What drives equities in a low interest-rate environment?

Duncan Lamont
Head of Research and Analytics

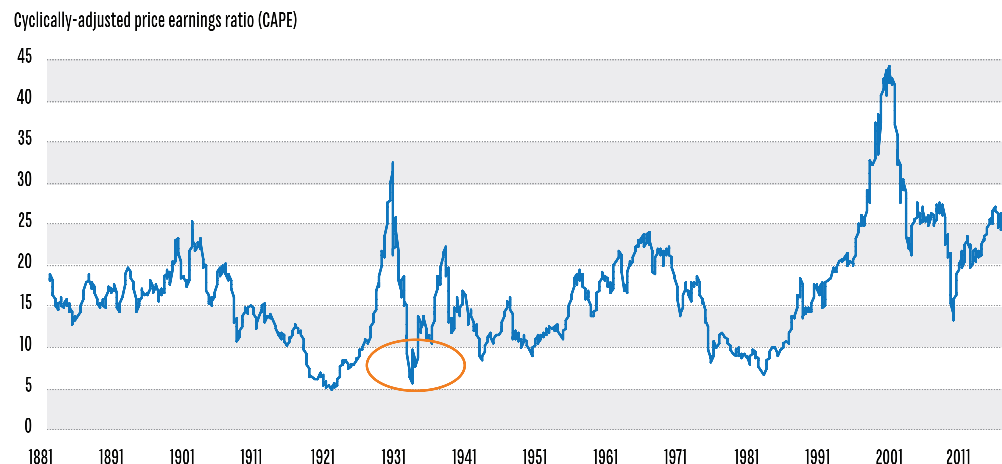
The world has been living with low interest rates for eight years, but such periods are not new. The US and UK saw rates below 1% for most of the two decades spanning the Second World War, while Japan has been living with sub-1% rates since 1995. Equity markets performed differently in each case, with an exceptionally strong performance in the US but a more lacklustre showing in the UK and barely positive returns in Japan. Although performance was different, we argue in this article that the lessons from all three were remarkably similar. Valuations probably remain the most important determinant of performance, but earnings also need to grow. Whether they do is linked to a host of factors, not least government finances and fiscal policy, demographics, the health of the banking sector and inflation.

The US experience 1933-1950

US equities delivered an annualised return of 11.6% between 1933 and 1950, 7.6% a year in real terms. This was an 18-year period when short-term US interest rates averaged less than 0.5%. It coincided with the end of the Great Depression, the recession of 1937 and the Second World War and its aftermath. Several key features stand out:

A cheap starting valuation after a period of exceptional weakness. US equities fell almost 85% between September 1929 and June 1932. By the end of 1932, the cyclically-adjusted price-earnings multiple (CAPE) was only 8.3 times, well below its historic average of 14.9 times (Figure 1). At 7.2%, the dividend yield was also very attractive. So on several measures equities were cheap, particularly compared with today's valuations.

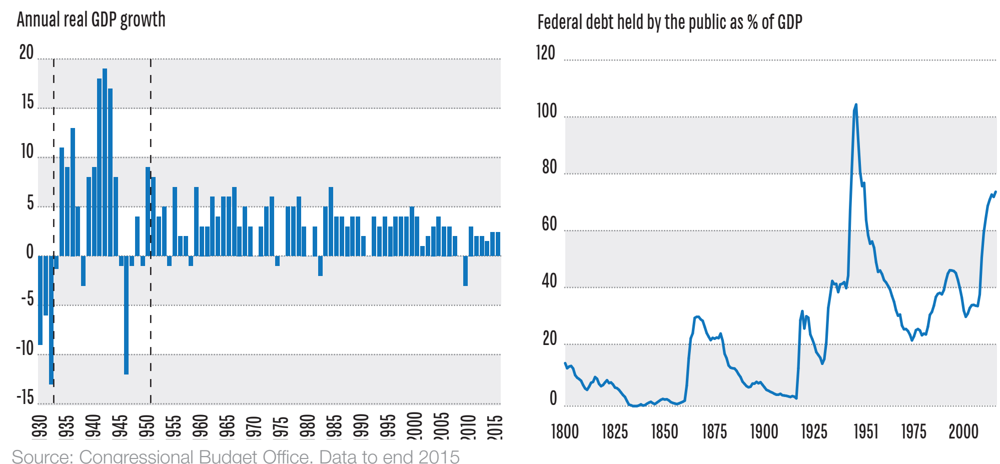
Figure 1: US equities were historically cheap in the early 1930s



