**Global Investment Research |** Fixed Income

# Fed easing cycles and duration – taking the long view

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# Overview

In February 2024, we addressed whether lessons could be drawn from previous G7 central bank easing cycles[1]. In that paper, we compared the easing cycles since 2000 – namely the Covid, Global Financial Crisis (GFC) and dot.com bust easing cycles – and assessed whether lessons could be drawn for the next cycle. As the Fed prepares to join the current G7 easing cycle, what are the implications for the US Treasury curve, and prospective returns?

In particular, in this paper, we assess:

1. Whether lessons can be drawn from previous easing cycles, about the performance of US Treasuries, after the first Fed rate cut
2. If investors have benefitted from holding longer duration Treasuries, during easing cycles, even if the yield curve steepens
3. How consistent this evidence has been across Fed easing cycles
4. The prospective returns for investors in different rate-cutting scenarios, using FTSE Russell Yield Book analysis

[1] Timing, Tempo and Terminal Rates - Lessons from previous G7 easing cycles, Robin Marshall, FTSE Russell, February 2024.

# Contents

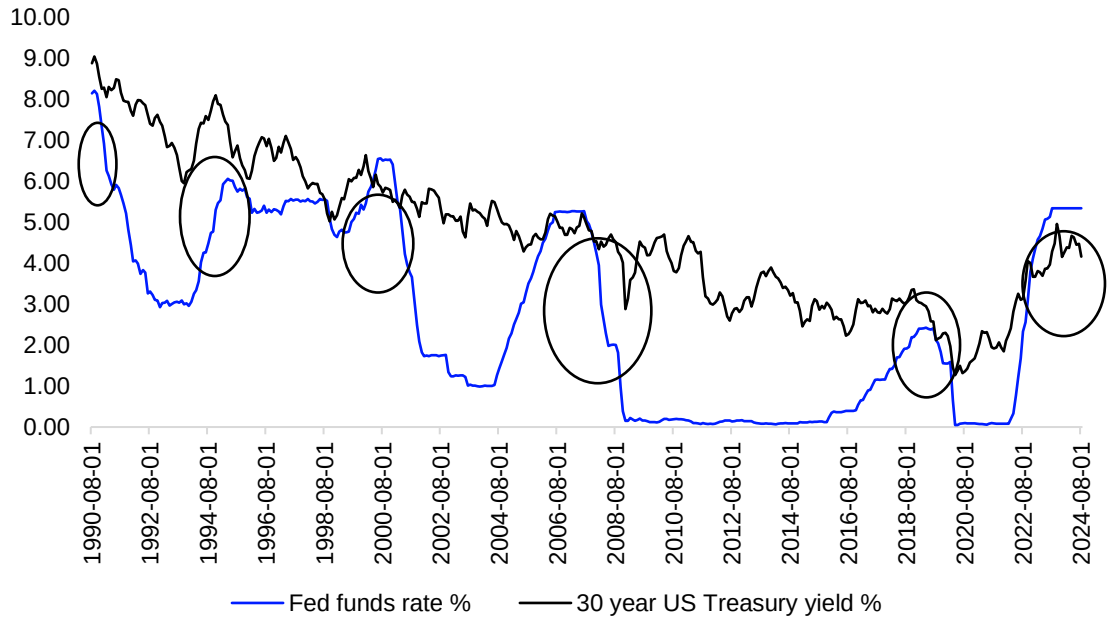
# Benchmarking historical evidence for Treasuries from Fed easing cycles

To assess these questions, we consider (a) the historical evidence for Treasury performance from Fed easing cycles since 1990, and also (b) explore different Fed rate-cutting scenarios, by using FTSE Russell Yield Book scenario analysis for the US Treasury curve. By varying the shape of the yield curve during different Fed rate-cutting scenarios, both the impact of a parallel yield curve shift downwards in the curve, and the more typical curve steepening scenarios during Fed easing cycles, can be assessed.

# Historical evidence shows Treasuries front-running Fed easing

Chart 1 shows US Fed easing cycles since 1990, and movements in 10 year and 30 year Treasury yields. The long end of the Treasury market has “front-run” Fed rate cuts in virtually every easing cycle – sometimes prematurely – with Treasury yields falling well in advance of actual Fed easing. Only in the 1990 Gulf war recession, did 30 year yields move lower almost contemporaneously with the Fed funds rate. Front-running by the Treasury market is unsurprising, since central banks usually signal a policy pivot some months before implementing it. But the degree of front-running has varied, from one cycle to another, depending on the nature, and scale, of the shock hitting the economy and the easing cycle. 30 year yields fell less in more normal cycles, like the mid-1990s, and early-2000s easing cycles, than during the big deflationary shocks of the GFC and Covid. Also note that the bigger declines in yields have generally followed the first Fed rate cut, when market expectations of an easing cycle have been validated.

