US FEDERAL RESERVE POLICY IN TRANSITION:

Key Impacts for Canadian Fixed Income Markets

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As the US Federal Reserve (Fed) starts to taper its massive quantitative easing (QE) in late 2021, it faces difficult tasks and serious risks in unwinding QE and in managing the future lift-off from near-zero policy rates. Despite its notable pandemic success to date, the Fed's "patient" approach is encountering increasing criticism. A growing number of prominent economists and analysts view its policy transition as starting too late and being inadequate in its pace and scale.

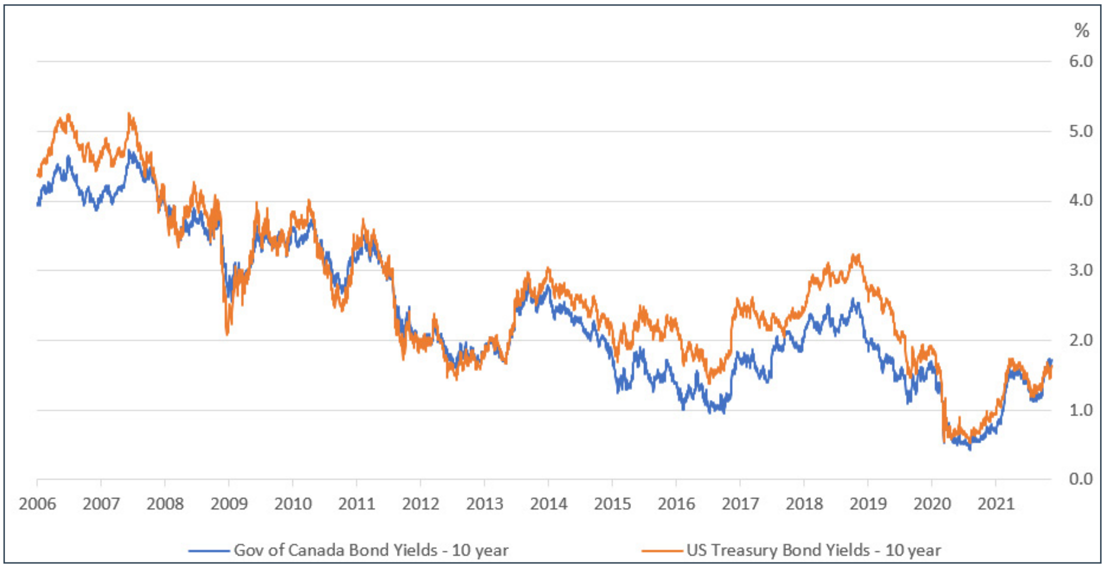
This paper examines the Fed's policy transition challenges and risks. It explores several crucial impacts for Canadian fixed income markets. Fed policy has a powerful indirect influence upon the absolute level and shape of Canada's yield curve via US$ and global interest rates and financial markets. The issues in the Fed reversing its ultra-easy stance are broad ranging. They include the structural impacts and stability implications of large-scale QE and ultra-low interest rates since the Great Financial Crisis (GFC). The volatile upward move and then partial retracement in US Treasury yields from early September through November 2021 highlight the US and global effects of the Fed's policy shift, and the major impacts and risks for Canadian fixed income markets.

This paper begins with a brief review of Fed policy prior to the pandemic and an overview of its approach during COVID-19. The next section explores the Fed's policy successes with enormous monetary support during COVID-19's initial emergency phase and its communications approach through November 2021. It also examines major issues and risks as the Fed unwinds QE and, subsequently, near-zero policy rates, including whether the timing, pace and magnitudes of its policy reversal are appropriate. The final section looks at some key implications for Bank of Canada (BoC) policy, and the returns and risks for CDN$ bond holders. (Readers wishing to focus on the Canadian-specific impacts have the option to skip to this last section.)

1. FED POLICY IN TRANSITION

The Fed, European Central Bank (ECB) and other leading central banks entered the pandemic with robust credibility for their inflation track record and policy approach. Their high standing reflected sustained low inflation since the 1990s, and well-anchored inflation expectations in financial markets and in the real economy. It was reinforced by the extraordinary use of QE by the Fed and the Bank of England (BoE) during the GFC, and afterwards when the ECB embarked upon QE. The dominance of monetary stimulus in macroeconomic policy during the post-GFC decade reinforced the strong stature and outsized support role of central banks.[1] Their success was reflected in the sustained decline in US interest rates for three decades, especially the ultra-low yields after the GFC (Chart 1).