Source: Prof. Robert Shiller, Yale University. Data to 31 October 2016

Healthy growth powered by increased government spending and borrowing. The 1933-50 period saw strong economic growth, with real GDP increasing by an annual average of 5.8% (Figure 2, left side). A key driver was government spending growing at 6.5% a year above inflation. Government debt levels of only 16.5% of GDP in 1930 left significant capacity to finance this spending, which helped make up for shortfalls in consumer spending and business investment. Consequently, the government debt-to-GDP ratio grew significantly, peaking at 106% of GDP in 1946, before falling back to 79% by 1950 (Figure 2, right side). With today's ratio already around the 1950 level, there would appear to be far less capacity for an escalation in government spending. However, with monetary policy becoming less effective, the clamour for fiscal stimulus is growing.

Figure 2: Strong growth was fuelled by rising government debt



Source: Congressional Budget Office. Data to end 2015

Source: US. Bureau of Economic Analysis, retrieved from FRED, Federal Reserve Bank of St. Louis. Data 1800-2015

Low initial corporate profitability, with significant room for improvement. Company earnings, measured as a share of GDP, turned negative in 1932. This left considerable scope for companies to boost their profitability. By 1950, the corporate profit share had increased to 6%. In contrast, US profit margins today are in the top decile of historical experience. Given the economic environment, the ability of companies to squeeze them higher through downward pressure on wages or lower interest costs is likely to be limited. Already high levels of profitability could prove a headwind for US equities.

The combination of strong economic growth and improving corporate profitability fuelled a 7.4% per year rise in real corporate earnings in the 1933-50 period, providing a solid grounding for US equity returns. Unfortunately for investors today, the US market scores poorly on every single indicator that supported equites in the 1933-50 period. More challenging times are therefore likely to lie ahead.

The UK experience 1933-1950

In the UK, short-term interest rates averaged only 0.7% over the 1933-50 period, only slightly higher than in the US.[1] However, UK equities generated returns of just 5.6% in nominal terms, a little under half the amount produced by the US market. Real returns were barely positive and well below the 7.6% average on the opposite side of the Atlantic. The 1940s also included a significant devaluation of sterling (it fell by 27% across the decade). The performance gap is therefore considerably larger in a common currency.

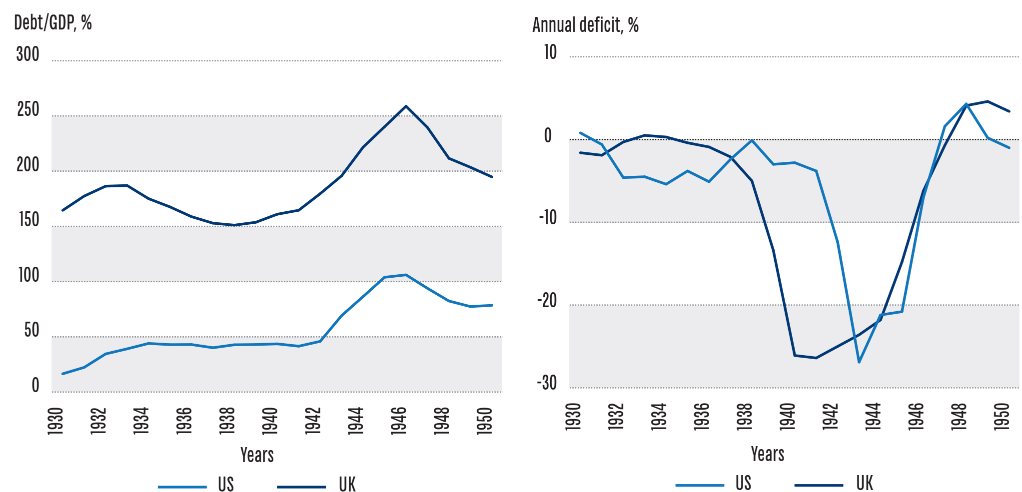
Part of the difference is due to the US rebound from the 1929-32 declines. Although UK equities also suffered during this period, the US fared far worse. As a result, US equities were noticeably cheaper than the UK at the end of 1932. Whereas the US dividend yield stood at 7.2%, the UK equivalent was only 4.5%, slightly below its historic average.

