Interest rate cycles and implications for the financial sector: a long-term view

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1 Introduction

Writing at the time of the conference on "Asset-liability management with ultra-low interest rates", jointly organized by SUERF – Société Universitaire Euopéenne de Recherches Financières, Oesterreichische Nationalbank (OeNB) and Austrian Society for Bank Research (BWG), it is impossible to deny the conference's underlying premise, namely that the industrialized world is in the midst of a period of *ultra-low* interest rates. Central bank benchmark rates have been low for years. The US Federal Reserve's federal funds target rate range has been 0 to 0.25 percent for nearly 6-1/2 years, the Bank of England's bank rate has been 0.5 percent for almost exactly 5 years, and the Bank of Japan's overnight call rate has been 0.1 percent for 4-1/2 years. The above, of course, includes only central banks with positive benchmark rates: at the time of this writing, the Swedish Riksbank and the Schweizerische National Bank benchmarks are below zero.

Although the above-mentioned rates seem low, are they low by historical standards and in comparison with rates not directly set by the central bank? Charts 1 and 2 address this question, by presenting data on American, British, German, Japanese, and Swiss Treasury bill rates from 1960 to 2015. These figures illustrate that the recent declines in short term interest rates are both more profound and persistent than any experienced during the past half-century. Japan is an outlier in that ultra-low short-term rates have been a feature of its economy since the "lost decade" of the 1990s.

Nor has the phenomenon of ultra-low interest rates been limited to the short end of the market. Quantitative easing (QE) has also brought down longer-term yields. Charts 3 and 4 present data on US and Japanese 10-year treasury bonds, highlighting three rounds of American QE, two rounds of Japanese QE, and the Bank of

[1] The author is grateful to conference participants for helpful comments.

Japan's recent enhancement of its existing QE program. Just days before the conference, the European Central Bank commenced a EUR 60 billion monthly QE program, which is scheduled to extend through September 2016.

Are these interest rate declines steeper than those witnessed following financial crisis in earlier eras? Charts 5 and 6 suggest that they are not. Chart 5 presents data on the private discount rate (a short-term market interest rate) in England between 1840 and 1870, as well as the average for the entire 19th century, and highlights the three major banking crises of the period (1847, 1857, and the Overend, Gurney crisis of 1866). Chart 6 presents data on the US commercial paper rate between 1863 and 1910 and indicates the three major banking major crises of the period (1873, 1893, and 1907). The three horizontal lines in chart 6 represent the average commercial paper rate during the ten years prior to each crisis. The data presented in charts 5 and 6 confirm that it was not unusual for interest rates to remain below their pre-crisis levels for extended periods of time in the wake of 19th and early 20th century financial crises.

We can broaden these results by considering the experiences of more countries over a longer period of time. To do this, chart 7 looks at average pre- and post-crisis interest rates during a longer period and across a broader sample of countries. Based on data gathered by Michael Bordo, it presents average short- and long-term interest rates for years in which banking crises took place, the five years before crises erupted, and the five post-crisis years. Thus, the chart shows the course of interest rates averages before, during, and after crises. The data cover 20 countries (including western Europe, the USA, Canada, Japan, and Australia) between 1880 and 1997. The pattern in chart 7 is striking: following financial crises, long- and short-term rates fall by as much as 4–5 percentage points, typically bottoming out four years after the crisis, and remaining below pre-crisis levels for at least five years.

The potential consequences of ultra-low interest rates – both positive and negative – are many and varied. On the positive side, low interest rates should boost investment spending (e.g., spending on housing, plant, and equipment) because these purchases are frequently made with borrowed money, thereby leading to improved prospects for economic growth. Large-scale borrowers also benefit from low interest rates. According to a study by McKinsey, low interest rates led to a savings of about USD 1.6 trillion for governments in the USA, UK, and euro area countries between 2007 and 2012. The same study indicates that non-financial corporations saved about USD 710 billion.[2]

Exporters also benefit because low domestic interest rates encourage investors to send funds abroad in search of higher returns. Since the domestic currency cannot be used to purchase foreign assets, investors seeking a higher return overseas must sell domestic currency to purchase foreign currency (which can be used to purchase

[2] Dobbs, et al. (2013).

foreign assets), driving down the exchange value of the domestic currency and making domestic goods cheaper, and more attractive to foreign buyers.