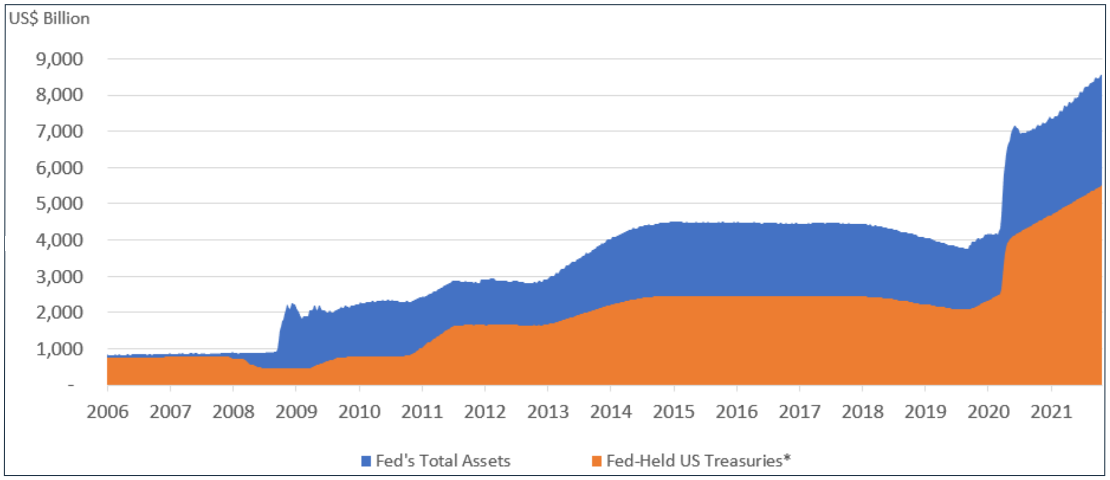
Chart 1: Canada Bond and US Treasury 10-year yields



Source: Bank of Canada, Board of Governors of the Federal Reserve System

Yet, ultra-low policy rates from the GFC onwards (including negative interest rates in Europe in the years leading up to the pandemic) meant the Fed and other central banks had too little rate ammunition to combat prospective economic disruptions. Ultra-low policy rate levels left little room for interest rate cuts before near zero policy rates were reached. It meant that the Fed's rapid interest rate decreases to near zero (March 2020) with the onset of COVID-19 had minimal impact initially. Inadequate early stimulus from these policy rate cuts led to the second massive use of QE by the Fed, ECB and the BoE in the past 15 years. It also led to the first-time use of extraordinary QE by the BoC and other central banks. The Fed's enormous QE expansion involved much faster rate decreases and far greater QE and credit easing (CE) than occurred during the GFC (Chart 2). Its pandemic QE entailed much larger purchases of US Treasury bonds and US Agency Mortgage-Backed Securities (agency MBS).[2] Its CE entailed a broader array and larger scale of debt instrument purchases and liquidity programs.

Chart 2: Aggregate Fed Asset Holdings and US Treasury Holdings



*Include US Treasury bills, notes and bonds
Source: Board of Governors of the Federal Reserve System

Similar to the GFC and its aftermath, the Fed's "temporary" QE during March-April 2020's peak market stress and severe economic dislocations shifted to become sustained economic support. Once again, the policy rationale of emergency QE support morphed into an ongoing stimulus paradigm. In doing so, the Fed continued its carefully-calibrated initial forward guidance that near-zero Federal Funds rates would be maintained until the economy was on track to reach maximum employment and its 2% inflation goals. Federal Open Market Committee (FOMC) statements and the Fed Chair's speeches underscored sustained massive monetary support. The Fed continued buying US Treasuries and agency MBS in enormous quantities, albeit at lesser levels from mid 2020 onward than during the March-April 2020 emergency phase. It also engaged in large-scale liquidity and funding measures to support money markets and the flow of credit to households, businesses, state and local governments.

The Fed's adoption of annual inflation targeting (AIT) in August 2020 at the Jackson Hole Symposium further supported unprecedented monetary ease. AIT enabled the FOMC to explicitly state its goal of achieving inflation "moderately above" 2% for some time so that inflation would average 2% over time, and longer-term inflation expectations would remain "well anchored" at 2%. Its forward guidance continually stressed that accommodative monetary policy would continue until these inflation outcomes were achieved, providing crucial communications support for Fed policy patience when general price pressures picked up.

As the rapid and stronger-than-anticipated US economic and financial rebound became clear by 2H2020, the Fed adjusted its forward guidance. It set out and consistently reiterated the economic criteria for reversing each of the two pillars of ultra-loose monetary policy. The Fed's goal was to avoid an abrupt surge in yields akin to the "taper tantrum" when then Fed Chair Ben Bernanke announced the intention to reduce QE in 2013. The December 2020 FOMC statement specified monthly purchases of $80 billion US Treasuries and $40 billion of agency MBS until "substantial further progress has been made toward the Committee's maximum employment and price stability goals." It established a higher bar of maximum employment and inflation exceeding 2% for increasing its policy rates.

By mid 2021, US inflation across a wide range of measures was running well in excess of 2% amid continued economic strength. In response, the Fed Chair's 2021 Jackson Hole speech stated, "the 'substantial further progress' test has been met for inflation. There had also been clear progress toward maximum employment." Jerome Powell reiterated that "The timing and pace of the coming reduction in asset purchases will not be intended to carry a direct signal regarding the timing of interest rate liftoff" which has "a different and substantially more stringent test." He emphasized that the "sharp run-up" in inflation in mid 2021 was likely to prove temporary. In the Fed Chair's view, broad-based inflation pressures were absent, increases in certain high-inflation items (*e.g.*, used cars) were lessening/reversing, and wage pressures were not present. He noted that longer-term inflation expectations were well behaved, and structural disinflationary forces globally looked set to continue.

