after adjusting for demographic shifts, has been modestly positive, not negative. Is there something unique about this situation in Japan, or could such a scenario play out in the US, UK or across Europe, as well?

## Deflation Trap Logic

A deflation trap requires a catalyst: a negative economic shock that lowers equilibrium real rates into negative territory. Negative-equilibrium real rates are rare but perfectly plausible during a deleveraging cycle. So strong is the desire to save and repair their balance sheets, households and businesses are simply not interested in borrowing money—even at a zero real rate. The challenge for policy-makers is that nominal rates cannot decline below zero, so real rates can turn negative if and only if the market expects inflation (Exhibit 3, Loose Policy). If expectations turn deflationary then the central bank will find it impossible to run a monetary policy sufficiently loose to reinvigorate spending and stabilise prices. In this case, real rates are driven higher than nominal

Exhibit 1a  
Long-Dated US Treasury Yields



Source: Federal Reserve, Western Asset

Exhibit 1b  
Long-Dated UK Gilt Yields



Source: Barclays Capital

rates, well above the equilibrium level required to stabilise prices and achieve full employment (Exhibit 3, Tight Policy). The greater the expected deflation, the tighter monetary policy becomes—regardless of a central bank’s efforts to inflate, even by employing unorthodox measures. Growth slows, prices fall further and the economy becomes trapped in a self-reinforcing steady state of low growth/low inflation (deflation).

The early monetarists rejected the possibility of deflation traps. If inflation is defined as an excess supply of money, then deflation is defined as an excess demand for money. It follows that the solution is simple: print money until supply exceeds demand. Granted, a central bank could print enough money to purchase all foreign assets in the world—a policy that not only would prevent deflation but lead to hyperinflation and a total debasement of the currency. Clearly a central bank is *able* to prevent deflation. But is it *willing*?

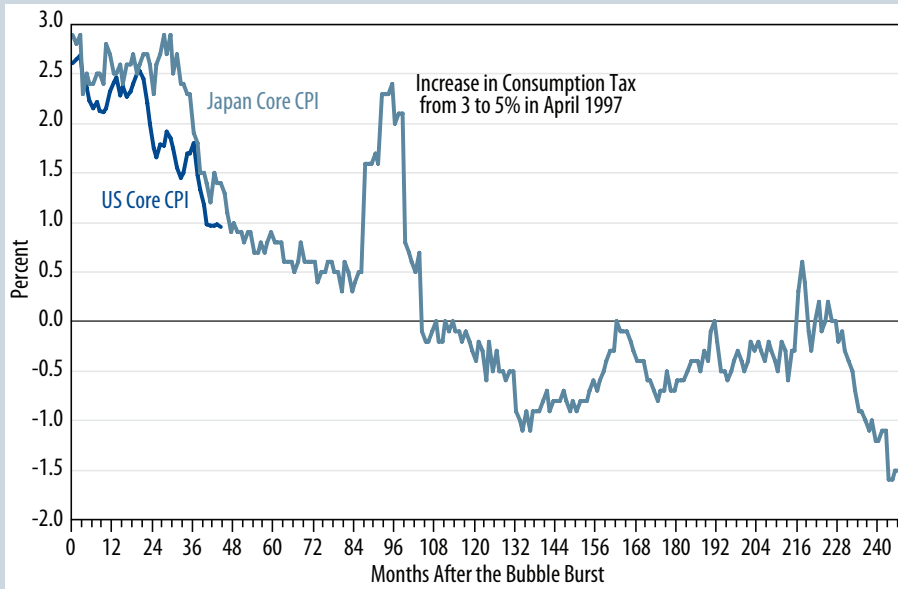
Truly this is the crux of the matter on which recent research has converged: a deflation trap can only ever be a credibility problem—one of too much credibility. A long history of strong inflation-fighting credibility can actually become a central bank’s biggest burden in the fight against deflation.

Paul Krugman wrote in 1998 that the virtue of having a “central bank known to be strongly committed to price stability” becomes a vice when policy rates hit the zero-lower bound.<sup>2</sup> His logic boils down

to a version of the classic time-inconsistency problem of central banking: the solution to deflation—printing vast amounts of money—becomes costly once the threat has passed, specifically in the form of higher inflation down the road. The central bank therefore has an incentive to renege—to shrink its balance sheet once the deflationary threat has passed. The public understands this and is never fully convinced of the central bank’s willingness to carry through. The public assumes the increase in the money supply will not be sustained, and the central bank cannot alter the public’s expectations. Real interest rates remain too high.