Ultra-low interest rates can also have negative consequences. Lenders – including pension funds, insurance companies, and retirees living off their savings – suffer because their investments yield less income. Banks and other financial institutions that rely upon interest rate margins to earn a profit, find those margins squeezed. And importers suffer because the foreign goods they would like to sell in the domestic market become more expensive.

A potentially dangerous consequence of ultra-low interest rates, and the focus of the remainder of this paper, is that they may generate asset-price bubbles as low interest rates lead investors to seek higher returns via ever-riskier investments. Because credit is cheap and plentiful in a low interest rate environment, investors have the resources in the form of borrowed money to make large wagers on high-risk projects. Thus, low interest rates may contribute to a rise in the prices of assets (i.e., asset price bubbles), such as real estate or commodities. When these bubbles burst, those who have taken on debt to finance asset purchases and those who provided the loans to finance those purchases find themselves in serious financial difficulty.

The next section presents a description of the observed pattern of boom-bust financial crises. The subsequent section discusses the recent US subprime crisis in the context of the historical pattern. The final section concludes with a brief evaluation of the risks of ultra-low interest rates, particularly for Europe.

2 Boom-bust financial crises: a familiar pattern

Boom-bust financial crises have long been a feature of the world economy.[3] Writing in 1859, the journalist D. Morier Evans noted that the pattern was *already* 60 years old, saying such crises occurred "…immediately after a period of apparent prosperity, the hollowness of which it has exposed. So uniform is this sequence, that whenever we find ourselves under circumstances that enable the acquisition of rapid fortunes, otherwise than by the road of plodding industry, we may almost be justified in arguing that the time for panic is at hand" (Evans 1859 [1969]).

Among the earliest modern economists to construct an analytical model of financial crises was Irving Fisher (1932, 1933); more modern versions of his model were developed in the popular and influential works of Hyman Minsky (1982) and Charles Kindleberger (1978). In this model, financial crises begin with an exogenous shock – such as a bumper harvest, the beginning or end of a war, the widespread adoption of a game-changing technology – which provides new profit opportunities and sets the economy off on an economic boom. As the boom progresses, speculation develops in a particular asset. The object of speculation varies from crisis to

[3] See Grossman (2010, 2013) for more detailed descriptions of boom-bust financial crises.

crisis, and has included land/real estate, agricultural products, mines, railroads, foreign securities, and assets as diverse as limited liability companies.[4]

Boom-bust economic expansions are typically fed by ample credit, which reduces the cost of borrowing. Once the speculative mania catches hold, cheap credit allows speculators not only to risk their own funds, but to assume ever-greater debt which increases the potential reward, as well as potential risk, of speculation.

Because cheap credit is frequently an important contributor to boom-bust cycles, it is reasonable to ask – as many have[5] – if ultra-low rates will lead to a renewed boom-bust cycle. Historical evidence suggests that low interest rates alone are not sufficient to generate a boom-bust cycle.

Consider again chart 7. A notable feature of this diagram is that the years preceding financial crises are not characterized by below-normal interest rates. In fact, short- and long-term interest rates do not decline during the prelude to financial crises, only in their wake. Looking across a number of countries during the late 19th and early 20th century, Grossman (2010, chapter 3) finds that business cycle expansions that precede financial crises tend to have higher interest rates and stronger GDP growth than business cycle expansions that do not end in a financial crisis. This evidence supports the view implicit in the work of Fisher, Minsky, and Kindleberger that in the absence of an exogenous shock, low interest rates alone are not sufficient to cause a boom-bust cycle.

3 A recent example: the subprime crisis

The American subprime mortgage crisis provides a case in point in which stimuli other than low interest rates generate a boom-bust financial crisis. The exogenous shock and key culprit in generating the subprime crisis was the dramatically expansionary fiscal policy undertaken by the administration of President George W. Bush. Ideologically committed to lowering taxes, in accepting the Republican Party's nomination for president in 2000, candidate Bush said: "Today, our high taxes fund a surplus. Some say that growing federal surplus means Washington has more money to spend. But they've got it backwards. The surplus is not the government's money. The surplus is the people's money…. So we will reduce tax rates for everyone, in every bracket."