By mid fall 2021, the Fed's public statements expressed less certainty regarding the 2021 rise in inflation. In late October, the Fed Chair said that: "The risks are clearly now to longer and more persistent bottlenecks, and thus to higher inflation … Supply constraints and elevated inflation are likely to last longer than previously expected and well into next year, and the same is true for pressure on wages. If we were to see a risk of inflation moving persistently higher, we would certainly use our tools." Even though the FOMC's November meeting statement acknowledged the near-term pick-up in inflation, but reiterated the "temporary" theme about these price pressures, Jerome Powell's remarks on November 30 shifted the Fed's tone and prospective timing for tapering. The Fed Chair indicated the potential to conclude tapering at a faster pace, and stated the need to replace the term "transitory" in the description of higher inflation with one that reflects that elevated price pressures will linger longer in 2022.

2. ASSESSING FED POLICY DURING COVID-19

2.1 Policy Successes

Analysing Fed policy during the pandemic begins with its critical success in supporting financial markets during their time of maximum stress in March-April 2020. The Fed, ECB and other central banks once again became the "buyers of last resort" for securities markets. This was in addition to their traditional role of "lender of last resort" for banks and other credit providers. Open-ended QE plus its huge CE through liquidity facilities, credit backstops and direct securities purchases prevented far greater market disruptions and helped sustain lending, liquidity and confidence. The Fed's QE and CE stabilized US financial markets, boosted global financial markets, and helped contain the largest US economic decline since WWII in 2Q2020.

The signalling success of Fed policy through November 2021 also merits highlighting. No abrupt surge in US bond yields above pre-pandemic levels had occurred nor had substantial pressures on emerging markets arisen. The Fed Chair's constant themes and FOMC statements regarding the conditions for unwinding QE and the tougher criteria for the policy rate lift-off had "slow walked" policy expectations and investor behaviour. These conditions helped keep 10-year US Treasury yields below 1.75% and long Treasuries to around 2% in 2021ytd. These modest nominal yields are all the more impressive given significant negative real yields since the CPI annual inflation reached 4% in April 2021, and jumped to 5-6% from May 2021 onward.

2.2 Declining Benefits of Repeated Easing and Increasing Side Effects

Yet, as the Fed embarks upon implementing its patient pivot from ultra-loose policy during the pandemic, the structural risks are increasing and new risks are appearing. Longstanding critics cite the Fed's continuous use of aggressive monetary support during actual or expected downturns since the late 1980s. These analysts stress the declining effectiveness and increasing side effects of this ultra-easy policy dependence since the late 1980s. Their fundamental concerns only deepened with the Fed's intensified use of ultra-loose policy during and especially after the GFC.[3] They highlighted the asymmetry in policy with rapid, larger scale loosening during and after downturns versus the much slower and lesser unwinding or tightening in upturns. They stressed the increasingly temporary benefits of easing. The short-term boost to demand from ultra-loose policy was followed by reduced future growth from the debts incurred to fund increased personal and business spending.

Critics also emphasize the negative effects of ultra-low yields and QE in fostering undue risk-taking in financial

Chart 3: US Treasury 10-year yields

Source: Board of Governors of the Federal Reserve System markets. These analysts cite the misallocations of investment and lending such as in supporting zombie firms and in generating greater instability overall in the financial system. Others stress that over-dependence upon easing fosters excessive leverage for households, businesses and governments. Surging US private and public debt in recent decades has also been accompanied with the declining productivity of this burgeoning leverage.[4]

Other concerns surround what critics refer to as the "Fed put". Research shows that the Fed responds to financial market declines more quickly and decisively while it is slower and less active in dealing with elevated market levels and robust conditions.[5] In part, this reflects the greater uncertainty about the impacts of reversing easing/tightening relative to the effects of loosening. There is also a clear imbalance in the greater behavioural incentives and political economy benefits in favour of easing versus tightening. This creates a serious risk of delay in the timing and extent of unwinding.[6] Major political pressures from individuals and businesses faced with rising debt service costs and investor fears about weaker equity markets create further significant constraints in exiting QE and ultra-low rates.

2.3 Difficulties and Risks in Exiting Ultra-Loose Monetary Policy During the Pandemic

Strategic – the exit strategy challenges in late 2021 begin with choices about whether QE or policy rates should be changed first, or in some combination, and at what magnitude and speed. Optimal sequencing in lessening QE and/or raising policy rates depends upon accurate evaluation of structural trends and economic developments. Both factors make forward guidance more challenging during unwinding. Uncertainty surrounds the correct neutral interest rate setting in guiding policy rates upward during the reversal of easing.