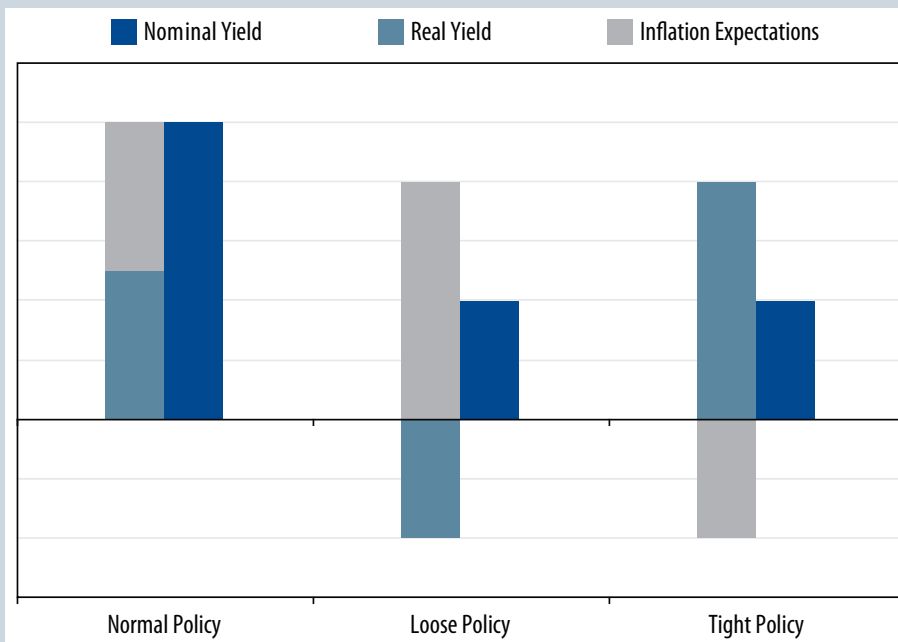
Accordingly, in a deflation trap the management of money demand becomes equally important as the management of money supply. Krugman recommended that the Bank of Japan (BoJ) “credibly promise to be irresponsible.” It was the only way to increase the money supply and simultaneously

Exhibit 2  
Disinflation During a Deleveraging Cycle



Source: Bureau of Labor Statistics, Ministry of Internal Affairs & Communications

Exhibit 3  
Inflation Expectations: Critical when Nominal Yields are Low



Source: Western Asset

decrease money demand. If not, because there is no cost of holding cash, the newly printed money sits idle on banks’—or even on households’—balance sheets. The new money is not transactional and has no impact on consumer prices.

A handful of monetary economists have recently formalised Krugman’s early insights, finding that those central banks that are well-characterised by the Taylor Rule are more prone to deflation traps.<sup>3</sup> Because the public anticipates a reversal of stimulus as soon as deflationary pressures subside (as the Taylor rule dictates), the central bank cannot raise inflation expectations above target, and thus it cannot lower real interest rates sufficiently. Any audacious policy like quantitative easing (QE) is considered temporary. The public assumes the increase in money supply will be short-lived, so money demand rises proportionally. This dynamic is formally called the “deflationary bias of discretionary policy in a liquidity trap.”<sup>24</sup> It is consistent with then-Professor Ben Bernanke’s assessment in 1999 that Japan’s deflation trap was attributable to “self-induced policy paralysis.”<sup>25</sup>

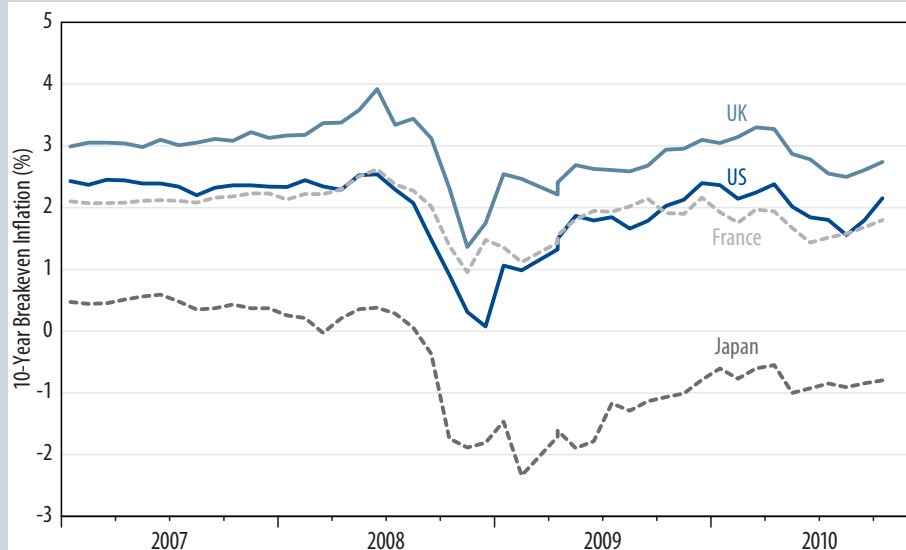
A central bank cannot raise inflation expectations (and lower real interest rates) unless it can convince markets that it is willing to break type and take inflationary action that is audacious and permanent. This includes abandoning its existing inflation target. To break from its “self-induced policy paralysis,” Bernanke recommended that the BoJ raise its inflation target to an explicit 3–4% from an implicit 0–2%. This would signal to markets its commitment to ending deflation by any means possible. However,

the BoJ has not been *willing* to take such actions and nominal GDP is 4% smaller today than it was in 1995. Would the Fed, Bank of England (BoE) or European Central Bank (ECB) be more willing to raise their inflation targets should it become similarly necessary?