President Bush was true to his word. Under his predecessor Bill Clinton, the US government ran a budget surplus for the first time since the 1960s. During President

[4] See Grossman (2010, Appendix 3.1) for a detailed catalogue of banking crises and the target of speculation in each.

[5] See, for example, Koo (2014) and the warning by IMF chief economist Olivier Blanchard www.telegraph.co.uk/finance/economics/10989500/IMF-fears-ultra-low-rates-are-fuelling-asset-bubbles.html.

Bush's first administration, he engineered three tax cuts. In addition to cutting taxes, the United States embarked on costly wars in Iraq and Afghanistan. The combined effect of the tax cuts and increased war spending raised the US government's debt-to-GDP ratio from less than 58% in 2001, to 65% in 2005, to nearly 70% in 2009.

Fiscal policy was not the only culprit, of course. Monetary policy was exceptionally loose in the aftermath of the collapse of the dot-com bubble: by the end of 2001, the federal funds rate was lowered to 2%. Although not low by the standards set in December 2008, at the time it was the lowest federal funds rate in 40 years (it would subsequently drop to 1% or lower between 2003 and 2004), and well below what rule-of-thumb models of monetary policy recommended. In addition to easy fiscal and monetary policies, financial supervision was lax and a number of regulatory and legislative changes made it easier for firms and households to take on increased debt loads, and encouraged more subprime mortgage lending. The combined effect of fiscal, monetary, regulatory, and supervisory changes inflated a bubble in US real estate markets. The bursting of this bubble in 2008 led to a massive financial crisis which reverberated worldwide.

Although various observers blame different factors for generating the subprime crisis, fiscal policy must bear the lion's share of the blame. Tighter monetary policy would have reduced the appetite for risk-taking; more rigorous regulation and greater vigilance on the part of the ratings agencies might also have curbed some of the excesses that led to the crisis. Fundamentally, however, the incentives brought about by expansionary fiscal policy, both on the tax side and on the spending side, increased the incentives for risk taking to the point where a financial crisis was inevitable.

4 Conclusion: how risky are ultra-low interest rates?

Prolonged low interest rates can increase risk-seeking on the part of investors as they embark on a hunt for yield. And they certainly contributed to the subprime crisis, as they have in many other crises throughout the past 200 years. It is not inconceivable that current ultra-low interest rates may lead to bubbles in various assets, particularly commodities and real estate. Policy makers need to be wary of these asset bubbles.

For the most part, however, low interest rates have not generated financial crises in the absence of other factors. In virtually all historical instances of financial crises in which easy credit was a factor, there was some exogenous shock that generated the boom-bust cycle. In the United States prior to the subprime crisis, a massive fiscal stimulus provided the backdrop for the crisis. In Japan, by contrast, interest rates have remained low since the mid-1990s and no asset bubble has emerged, primarily because the Japanese economy has been so weak.

As of March 2015, US economic growth has rebounded from the recession. GDP growth is now nearly equal to pre-crisis levels, and is forecast to perform well in 2015–2016. Unemployment in February 2015 was 5.5 percent, its lowest level since May 2008, and the upper end of the range set by the Federal Reserve to trigger higher interest rates. In the current environment, it appears likely that US rates will rise in the coming months, as they should.

In Europe, where growth remains more sluggish, the European Central Bank has just embarked on monthly quantitative easing of EUR 60 billion through September 2016 and interest rates will remain low for some months yet. This policy is not without risks. With higher interest rates in the United States, low European interest rates may not lead to increases in investment, but may provide an incentive for European money to flow to the United States to take advantage of higher rates.

At the time of this writing, however, economic growth in Europe remains sluggish. In the current economic environment, and in the absence of some exogenous macroeconomic shock, the risk of low interest rates leading to a boom-bust are considerably lower than the risk that higher interest rates will strangle Europe's recovery. As Europe's economy recovers, this calculation will change.