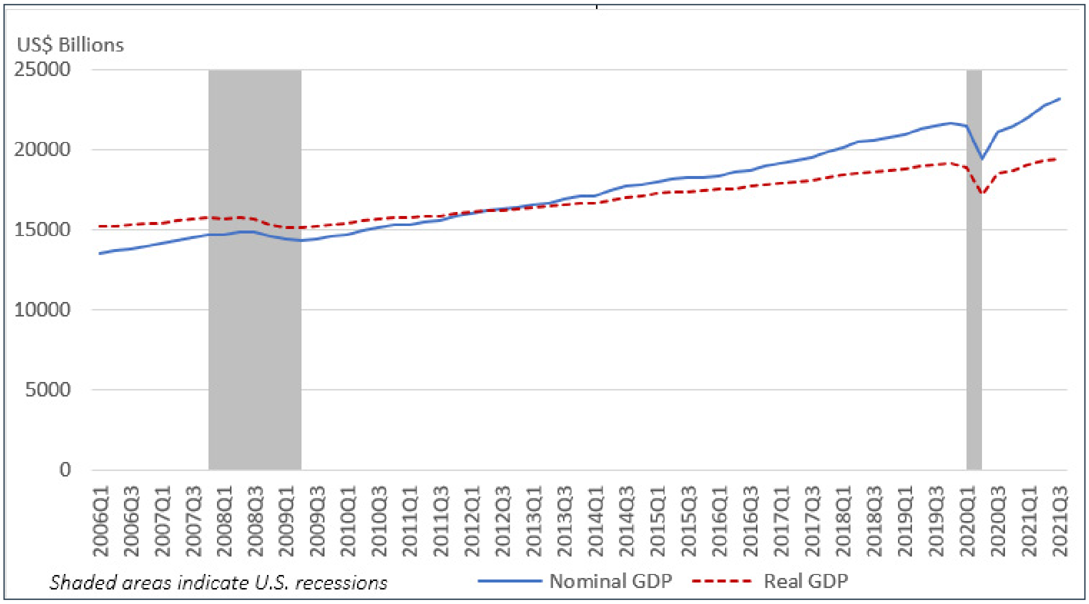
Timing – There is a clear risk that the Fed's "patient" approach to unwinding QE and, eventually, raising policy rates is both too slow and insufficient. This serious risk is growing in late 2021 given US inflation pressures, massive fiscal stimulus, large-scale pent-up demand, and huge personal savings and business liquidity. The impacts of Delta and new variants (*e.g.,* Omicron) of COVID-19 and global supply chain headwinds need to be considered. However, a range of former central bankers, ex-senior US government economists and various leading market commentators believe that the Fed either missed the window earlier in 2021 to start reversing its policy stance and/or needs to start responding much more actively in late 2021.[7]

Additional timing concerns arise from QE's greater impacts and merits during crises versus normal conditions.[8] QE's benefits during the periods of maximum stress in both the GFC and pandemic were clear in stabilizing financial markets and containing the economic contraction. In contrast, QE's effects and merits are much less in normal conditions while its adverse impacts are much greater. Beyond facilitating excessive leverage, its side effects include the overvaluation of financial assets and housing, and fostering social inequity as higher asset prices strongly favour the well off. Failing to reverse QE when recoveries are well established or expansions are well underway (as many contend is the case in late 2021) risks having inadequate balance sheet room and fewer monetary tools to respond to the next crisis.

Sequencing – Other critics have challenged the order of the Fed's approach, stressing the need to start reining in excess demand with interest rate hikes as the economy is much less sensitive to QE's unwinding than to rate rises.[9] A common theme in these criticisms is that the move to AIT risks an even greater delay in fully reversing QE and starting the policy rate lift-off.[10]

Structural Differences versus the GFC and its Aftermath – The Fed's rationale for ongoing QE stimulus after March-April 2020 included continued economic growth problems, an inadequate employment recovery, and large slack in product and labour markets. However, unlike the GFC, the economy's recovery has been much faster and more robust. The strong rebound in US growth was solidly underway by mid 2020. US equity markets had surged above pre-pandemic levels by late 2020, and inflation had jumped sharply in mid and, especially, late 2021. Macroeconomic policy support is far greater and more balanced. Technology advances have enabled a surge in digital payments, e-commerce and especially remote work, facilitating the US real GDP recovery that surpassed pre-pandemic levels by mid 2021.