### Could it Happen Elsewhere?

On the surface, the US, UK and parts of Europe do look like Japan in the early 1990s: burst asset bubbles, severe damage in the banking system, a deep recession and protracted deleveraging in

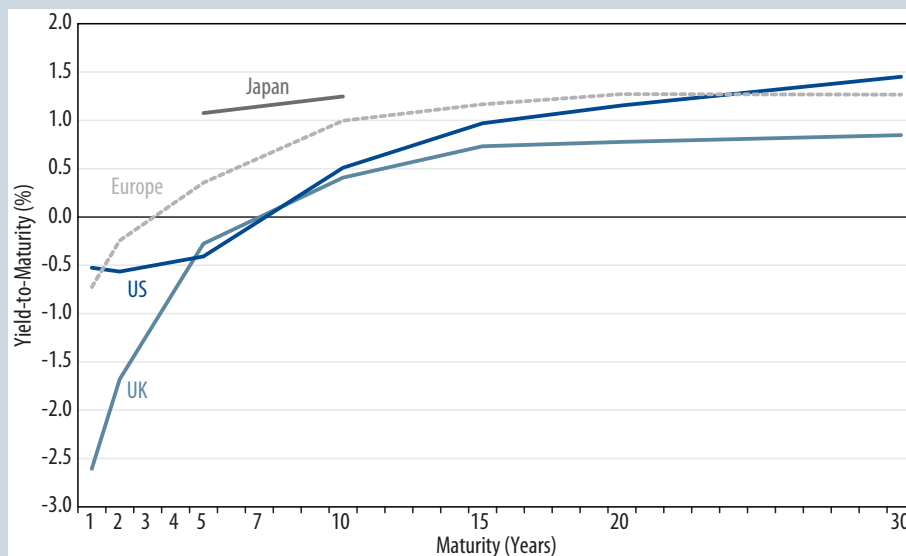
#### Exhibit 4 Inflation Expectations



As of 31 Oct 2010

Source: Barclays Capital

#### Exhibit 5 Real Yields Curves of UK, US, Japan and Europe



Source: Barclays Capital

the private sector. However, the necessary conditions of a deflation trap have not been satisfied anywhere outside of Japan.

Inflation expectations remain positive outside of Japan and would have to fall substantially before the necessary conditions of a deflation trap are satisfied (Exhibit 4). As a result, real rates are negative out to the five-year part of the government curve in the US and UK (Exhibit 5). In Europe, real rates are only negative at the front end but remain near zero until five years (based on French and German markets).<sup>6</sup> This contrasts sharply with the Japanese government curve where real rates are substantially higher at all maturities.

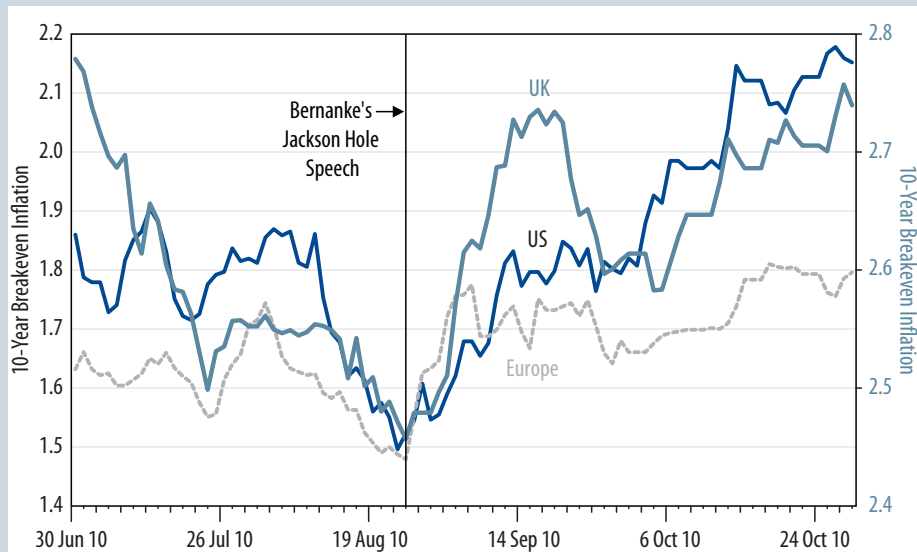
If inflation expectations were to decline substantially, and the necessary conditions satisfied, the possibility of a deflation trap then hinges on central bank credibility. Can the Fed, BoE or ECB prove their *willingness* to take permanent, audacious action? Or will they fail to raise inflation expectations as has the BoJ for more than a decade?