**Chart 1: US Fed funds and 30 year Treasury yields**



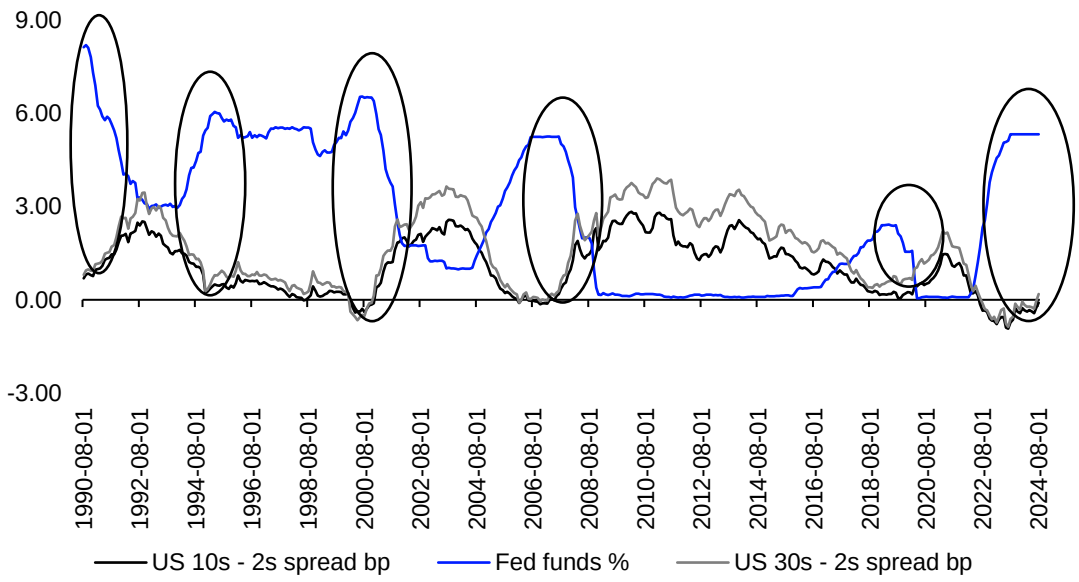

Source: US Federal Reserve. Monthly data to end-August 2024.

# It has paid investors to add duration very early in the easing cycle…

Overall, despite some false dawns, a clear message from Chart 1's fall in yield until 2020 is that it has paid investors to add duration, and convexity, to portfolios early in the policy easing cycle. The decline in US Treasury yields since the GFC also caused the duration of the Treasury market to increase sharply, and has made this duration effect even more pronounced, both as yields rise, and fall, as was shown during the latest US Fed tightening cycle from March 2022- July 2023. …even if historical evidence shows curve steepening during easing cycles

Another characteristic of easing cycles is that yield curves have bull steepened during Fed easing cycles, with short yields falling further than long dated yields. So why does that not lead to outperformance by short bonds, relative to longs? The answer is the positive effects of extra duration and convexity in longs during easing cycles normally swamps the effect of yield curve steepening. Chart 2 shows the curve steepening evident in previous easing cycles, by tracking yield spreads between 10 and 2 year bonds, and 30 and 2 year bonds since 1990. The message from the yield curve is that it tends to steepen, or disinvert, in advance of Fed easing, as the Treasury market discounts lower rates, and short yields react more to moves in Fed funds than longer yields. In the current cycle, for example, the yield curve has been disinverting since July 2023, so there has been more than a year of curve disinversion before the Fed begins policy easing.

**Chart 2: US yield curve spreads and Fed funds rate**




Source: US Federal Reserve. Monthly data to end-August 2024.

# What conclusions emerge from historical evidence for the next easing cycle?

Evidence of the outperformance by longer US Treasuries after the first Fed rate cut can be found in Table 1, which shows how different US Treasury maturities performed in easing cycles since 1990, in the first 6 and 24 months following the first Fed rate cut.

