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How US markets behave before and after the first rate hike – an historical comparison

Comparing similar phases of pre-tightening, equities have always performed well and yields risen on average.

Key points

- US bond markets posted surprisingly good performances in the first half of the year. Assuming the Fed will most likely start to hike rates around mid-2015, can yields stay low or will normalization resume?
- US markets did not disappoint investors: 6% in the first half is a satisfactory return. But concerns are rising, due mainly to expensive valuations.
- We have looked at how US markets behaved during similar episodes of monetary policy in the past, i.e. long phases of rates on hold prior to the beginning of a tightening cycle.
- Equity markets have always recorded good returns over the pre-tightening phase, under conditions broadly similar to the current one. Whilst, on average, bonds market poorly performed.
- This historical comparison supports our call to overweight equities and underweight govies.

Exhibit 1

US: market reaction before and after the first rate hike

	US 10Y		Equities (price perf)	
Date of 1st hike	1Y before change (bps)	1Y after change (bps)	1Y before S&P	1Y after S&P
Aug/63	2	19	21,3%	15,5%
Feb/94	-29	150	6,8%	2,2%
June/04	140	-73	14,7%	6,1%
Average	38	32	14,2%	8,0%

Source: Bloomberg and AXA IM Research

First Fed hike: the countdown has started

We know from the meeting materials that 12 out of 16 FOMC members consider 2015 as the appropriate timing of policy firming. To date, the consensus places the first hike in mid-2015, markets later on.

While policy firming normally causes long-term bond yields to move in the same direction[1], the peculiarity of this period is precisely the long lapse of time ahead of us before the rates change. Can bonds and equities continue performing as well as they did in the first half of this year? On the equity side, the main questions relate to stretched US valuations; on the bond side, the delay on yield normalization has surprised most observers (ourselves included). Being aware of the unprecedented nature of the period post-2008, we will run an historical comparison to see how bonds and equities behave during similar monetary policy phases.

When the Fed paused before hiking

The main monetary policy tool, the fed funds rate,[2,] reached a high of 20 points in 1979 and 1980 to combat double-digit inflation. Since 2008 it has been at an all-time low, between zero and 0.25%. On three occasions, official rates stayed unchanged at the bottom of a cycle for at least one year before lift-off. In each case, the circumstances leading up to tightening were broadly similar, as a consequence of the economy's expansion.

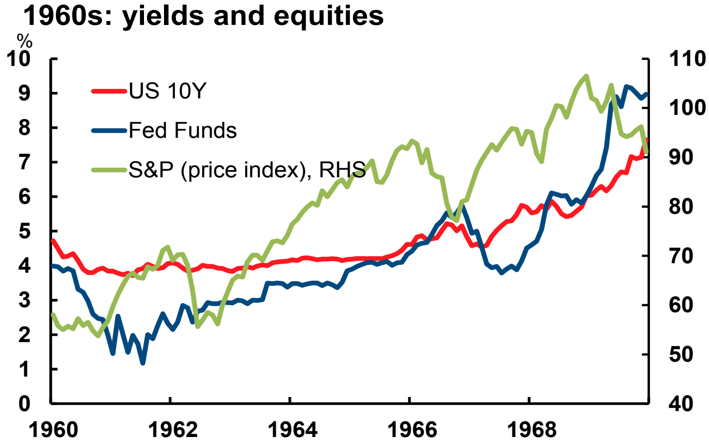
The 1960s episode

From the point of view of macroeconomic policy, the 1960s were a controversial period according to many economists, when the Bretton Woods system was still in place.

In 1963 the US economy had fully recovered from the 1960-1961 recession and inflation was relatively stable and low. In August the Fed increased rates by 50 bps from 3% to 3.5% (see *Exhibit* 2) in an effort to slow down capital outflows[3]. It should be remembered that the Federal Reserve's (Fed) current dual mandate, i.e. price stability and maximum employment, was not put in place until 1977. Corporate profits were high in 1963 and continued to increase, reaching a record 10% of GDP in the following years, while annualized real growth accelerated above 5% and the labour market showed some improvement as the unemployment rate started to decline from 5.5% (by mid-year).