All central banks reacted decisively and aggressively when financial markets seized in late 2008. The Fed waited barely a month before implementing QE after reaching the zero-lower bound on policy rates; the BoJ waited two years. The first capital was not injected into the overleveraged Japanese banking system until 1998; the US, UK and European governments began replenishing capital in their banking systems as early as the third quarter of 2007. More than \$1.5 trillion has been injected to date, and the

drive to force further balance sheet recapitalisation via regulatory coercion remains influential. So the possibility that other major economies become ensnared in a Japan-style “lost decade” seems highly unlikely due to both the immediate aggressiveness of the policy response and ongoing efforts to restore the health of the banking system.

While that may be true, would policy-makers be as willing to act as audaciously when it wasn't so obviously appropriate? Policy dogmas are difficult to overcome. It was not until 1933, nearly four years after the onset of depression, that US authorities were finally able to implement the

Exhibit 6  
Managing Inflation Expectations Higher (and Real Yields Lower)



Source: Barclays Capital

necessary regime shift in policy-making.<sup>7</sup> The new administration of Franklin Delano Roosevelt (FDR) suspended the gold standard, eliminated the Fed's independence, announced a price level target and began running aggressive fiscal deficits. While impossible to rank the relative importance of these individual policies, together they were radical enough to raise inflation expectations, lower real interest rates and finally break the deflation trap.

Today, fiscal retrenchment suggests policy dogma may already be binding. Divisions on the monetary policy-setting committees suggest a less decisive, more reactive response to gradual, grinding disinflation. In that respect, it may be easier to escape from a deflation trap once it has clearly occurred than to prevent one from occurring in the first place. Interest rates could

fall from current historic lows before eventually rebounding under such a scenario.

While not unimaginable, we are increasingly confident that this scenario will not transpire. Beginning with Chairman Bernanke's Jackson Hole speech, the majority of central bankers has become narrowly focused on managing inflation expectations higher, cognizant that low (negative) real interest rates must be sustained well into the future (Exhibit 6). The latest meeting minutes indicate that the Federal Open Market Committee is even considering a price level target rather than an inflation target should it become necessary. Chicago Fed President Charles Evans recently dedicated an entire speech to the mechanics of a price level target. In other words, the Fed is taking on board then-Professor Bernanke's 1999 recommendation that purposefully raising inflation above target is the best way to signal to the public a commitment to preventing deflation by any possible means.

An eminent scholar on Japan's lost decade, the BoE's Adam Posen recently concluded that erring on the side of doing too much is perfectly acceptable given the skew of today's risks: "The challenge for monetary policy today is not about fine-tuning... This is a question of doing what is necessary to preserve the system we have [political moderation, liberal democracy and free trade among nations]."<sup>8</sup> All this suggests that it is unlikely that interest rates can fall much further from current historic lows.

### Footnotes

- <sup>1</sup> For the sake of clarity, this paper utilises the term 'deflation trap' rather than 'liquidity trap.' Technically, the latter is more accurate since a liquidity trap is the cause and persistent deflation is the result.
- <sup>2</sup> Krugman, Paul. "It's Baaack! Japan's Slump and the Return of the Liquidity Trap," 1998.
- <sup>3</sup> Eggertsson, Gauti & Woodford, Michael. "The Zero Bound on Interest Rates and Optimal Monetary Policy," *Brookings Papers on Economic Activity*, June 2003. Benhabib, J., Schmitt-Grohe, S. & Uribe, M. "Monetary Policy and Multiple Equilibria," *American Economic Review*, 2001.

- <sup>4</sup> Eggerstsson, Gauti. “The Deflation Bias and Committing to Being Irresponsible,” *Journal of Money Credit and Banking*, Volume 38, March 2006.
- <sup>5</sup> Bernanke, Ben. “Japanese Monetary Policy: A Case of Self-Induced Paralysis?,” December 1999.
- <sup>6</sup> It is important to distinguish the eurozone’s structural problems, which are not part of the deflation-trap dynamic. The eurozone suffers from a divergence in levels of competitiveness among member states. Prices must fall in the periphery to re-establish competitiveness with the core. This is a necessary part of the rebalancing process, not an unnecessary deflation of the sort that helped create an inferior equilibrium in Japan.
- <sup>7</sup> Eggertsson, Gauti. “Great Expectations and the End of the Depression,” Federal Reserve Bank of New York, July 2007
- <sup>8</sup> Posen, Adam. “The Case for Doing More,” 28 September 2010.

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