Chart 4: US GDP Path during the Pandemic vs. the GFC



Source: U.S. Bureau of Labor Statistics

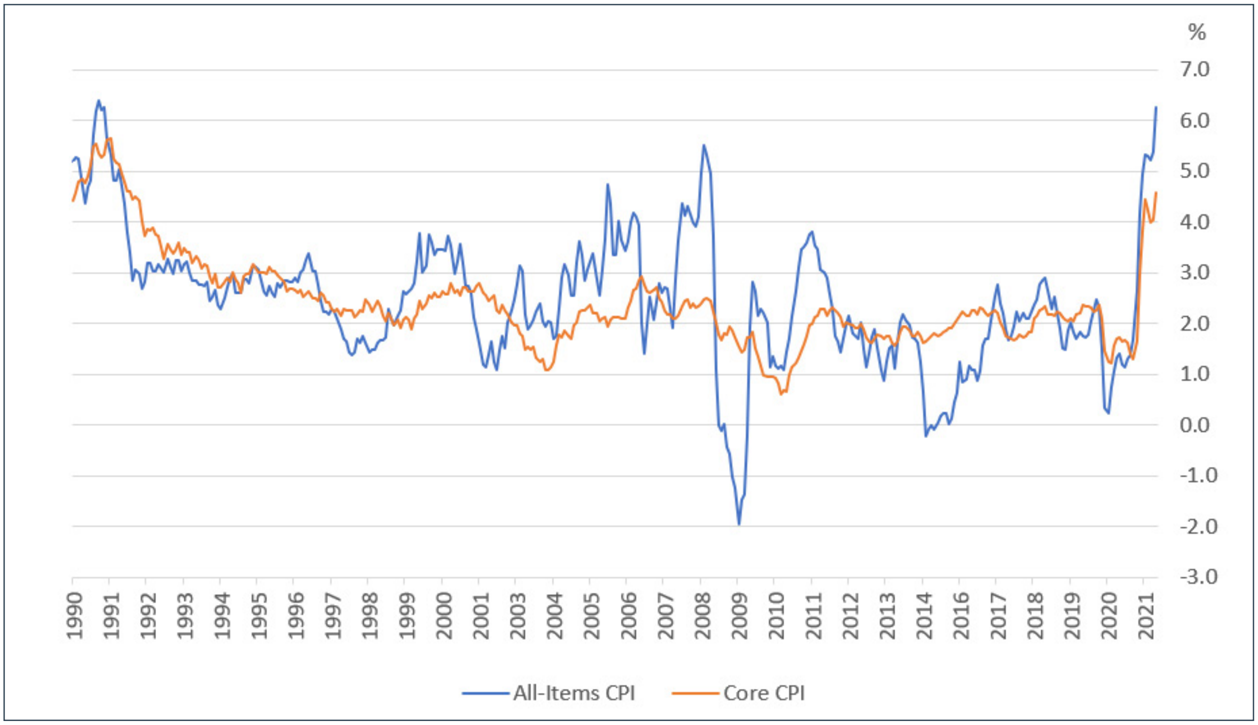
The Return of Inflation: Short-Lived or More Sustained – At the heart of the debate about the Fed's policy in transition are fundamentally different views about the nature of the rise in US inflation in 2021 and its future path. October 2021 marked the 7th straight month of an array of inflation figures being well above the Fed's target. The headline Consumer Price Index (CPI) rose by 6.2% over the past year, the fastest pace in over three decades. Yet, the Fed was consistent through the summer to mid November of 2021 in viewing the increase in inflation as transitory. While it has somewhat moderated this stance more recently, the Fed's "temporary" view of inflation continues to decisively shape policy in late 2021, including sequencing tapering QE first and raising policy rates later on.

Unfortunately for the temporary inflation outlook, many of the factors pushing inflation higher in 2021 have proven more durable and widened substantially this fall. Temporary causes such as the base effects of depressed prices in the spring of 2020 no longer distort the year-over-year figures. While lumber prices and copper are well off their pandemic highs, a broadening set of other goods have rising prices. Severe supply chain problems (availability and costs of shipping containers, historically congested ports, ongoing semi-conductor shortages *etc.*) continue to cause sustained disruptions in 2021 while excess demand for an array of key input goods (aluminum, lithium, magnesium.) is boosting price pressures. Energy supply problems in Europe and power supply issues in China propelled global oil, gas and coal prices to new heights even before the normal seasonal increase in demand occurs during the winter. China's power supply problems have also exacerbated global supply chain pressures with reduced production across a range of goods.

Robust US housing markets mean that the US CPI's shelter component is set to increase more quickly due to escalating rental costs and the higher imputed cost of ownership. Labour shortages in a wide range of lower skilled to highly-skilled occupations have led to increased base pay, bonuses and other compensation as employers scramble to add new employees and retain existing staff. US hourly pay was up by 4.9% in the year ended October 2021, the largest annual increase in 14 years excluding a brief spike in 2020.[11]

Even the Fed's preferred inflation measure, the core personal consumption expenditures price index, rose by 4.1% over the year ended October 2021. Over the same 12-month period, the core CPI measure was up 4.6% the largest increase in 30 years, while the Producer Price Index for final demand rose by 8.6% over that same period, the highest rate in a decade. Consumer inflation expectations are at their highest levels since 2013.