1 Treasury bill rates, Source: Hills, S, Thomas, R and Dimsdale, N (2015) "Three Centuries of Data - Version 2.2", Bank of England

However, the US also outperformed in the 1940s, when any rebound was arguably over. Fundamentally, this difference in returns comes down to the UK's poor relative economic performance during and after the war. Real GDP grew at 10.9% p.a. between 1939 and 1945 in the US, but at only 2.4% p.a. in the UK. Furthermore, the two world wars had left the UK with a heavy debt burden, which allowed less room for manoeuvre than was possible in the US (Figure 3, left side). The UK government ran a 3.6-4.6% budget surplus in 1948-50, whereas the US ran a balanced budget in 1949 and a slight deficit in 1950 (Figure 3, right side). The UK was less able to afford such relative fiscal freedom and its more restrictive policy was a drag on economic growth.

Notwithstanding the impact of war, it is clear that a cheaper valuation benefited investors in the US and that the UK's higher debt burden resulted in more restrictive fiscal policy, which was ultimately a contributor to the UK's lower economic growth. These factors contributed to the US equity market's relatively strong performance versus the UK.

Figure 3: The UK's greater debt burden left less fiscal room for manoeuvre



Sources: US CBO, UK OBR, Bank of England. Data 1930-1950

The Japanese experience 1995-2016

Japan's episode of low interest rates has been significantly different from those of the UK and the US. After rates were cut to 0.5% in September 1995, Japanese equities returned only 1.7%% a year in nominal terms to 14 December 2016. Even so, wide market fluctuations suggest there have been significant trading opportunities.

The explanation for many of Japan's woes lies in the bubble years of the 1980s. Loose monetary policy and financial deregulation contributed to an overheating economy, a soaring equity market and credit excesses. The bubble burst at the end of the decade as the Bank of Japan raised rates rapidly, a policy soon reversed. Although valuations then fell rapidly, they remained expensive in a global context in September 1995.

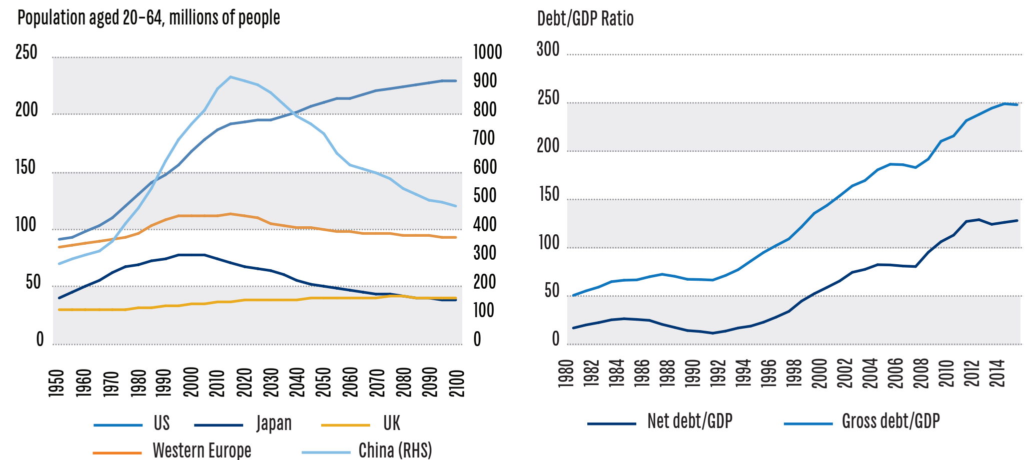
A combination of low interest rates and lack of will over the subsequent years meant bad debts were not recognised and there were few attempts to recapitalise banks. This led to the misallocation of capital, as healthier firms were starved of finance, and contributed to Japan's declining productivity relative to the rest of the world.

One victim of Japan's slow debt reduction process and low long-term interest rates has been growth. Nominal GDP in 2016 was no higher than its level in 1995. This has been exacerbated by Japan's ageing population. The proportion of the population aged 65 and over has more than doubled since 1990 to over 26%. Furthermore, the number of Japanese citizens aged between 20 and 64 has fallen by almost 10% since 2000, with another 10% decline projected over the next 15 years (Figure 4, left side). With fewer people in work, it is difficult for monetary or fiscal policy to raise economic output. By contrast only just over 5% of the US population was aged over 65 in 1930.[2]

2 U.S. Census Bureau, Demographic Trends in the 20th Century, https://www.census.gov/prod/2002pubs/censr-4.pdf

The country's economic problems have been compounded by persistent deflation. This has raised the real cost of borrowing, made it more difficult to deleverage, discouraged spending and investment and seen wages fall. Meanwhile, a sizeable budget deficit since the early 1990s has left gross debt of nearly 250% of GDP at the end of 2015 (Figure 4, right-side). Much of this debt has supported public infrastructure projects of questionable economic benefit. Against this backdrop, it is hardly surprising that equities have struggled.