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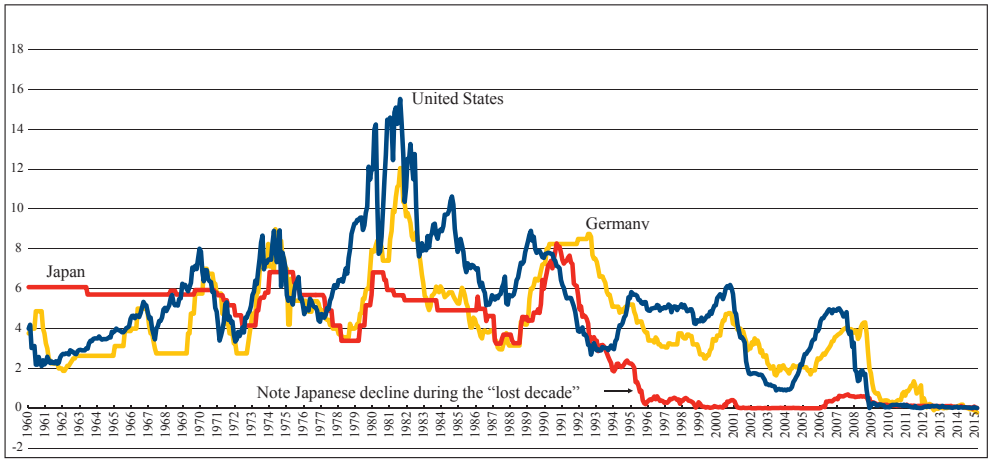
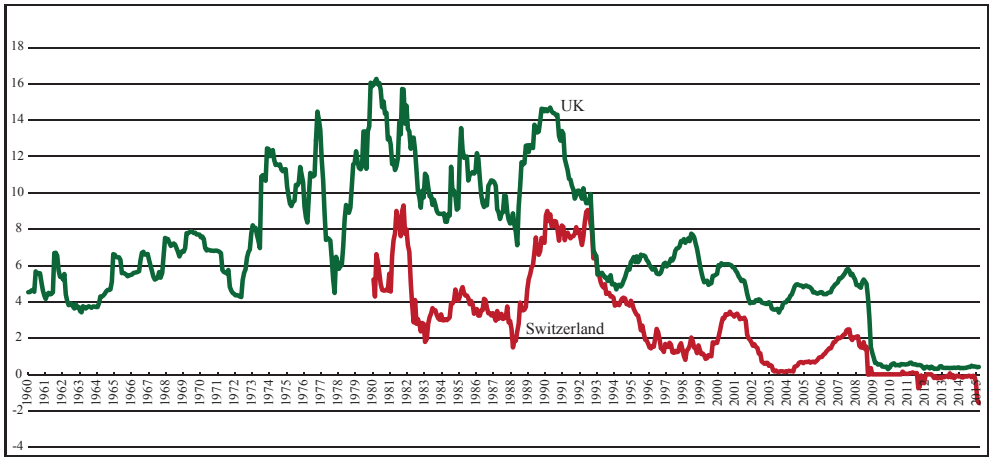
Chart 1: 3-month treasury bill rates, Germany, Japan, USA (Jan. 1960–Feb. 2015)



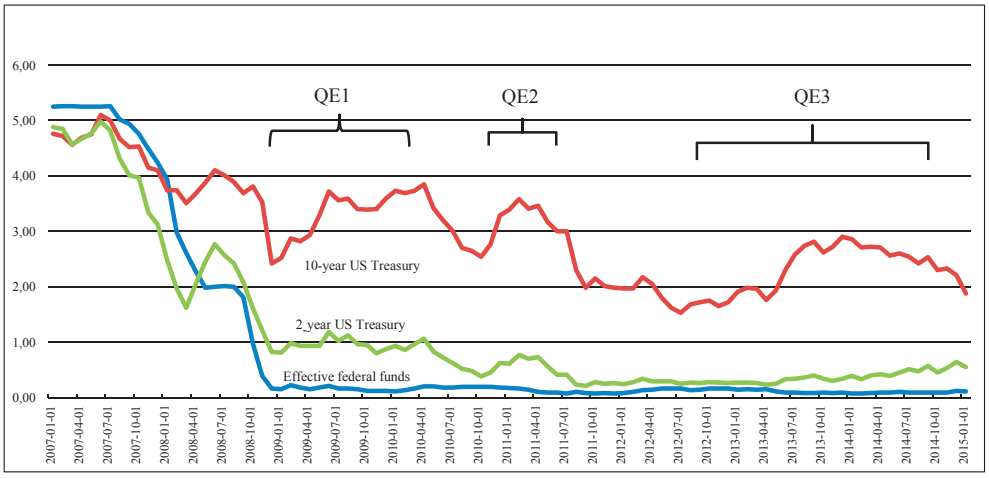
Source: Global Financial Data.