Exhibit 2

1960s: US monetary policy and markets



Source: Datastream, Fed, Shiller and AXA IM Research

Between mid-1962 to mid-1963, bonds and equities moved in parallel, similarly to what they are doing year to date. As outlined before, the economic outlook surrounding the stock market was benign and equity prices actually rebounded by 21%. Stocks also posted double-digit returns (15.5%) in the year following the tightening move, despite somewhat high valuations (the Shiller PE was 20[4], vs an historical average of 17). Over the same period (mid-62 to mid-63), long-term Treasury yields remained practically unchanged at 4% (see *Exhibit* 1). The bond reaction was not astonishing given that the hike was an isolated move and was not followed by another rise in fed funds until one year later. The most striking difference with today is that we expect a prolonged tightening cycle in 2015, not a one-off move, meaning that bond market should diverging from equities by late 2014.

The 1990s episode

The year 1994 has gone down as the year of the bond market crash. The fed funds rate had been at 3% since late 1992 (see *Exhibit* 3), and on 4th February 1994 the Fed unanimously voted for a 25 bps hike. This was first policy change after a long hiatus and indeed the first tightening action in about five years. Reading the FOMC minutes, the committee seems to have been responding to an unexpected pick-up in economic growth; at the same time, price increases were mainly being driven by higher commodities components by end-1993. Accordingly, reflecting the stronger growth rate, surveys were forecasting a steady increase in CPI inflation in 1994, from 2.9% in the first quarter to 3.3% in the fourth, while 10-year long-term inflation expectations stabilised at 3.5%.

Subsequently, fed funds increased by 300 bps in a year, putting huge pressure on bonds prices. 10y yields ended the

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[1] The sensitivity of 10y year yields to a fed funds change is estimated to have averaged 15% since 1953 and 30% since 1983.

[2] The fed funds rate is the rate that banks charge each other for overnight loans to meet these reserve balances. The Committee does not set the fed funds rate directly, it conducts open market operations (trading short-term government securities with depository institutions) to keep the rate close to the Committee's target.

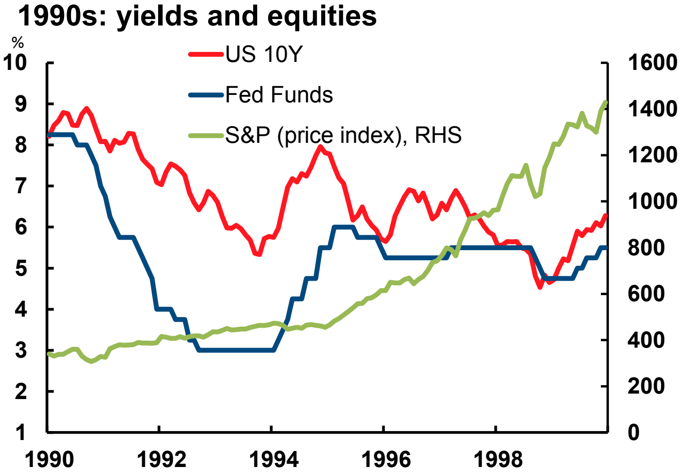
[3] The purpose of the move was to help reduce short-term capital outflows by firming U.S. short-term money market rates and permitting member banks to compete more effectively for foreign and domestic funds.(Source Fed)

[4] In the article we have used the Shiller PE series, based on cyclically adjusted earnings, for the purpose of homogeneity throughout the sample.

year 1994, more than 200 bps higher than at the bottom of that cycle, i.e. 8% in December 1994. Stocks earned 7% during the year before the tightening (1994 calendar year performance was slightly negative,-2.3%), and the bull market continued despite the steep rate hike, supported by healthy corporate fundamentals and a steady increase in profits (as a % of GDP), which peaked only three years later.

However, for some months prior to the hike, both equities and bonds price went up. As a matter of fact, bond markets started to suffer only three to four months before February 1994, as shown by the yield movements shown in *Exhibit* 6. Overall, 10y yields declined by 29 bps over February 1993 - February 1994 (*Exhibit* 1). A cross check with professionals surveys confirms that in early 1993 economists were not yet seeing higher growth at the expense of higher inflation, and long-term inflation expectations were continuing to fall. The turning point for yields was triggered by economic forecast revisions that led forecasters and investors to realise that Fed would have removed its accommodative policy sooner rather than later.