Several conclusions emerge from the table. Firstly, apart from the very brief Asian crisis easing in 1998-99, consistent outperformance emerges by longer Treasuries in the first 6 and 24 months after the first rate cut, particularly in the first 6 months. Secondly, only in the 6 months following the first Asian crisis rate cut, were returns in longs negative, as duration has proved the investors' friend during easing cycles. Thirdly, the outperformance by longs was more marked in longer easing cycles, with deeper rate cuts, like the dot.com bust and Global Financial Crisis. But even in the shorter, mid-cycle adjustment of 1995-96, longs comfortably outperformed, which may prove important, if the Fed implements a shorter easing cycle in 2024-25. Fourthly, Table 1 shows a wide range of easing cycles, with faster rate cutting scenarios generally resulting in lower terminal rates for Fed funds, and a greater overall degree of policy easing. Quantitative Easing supplemented rate cuts once the zero bound was reached, in the GFC and Covid easing cycles.

**Table 1 Performance of short, medium and long Treasuries during Fed easing cycles**

| Fed easing cycle | Date of 1st rate cut | Total easing in cycle and Fed Funds terminal rate | Length of easing cycle 1st to last easing move | Total return 1-3 year Treas.6 months after 1st rate cut | 24 months after 1st rate cut | Total return 7-10 year Treas. 6 months after 1st rate cut | 24 months after 1st rate cut | Total return 20+ year Treas.6 months after 1st rate cut | 24 months after 1st rate cut | Best maturity bucket returns |
|---|---|---|---|---|---|---|---|---|---|---|
| Gulf war recession 1990-92 | July 13 1990 | 525 bp to 3% | 26 months | +5.4% | +21.6% | +6.5% | +29.8% | +6.5% | +30.2% | 20+ years |
| Mid-cycle adjustment easing | July 6 1995 | 75bp to 5.25% | 6 months | +4.4% | +13.1% | +8.9% | +16.5% | +13.1% | +21.4% | 20+ years |
| Asian currency/LTCM crisis | Sept 29, 1998 | 75bp to 4.75% | 2 months | +1.4% | +9.2% | -3.4% | +1.6% | -5.8% | +0.6% | 1-3 years |
| Dot.com bust and 9/11 | Jan 3, 2001 | 500 bp to 1.75% | 11 months | +3.8% | +8.9% | +3.8% | +16.1% | +2.9% | +17.5% | 20+,7-10 years |
| Weakening recovery, low inflation | Nov 6, 2002 | 75bp to 1% | 7.5 months | +2.1% | +1.4% | +8.6% | + 8.4% | +13.7% | +12.5% | 20+ years |
| Housing crash and GFC | Sept 18, 2007 | 450 bp + QE to 0-0.25% | 15 months | +5.5% | +9.9% | +11.5% | +19.3% | +10.2% | +21% | 20+, 7-10 years |
| Mid-cycle adjustment + Covid | Aug.1, 2019 | 225bp + QE to 0-0.25% | 7 months | +1.8% | +3.6% | +3.8% | +5.5% | +6.8% | +4.8% | 20+ years |

Source: US Federal Reserve, FTSE Russell Yield Book, September 2024.

# Exploring different Fed rate cutting scenarios and the impact on US Treasuries

Turning to the current cycle, given the wide range of Fed easing cycles historically, we include a range of easing scenarios and compare different Fed rate cutting scenarios, using Yield Book scenario analysis. The impact on prospective returns in short, medium and long Treasuries from adjusting the shape of the yield curve can also be assessed. In this way, performance when the curve bull steepens, and yields fall more in shorts than longs, can be compared with the performance results from a parallel shift lower in the yield curve, when yields fall by the same amount.

# Parallel yield curve shifts with different Fed rate-cutting scenarios

Table 2 shows the impact on prospective US Treasury returns, in different maturity buckets, of 3 rate cutting scenarios, based on Fed easing cycles since 1990. In Scenario 1 – “higher for longer” (HFL) – the Fed cuts rates by only 25 bp per quarter, or 100 bp per annum, which translates to yield declines of 70bp per annum, across the curve, to the 2 year horizon (based on a delta of 0.7 for Treasury yield sensitivity to Fed rate changes, drawn from previous cycles). Sticky inflation makes a HFL scenario more than a tail risk.

Alternatively, in Scenario 2 (“More Normal easing”) the Fed is projected to ease rates by 50 bp a quarter for 2 years, to a terminal rate of 1-1.25%, and yields decline by 140bp per annum for all maturity buckets to the 2 year horizon. Finally, should another deflationary shock like Covid or the GFC occur, in Scenario 3 (“Deep cuts”), the Fed is projected to ease by 100 bp a quarter for 5 quarters, to a terminal rate of 0.25%, and yields decline by 280bp per annum, but for 5 quarters only, to the horizon. (We do not allow yields to go negative).