Chart 2: 3-month treasury bill rates, Switzerland and UK, (Jan. 1960–Feb. 2015)



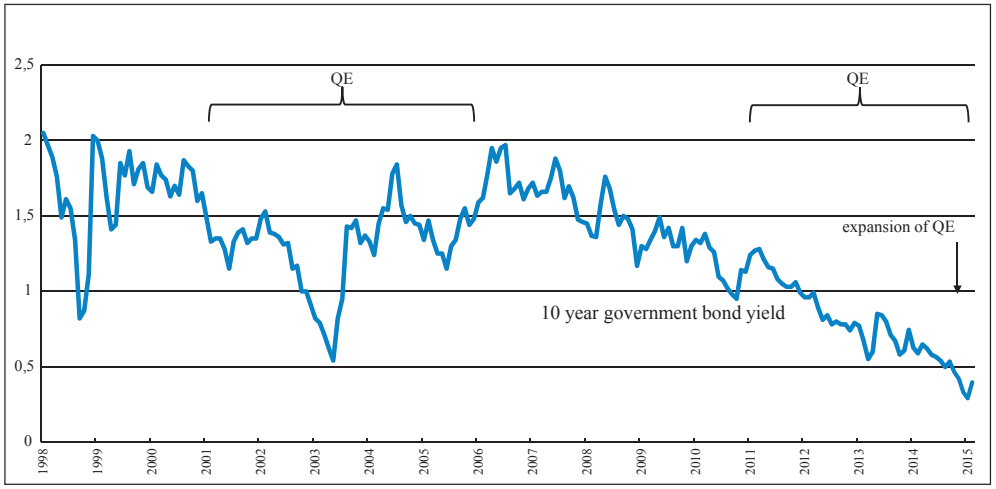
Source: Global Financial Data.

Chart 3: Quantitative easing and yield in the USA



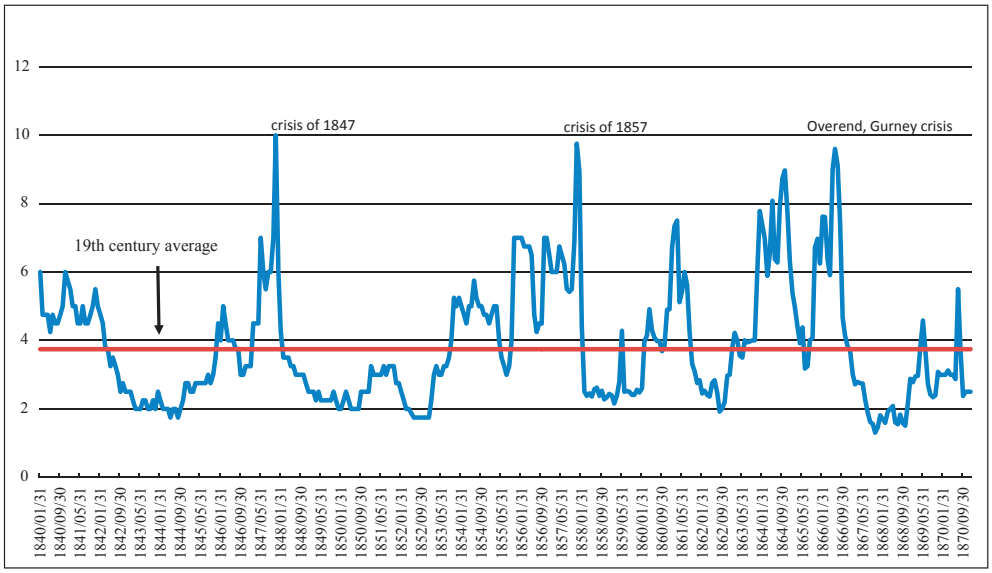
Source: Federal Reserve Bank of St. Louis.