Exhibit 3
1990s: US monetary policy and markets



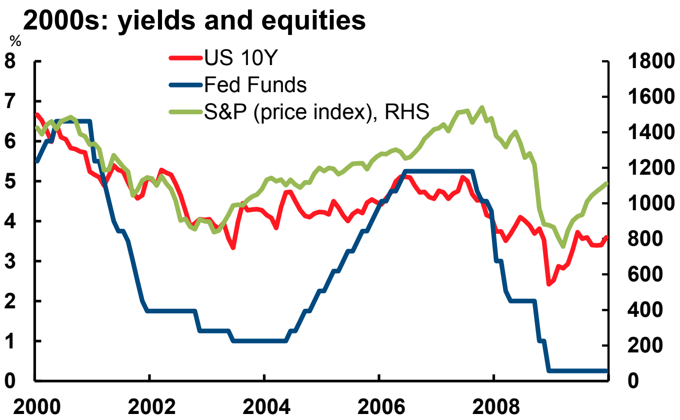
Source: Datastream, Fed, Shiller and AXA IM Research

Today, a dovish Fed is gently supporting bonds and equities; and similarly to what happened in 1993, the bond market seems to be lagging in order to price in the ongoing normalization of monetary policy, the improving labour market and the first signals of (so far) modest salary pressures. However, a 1994 (post-tightening) scenario for bonds seems unlikely for different reasons. For example, the upcoming firming cycle will not be aggressive (real short-term rates will remain negative in 2015 and 2016), long-term inflation expectations are well anchored, the US net bond supply is decreasing, and there is sustained demand from long-term price-insensitive investors (central banks, pension funds, commercial banks) hungry for safe assets. Last but not least, markets are discounting a lower ultimate rate. Yet, the main hidden danger for bonds is that the longer the period of low rates, the higher the medium term risk that the Fed will be behind the curve.

The 2000s episode

In 2004 the fed funds rate was at a 45-year low of 1% (*Exhibit* 4), and in June, the Fed lifted official rates after a one-year pause. In that year, policy concerns were well balanced, and when the headline inflation over the second and third quarters increased substantially (from slightly below 2% to roughly 3%), the Fed took the opportunity to remove some accommodation. The professional forecasters' survey for the related period confirmed a broadly stable environment for economic growth (up only slightly for 2005, at 3.9% from 3.8%), a mild improvement in the labour market and rising projections for near-term inflation.

Exhibit 4
2000s: US monetary policy and markets



Source: Datastream, Fed, Shiller and AXA IM Research

When considering the effects on financial markets, commentators as well as Fed members[5] often contrast the 2004 policy normalisation with the 1994 episode. Indeed, bond markets reacted quite differently. In the run-up to the first rise, 2004 is the only case out of the three we consider here where bonds and equities did not perform in tandem. US 10y yields rose by 140 bps (from 3.3% to 4.7%) and the stock market made a 15% gain over the same period (*Exhibit* 1). The Standard & Poor's price index also returned a reasonable 6% during the post-hike year. This was because the gradual removal of accommodative policy did not hit rising corporate profits, even though Shiller PE valuations were higher than the average (at 26, that is pretty close to today's levels). This period stands out mostly

[5] In a 2011 speech Bullard referred to the 1994 and 2004 tightening cycles as follows "*In 1994, the Fed tightened policy unexpectedly and in uneven amounts," and the financial market effects were considered disorderly, he noted. Policy was then normalized, he said, and the economy boomed for the rest of the decade. "In 2004, the Fed tightened policy in perfectly even amounts," and he noted that although the financial markets effects were considered orderly, the financial crisis was sometimes blamed in part on this excessively smooth approach*.

because of the puzzling behaviour of US yields after the tightening. The cycle was particularly long and took the fed funds rate all the way from 1% to 5.25%. Between June 2004 and June 2006 the removal of accommodative policy should have driven long-term rates sharply higher. Instead, they remained relatively inert, rising only 64 bps over the period, from 4.60% to 5.14% (they dropped by 73 bps over the 12 months after the first hike). In his now-famous address of 16 February 2005, Federal Reserve Chairman Alan Greenspan first spoke of the bond market “conundrum,” giving a name to the particularly surprising behaviour of long-term interest rates since June 2004.