**Table 2 Projected Treasury returns over 2 years in selected scenarios – parallel curve shift**

| US Treasury Maturity bucket and duration | Scenario 1 Higher for longer (HFL) rates Total and annualised returns (US $) at 2 year horizon | (Attribution of returns - Principal and interest) | Scenario 2 More Normal easing (MNE) Total and annualised returns (US$) at 2 year horizon | (Attribution of returns - Principal and Interest) | Scenario 3 Deep cuts (DC) Total and annualised returns (US$) at 2 year horizon | (Attribution of returns - Principal and Interest) |
|---|---|---|---|---|---|---|
| 2-4 years<br>Duration= 2.82<br>Convexity = 0.1 | 7.5% total<br>3.7% annualised | 2% (P)<br>5.5% (Int) | 8.2% total<br>4.0% annualised | 2.7% (P)<br>5.5% (Int) | 8.5% total<br>4.1% annualised | 3.1% (P)<br>5.4% (Int) |
| 8-10 years<br>Duration = 7.5<br>Convexity=0.66 | 15.22% total<br>7.21%<br>annualised | 8.58% (P)<br>6.64% (int) | 23.3% total<br>10.8%<br>annualised | 16.7% (P)<br>6.6% (int) | 27.6% total<br>12.6%<br>annualised | 21.1% (P)<br>6.5% (Int) |
| 10-20 years<br>Duration = 13.1<br>Convexity=2.1 | 28.2%<br>12.8%<br>annualised | 21.1% (P)<br>7.1% (int) | 51.6%<br>21.9%<br>annualised | 44.5% (P)<br>7.1% (Int) | 65.2%<br>26.8%<br>annualised | 58.2% (P)<br>7% (Int) |
| 20-30 years<br>Duration = 17.02<br>Convexity=3.85 | 35.3%<br>15.7%<br>annualised | 28.0% (P)<br>7.2% (Int) | 72.1%<br>29.1%<br>annualised | 64.9% (P)<br>7.2% (Int) | 95.3%<br>36.4%<br>annualised | 88.2% (P)<br>7.1% (int) |

Source: FTSE Russell Yield Book, market yield data as of September 17 2024.

# With a parallel curve shift, duration dominates returns in rate-cutting scenarios…

Unsurprisingly, when the yield curve shifts lower in parallel, greater duration and convexity dominate the returns profile in all 3 rate-cutting scenarios projected, even in the HFL scenario, where the Fed only cuts rates by 25bp per quarter. Again, attribution of returns shows principal returns are the main driver of returns in longer duration buckets, with modest interest returns in comparison. This is particularly marked in the “Deep Cuts” easing scenario. In contrast, in the shorter 2 to 4 year maturities, coupon returns actually exceed principal returns in the more modest rate-cutting scenarios. But in all 3 rate-cutting scenarios described above, it pays investors to own extra duration and convexity, even in the HFL scenario.

# …so we stress-test the results by projecting curve steepening

Since the yield curve has steepened in previous easing cycles, to stress-test these results we project 3 additional scenarios, based on the HFL, MNE, and DC scenarios, in which the yield curve steepens, by varying degrees, during the Fed easing cycle. Scenario 4 retains HFL Fed easing by 25bp per quarter, but drops yields by the full 25bp in the 2 year area of the curve, and only 15bp in 10 years, and 10bp in 30 years, per quarter, to the 2 year horizon (interpolating other yield changes). Scenario 5 retains the MNE scenario with Fed easing of 50bp per quarter, and drops 2 year yields, by the full 50bp, but only drops 10 year yields by 30 bp, and 30 year yields by 25 bp per quarter to the 2 year Horizon. Finally, Scenario 6 retains the DC scenario with rate cuts of 100 bp per quarter, for 5 quarters, and drops yields by 100 bp a quarter in 2 years but only drops 10 year yields 70 bp per quarter, and 30 year yields by 60bp per quarter. The scenarios are shown in Table 3, and the performance returns for these scenarios, in Table 4.