Chart 4: Quantitave easing in Japan



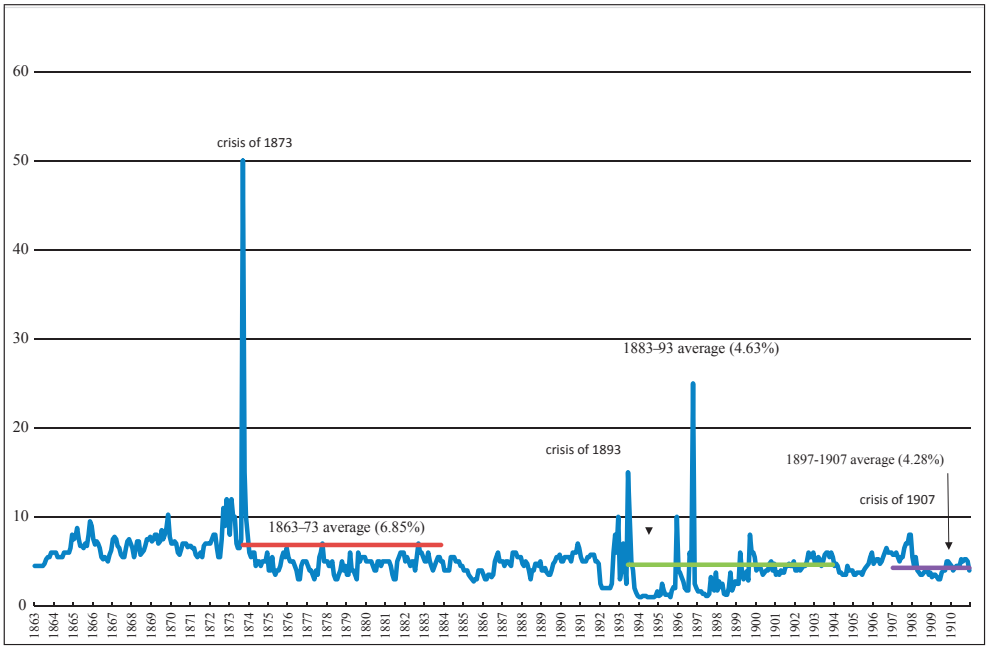
Source: Global Financial Data.

Chart 5: Private discount rate in England, 1840–1870



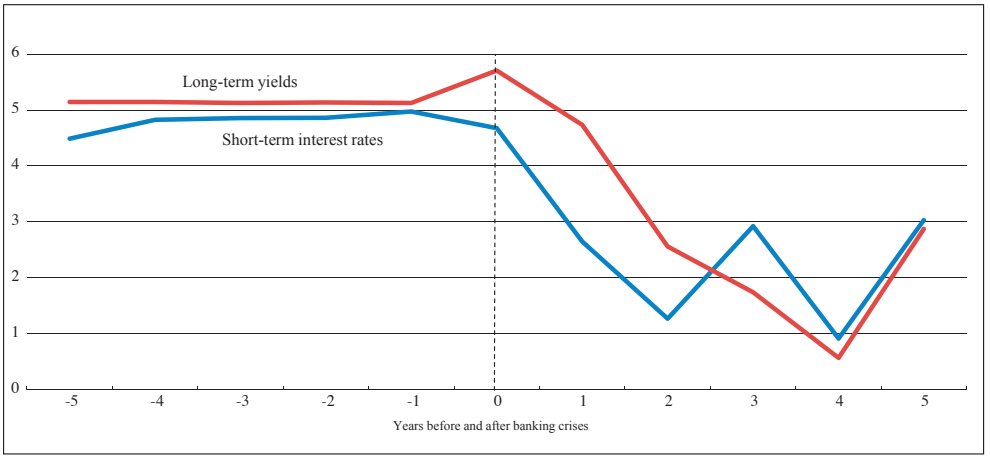
Source: Global Financial Data.

Chart 6: US commercial paper rate, 1863–1910



Source: Global Financial Data.

Chart 7: Short-long-term interest rates before and after banking crises



Source: Bordo.