Chart 5: US All-Items CPI and Core CPI, Percentage Change from 1-Year Ago



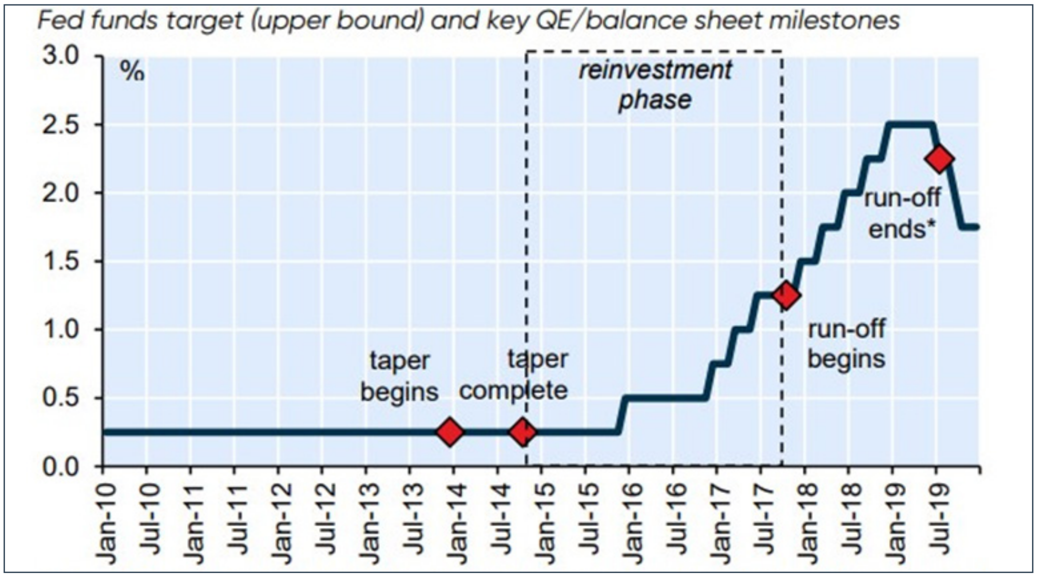
Source: U.S. Bureau of Labor Statistics

Looking ahead, the Fed Chair has referred to technology, globalization and perhaps demographic factors as more likely to "continue to weigh on inflation as the pandemic passes into history". Yet, while technology advances look set to continue to be disinflationary, other observers predict higher inflation from changing fundamentals this decade. They forecast the structural reversal of the excess global labour supply, lesser globalization of production, and a pending end to the oversupply of global savings that characterized the 1980s through 2010s.[12] The transition to a greener energy supply has already proven to be far more difficult in Europe and China. Sharply higher global oil, gas and coal prices in 2H2021 are indicative of secular price risks from "greenflation" until this adaptation is complete. Significant price risks are rising this decade from climate change through adverse supply shocks (*e.g.*, droughts and floods) and the huge investments required in mitigation and adaptation (*e.g.*, improving power grid resilience).

Walking a Narrow Path in Unwinding QE and Ultra-Low Policy Rates – The Fed's changes in its asset holdings need to avoid triggering a severe Treasury selloff/volatility that spills over into credit spreads and equity markets. Signalling about the timing and extent of policy rate increases will become increasingly important as the Fed moves through the tapering, reinvestment and winding down phases of QE.

In looking at 2010-19, the crucial differences between now and the post-GFC decade again warrant highlighting. Chart 6 shows the interaction among the three phases of reversing QE with interest rate increases and subsequent decreases during the post-GFC decade.

Chart 6: Fed policy normalization 2010-19

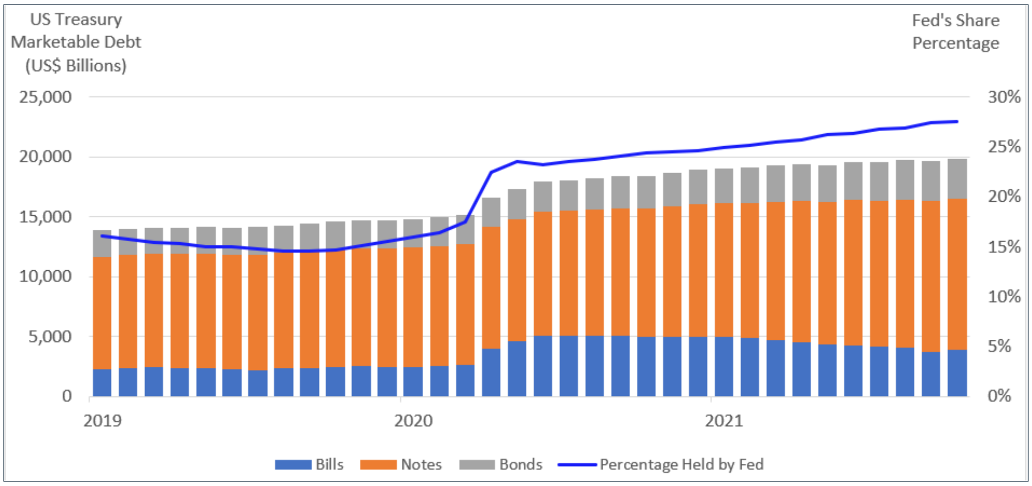


Source: National Bank Financial (NBF), Bloomberg, and Federal Reserve System

Yet, in looking at 2010-19, the crucial differences between now and the post-GFC decade again bear emphasis. The implementation of QE's unwinding this time starts with Fed purchases and aggregate holdings of around US$ 5.5 trillion by November 2021 that are a vastly larger share of the US Treasury market (Chart 4) than earlier. Its tapering of QE will also occur with the net supply of US Treasuries versus Fed buying expected to exceed US$1 trillion next year,[13] albeit with the pace of Treasury issuance slowing from 2021.