Implications for markets

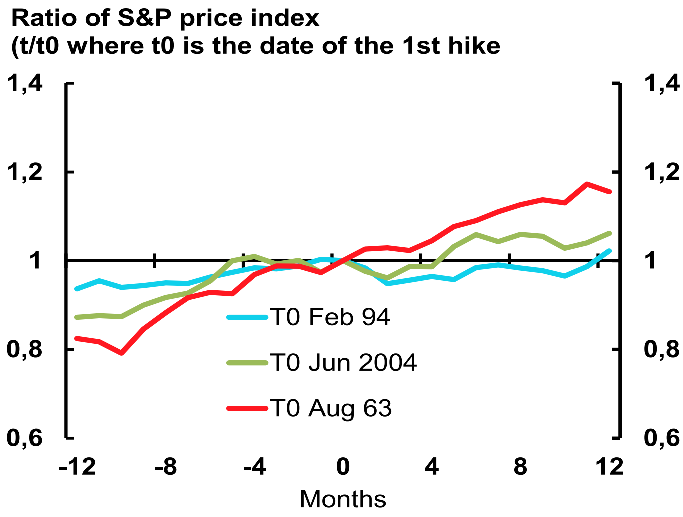
Our historical comparison shows that **in the run-up to the Fed's first hike (and even after it), equities posted consistently good performances.** In all the analyzed periods, firms' fundamentals were relatively healthy, corporate profits (as a percentage of GDP) headed upwards. Under these conditions, the removal of accommodation did not compromise the rising equity market, even though valuation metrics[6] appeared somewhat stretched in historical terms. Those same conditions are all in place today. Besides, our scenario assumes that the economic backdrop will improve gently, inflation will remain tame and accommodation will not be removed early, given that short-term real rates will stay negative or close to zero in 2015 and possibly beyond.

On average the pre-tightening phase is negative for bonds: long yields were up by 38 bps over the three periods (*Exhibit* 1). However the breakdown of the three cases shows than only 2003/2004 was clearly a bad year for bonds. Yields stayed flattish in 1963 ahead of an isolated move and in 1994 because monetary policy was tightened unexpectedly. Henceforth, **in light of expectations for a prolonged and very gradual tightening cycle to come, US Treasuries will come under moderate pressure during the year to come.**

These findings reinforce our allocation recommendation to overweight equities and underweight govies.

Exhibit 5

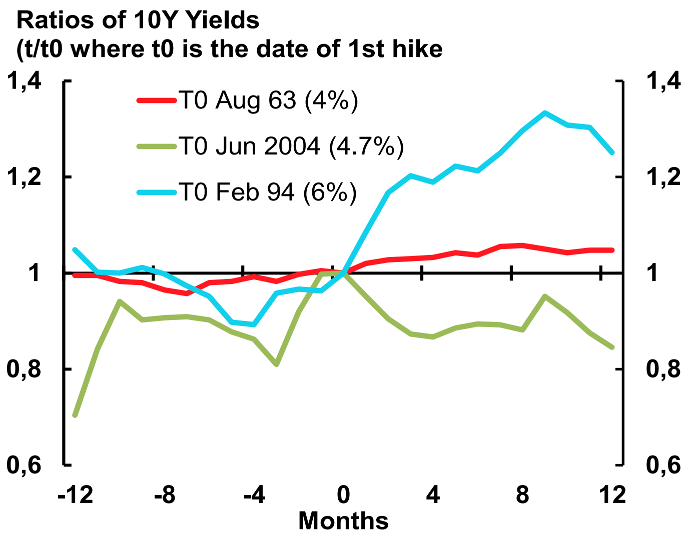
US equity market dynamics surrounding the first hike



Source: Datastream, Fed, Shiller and AXA IM Research

Exhibit 6

Movement in US 10y yields surrounding the first hike



Source: Datastream, Fed, Shiller and AXA IM Research

[6] In the article we have used the Shiller PE for the purpose of homogeneity throughout the sample.

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