**Table 3 – Fed rate cutting and projected curve steepening scenarios**

| Fed policy easing, yield and yield curve moves | Scenario 4 "Higher for longer" (HFL) with yield curve steepener | Scenario 5 "More Normal easing" (MNE) with yield curve steepener | Scenario 6 "Deep cuts" (DC) with yield curve steepener |
|---|---|---|---|
| **Projected Fed rate cuts** | 25bp per quarter | 50 bp per quarter | 100 bp per quarter |
| **Fed Funds rate after 2 years, and terminal rate (TR)** | 3.25%-3.50% after 2 years<br>Assumed TR =<br>2.25-2.50% after 3 years | 1.25%-1.50% after 2 years<br>TR = 1-1.25% | 0-0.25% after 2 years<br>TR =0-0.25% |
| **Decline in 2year, 10year, and 30 year yields per quarter** | 25bp, 15bp and 10bp falls in 2, 10 and 30 year yields | 50bp, 30bp and 25bp falls in 2, 10 and 30 year yields | 100bp, 70bp and 60bp falls in 2,10 and 30 year yields |
| **Projected 10s/2s steepening after 2 years** | + 80 bp | + 160 bp | + 240 bp |
| **Projected 30s/2s steepening after 2 years** | + 120 bp | + 200bp | + 320 bp |

Source: FTSE Russell Yield Book, projections from of September 17 2024.

**Table 4 – Projected Treasury returns over 2 years in selected scenarios – curve steepening**

| US Treas. Maturity bucket and duration | Scenario 4 Higher for longer (HFL) with curve steepener<br><br>Total and annlsd.returns (US $) at 2 year horizon | (Attribution of returns - Principal and interest) | Scenario 5 More Normal easing (MNE) with curve steepener<br><br>Total and annlsd. returns (US$) at 2 year horizon | (Attribution of returns - Principal and Interest) | Scenario 6 Deep cuts (DC) with curve steepener<br><br>Total and annlsd. returns (US$) at 2 year horizon | (Attribution of returns - Principal and Interest) |
|---|---|---|---|---|---|---|
| 2-4 years<br>Duration= 2.82<br>Convexity = 0.1 | 7.8% total<br>3.8%<br>annualised | 2.3%(P)<br>5.5% (Int) | 8.3% total<br>4%<br>annualised | 2.8% (P)<br>5.4% (Int) | 8.5% total<br>4.1%<br>annualised | 3.1% (P)<br>5.4% (Int) |
| 8-10 years<br>Duration = 7.5<br>Convexity=0.66 | 16.4%<br>7.8%<br>annualised | 9.8% (P)<br>6.6% (int) | 21.1%<br>9.8%<br>annualised | 14.5% (P)<br>6.5% (int) | 27.6%<br>12.6%<br>annualised | 21.1% (P)<br>6.5% (Int) |
| 10-20 years<br>Duration = 13.1<br>Convexity=2.1 | 23.7% total<br>10.9%<br>annualised | 16.6% (P)<br>7.1% (int) | 33.3% total<br>14.9%<br>annualised | 26.2% (P)<br>7% (Int) | 62.7%<br>25.9%<br>annualised | 55.7% (P)<br>7% (Int) |
| 20-30 years<br>Duration = 17.02<br>Convexity=3.85 | 24.8%<br>11.4%<br>annualised | 17.6% (P)<br>7.2% (Int) | 39.7%<br>17.4%<br>annualised | 32.5% (P)<br>7.1% (Int) | 84.2%<br>33.0%<br>annualised | 77.1% (P)<br>7.1% annualised |

Source: FTSE Russell Yield Book data, market yield data September 17.

# Duration still dominates returns in bull steepening scenarios

Table 4 shows the results change little, versus Table 3, even if the curve steadily steepens over the 2 year horizon period. Because the projected scenarios give a bull steepening of the yield curve, with yields declining, duration and convexity again dominate returns in the longer maturities. Even in the least favourable scenario for the long end, Scenario 4, or Higher for Longer, in which there is 120bp of steepening in 2s/30s, and yields only drop 80 bp in total in 30 years, the long end delivers the strongest returns. Again, this is because the duration effect overpowers the impact of curve steepening.

# Conclusions and key takeaways

US Fed easing cycles have varied considerably in timing, tempo and terminal rates since 1990, reflecting the range of shocks and inflation risks impacting the US economy.

But both historical evidence and our Yield Book Scenario analysis show the benefits of acquiring extra duration early in US Treasury portfolios during Fed easing cycles.

Even when the yield curve steepens and a more modest easing cycle is projected, the 20 year + maturity bucket delivers the strongest returns, overall.

The biggest declines in yields have generally followed the first Fed rate cut, when market expectations of an easing cycle have been validated.

Historically, in more protracted easing cycles, the outperformance of the long end has been more marked.

But even in the shorter, mid-cycle adjustment of 1995-96, the 20 year + sector outperformed.

Short maturities have underperformed most in Fed easing cycles since the transition to lower yields, and flatter yield curves, in the early-2000s (the Greenspan “conundrum” [2]).

[2] The conundrum of flatter yield curves outlined by Fed Chairman Greenspan in US Congressional Testimony, February 16, 2005.

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