Uncertainty about the extent of the direct and indirect impacts of QE purchases in reducing yields creates further challenges.[14] While there is considerable debate about the extent of QE's direct effects, estimates range from 120 basis points (bps) to nearly 200 bps and much higher. The Fed's signalling impacts regarding interest rates will also shape the impacts of unwinding QE. The 2013 taper tantrum contrasts with 2018-2019 when the Fed substantially reduced its balance sheet without a large rise

Chart 7: US Treasury Marketable Debt Outstanding and Fed's Share



Source: Securities Industry and Financial Markets Association, Federal Reserve System in bond yields. Analysts view the different Fed narrative for interest rates as decisive in explaining the divergent impacts of tapering QE on yields.[15]

In sum, the Fed's start in reducing ultra-loose policy in late 2021 will occur with a far stronger US economy, ongoing massive US fiscal stimulus, and inflation well above the Fed's target. The contrast is stark versus the GFC and its aftermath. The jump in the overall CPI and other key CPI measures mean that inflation-adjusted yields turned strongly negative in mid and late 2021. The Fed will have to keep inflation fears at bay to avoid a market-driven large rise in longer-term Treasury yields and US$ pressures. The reversal of QE and raising policy rates should not be so disruptive as to cause currently very low credit spreads to rise substantially and create distress in the indebted US household and corporate sectors. It should also avoid prompting major disruptions in emerging market economies akin to what occurred in 2013.

3. KEY IMPACTS FOR CANADIAN FINANCIAL MARKETS

More Policy Room for the BoC to Unwind QE

The BoC was initially much less aggressive than the Fed in stepping down its QE in mid 2020 after the severe financial markets stress of March-April 2020. Since the fall 2020, however, it pursued a sustained tapering that concluded in October 2021. The contrast relative to the Fed's pause at US$80 billion monthly from December 2020 through October 2021 is notable. The Fed's transition to tapering in November 2021 indirectly creates more policy "room" for the BoC to move more rapidly in its reinvestment and runoff phases.

Yet, the reality of Canada's monetary policy is that too large a divergence from the Fed's policy stance will be reflected in the CDN$: US$ exchange rate. The early 1990s experience was instructive as the BoC's much tighter policy than the Fed resulted in a sharp appreciation of the CDN$. The competitiveness of Canadian manufacturers plunged, and led to a dramatic and prolonged retrenchment in this sector. The BoC's next steps in unwinding QE need to be particularly well calibrated. The CDN$ rebounded to the US$0.80 area by late 2021, boosted by the commodity-driven rise in Canada's terms of trade this year, and the prospect of further commodity price gains in the near term.

The Fed's policy shift is indirectly supportive of a careful, but more rapid reversal of the BoC's ultra-loose policy. While the BoC's inaugural QE was essential during the March-April 2020 crisis phase, investment dealers criticized its ongoing massive Canada bond purchases as excessive by the fall 2020.[16] They advocated making significantly smaller QE purchases in late 2020 and winding up by mid 2021. They pointed to excess domestic and foreign demand for Canadian bonds, especially when the BoC owned 40% of the total outstanding Canada bonds by April 2021. BoC holdings reached 43% in October 2021.

Like the Fed, the BoC's greatest policy challenge in late 2021 is to maintain its credibility in the face of higher inflation and to keep containing investor and real economy expectations of inflation. Rising Canadian inflation measures since early 2021, combined with increasing consumer and business expectations of higher inflation, make the BoC's policy response even more important. Canada's CPI increase reached its highest annual rate since 2003 in October 2021, with a 4.7 % increase. The increases in the BoC's preferred CPI core measures (CPI-Trim, CPI-Median and CPI-Common) remain solidly above the BoC's target range mid-point (Chart 8). It is a serious concern that the faster pace of inflation in mid and late 2021 occurred before the full CPI impact has been felt from higher food commodity prices (typical 7-month lag), ongoing supply chain disruptions and continuing labour shortages.[17]

Chart 8: Canada: Perspective on Inflation

Source: NBF Economics and Strategy (data via Statistics Canada)

To its credit, the BoC accelerated its QE unwinding with its October 2021 policy announcement. Unlike the Fed, the BoC also changed its guidance around the timing of when Canada's excess economic capacity is expected to end. The move forward in its forecast timing of economic slack being absorbed generated a rise in Canadian yields from new expectations of policy rate increases by mid 2022, if not earlier. Its policy shift was further underlined by BoC Governor Macklem's changed narrative that inflation is expected to be "transitory but not short lived".[18]

Risks for Canadian Bond Returns and Reassessing Bond Allocations in Portfolios

The Fed's policy transition for Canadian fixed income markets has significant impacts as well as increasing risks. Over the past four decades, CDN$ bonds have offered similar returns to equities while providing the benefits of portfolio diversification, reduced volatility and, in the case of Canada bonds and those of the largest provincial borrowers, excellent liquidity. Falling inflation and inflation expectations from the mid 1980s onward led to robust bond return performance, and reinforced the merits of the standard balanced portfolio approach of "60:40" equities: fixed income holdings for many institutional and individual investors.