Figure 4: An ageing population and rising debts have been a drag on growth



Source: United Nations, Population Division (2015). World Population Prospects: The 2015 Revision, DVD Edition.

Source: IMF World Economic Outlook, April 2016

In addition, Japanese firms have been perennially inefficient compared with global peers. Return on equity and profitability have fallen well short of overseas competitors. More efficient firms should offer better shareholder returns. There are signs that things are moving in the right direction. A corporate governance code has been established and the Bank of Japan and the Japanese Government Pension Investment Fund are diverting some equity investment towards companies that meet higher standards of governance. If sustained, these moves should underpin future gains in Japanese equities.

Looking ahead

Markets score differently on the measures we have identified as determining performance when rates are low. Valuations are obviously one of the more important, with the US looking by far the most expensive in both absolute and relative terms.

		US	UK	Japan	Europe ex UK	Emerging Markets
CAPE	Current	28x	14x	24x	17x	11x
	Historic percentile*	86th	42nd	28th	44th	10th
Trailing P/E	Current	24x	27x	18x	22x	15x
	Historic percentile**	88th	100th	29th	85th	58th
Dividend yield	Current	2.0	4.0	2.0	3.3	2.6
	Historic percentile*	31st	48th	70th	45th	57th
Price/Book	Current	2.9	1.7	1.4	1.8	1.5
	Historic percentile**	80th	39th	20th	59th	30th

*Calculated using data since December 1969, other than emerging markets, which are since September 1995. Older US data excluded from analysis to permit consistent comparison across markets. US equities are more expensive on a 145-year basis than shown above. **Calculated using data since 1974, other than emerging markets, which are since September 1995. Sources: Prof. Robert Shiller, Yale University, Datastream, MSCI and Schroders. Data to 13 December 2016.

However, this valuation is justified to some extent. The US economy is in better shape than much of the developed world, the banking sector is in reasonable health, core inflation has been running above 2% and the country has better demographics than elsewhere. In contrast, European growth is weak, its demographics are deteriorating rapidly, the financial sector has not yet fully deleveraged, many countries are suffering under high debt burdens and much of the region has either been in deflation or has been flirting with it.

Japanese equities look reasonable relative to their own history, but less so against other markets. And Japan's modest price-to-book rating is a result of the structurally-low return on equity discussed earlier. In contrast to Japan or Europe, UK demographics are in better shape, while the country's banking sector is less troubled. However, the equity market is dominated by the commodity and financial services sectors, both of which are expected to face structural weakness. A cheap rating on a CAPE basis may be misleading if earnings do turn out to be as low as expected on average over the next cycle.

Emerging market equities look cheap in general, benefit from favourable demographics, healthier government finances, positive inflation and an untroubled banking sector. On the other hand, growth is expected to remain lower than before and the build-up in Chinese debt is concerning. As we are all aware by now, credit bubbles do not normally end well, so this is worrying not just for emerging markets but also the developed world.

Conclusions

Long periods of low rates are not a new phenomenon and can result in wildly different outcomes for equity investors as the US, UK and Japanese experiences demonstrate. Our investigation has confirmed that valuations are a key driver of performance when rates are low. Long-term returns are likely to be poor when valuations are full, unless earnings growth is rapid. Government finances and fiscal policy, demographics, the health of the banking sector and inflation all demand our attention. No one market stands out as being particularly attractive in these terms. If global growth stabilises or improves, then emerging markets and Japan look best placed, while the highly-rated US market may struggle. However, if global growth slows, emerging markets and Japan, along with Europe, could come under renewed pressure and the US is likely to prove more resilient. Investors need to be flexible and ready to seek investment opportunities where evidence of innovation and growth is strongest.

Finally, although volatility is often viewed in negative terms, investors should take some comfort in the bumpy ride that Japanese equities have experienced over the past two decades. These conditions, if repeated in this or other markets, would allow skilful investors to add value though timely allocations.

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