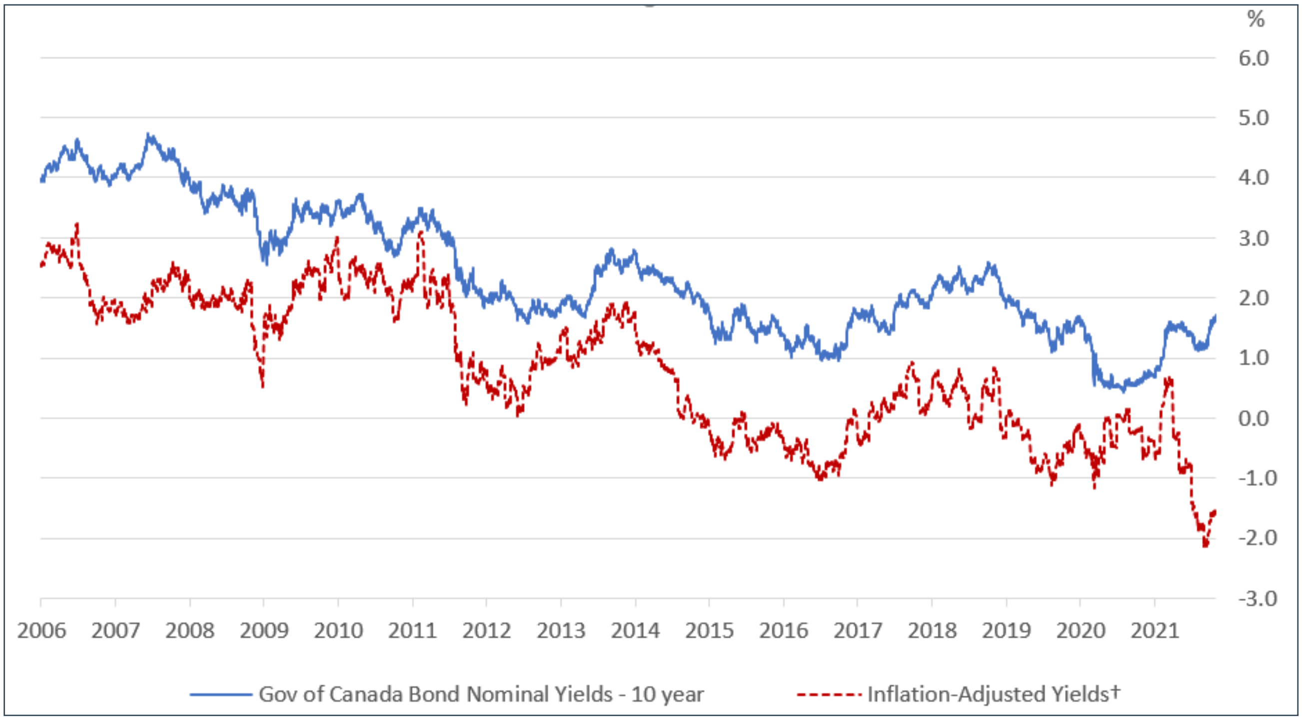
The Fed's ultra-low policy rates since the GFC and its ongoing reliance upon QE (especially when combined with the ECB's QE and near-zero rates) had decisive impacts in two ways in bonds' impressive performance in recent years.[19] "First, ample and predictable central bank purchasing of securities provide reassurance for many that the downward pressure on yields will persist, especially when central banks demonstrate they are willing non-commercial buyers (i.e. insensitive to rich valuations). Second, floored policy rates encourage investors to opt for longer dated debt in search of extra yield. These two effects are amplified when central banks continue to back their actions with the regular reiteration of ultra-loose forward policy guidance."[20]

The Fed's QE-driven reduction of US Treasury yields helped boost foreign demand for Canada bonds, Canada Mortgage Bonds, and Canadian provincial and corporate debt. Its QE also supported international buying of CDN$ debt issued by supranational and high-quality foreign corporations (so-called "Maple bonds"). For corporate bonds, The effects of the Fed's much-increased CE in 2020, and its ongoing large-size buying of agency MBS through 2021, were decisive in reducing US$ investment grade and high-yield debt costs, and helped compress the spreads on Canadian high-quality corporate bonds and high-yield credits.

Return and Allocation Issues -- Ultra-low Canadian government bond yields and narrow corporate spreads make the impacts and market risks of the Fed's policy transition even more important. Combined with the BoC's completion of its QE tapering phase, the implications for Canada bond yields and credit spreads portend a potentially very different path for Canadian bond returns. Through mid fall this year, Canadian government bonds have had negative returns, unlike the robust double-digit gains of Canadian equity markets. The FTSE Canada Universe Bond Index was down 4% on a total return basis through early November, the first decline since 2013 and the worst annual performance since 1994.[21]

Substantial negative real yields on Canada bonds, poor total returns in 2021ytd, and the jump in Canadian inflation this year raise serious questions about the optimal size of fixed income allocations in portfolios for the near term and potentially longer.[22] Investors face difficult decisions given the current "extreme liquidity" environment in debt markets. Core concerns for investors include whether the four-decade bull market in fixed income has ended temporarily or will its 2021 bear market phase last substantially longer. Multiple factors bode poorly in this regard. They include the significant negative real yields in the US and Europe, and the shift from ultra-loose monetary policy by the Fed and the BoC. Historical bond performance records offer little comfort. Deutsche Bank's data on the historical performance of US Treasuries since 1900 show negative real returns in six of these 12 decades, including four successive decades from the 1940s onward.[23] It is also notable that nominal US Treasury yields ranged between 1.5% and 3.0% during 2012-2019 when inflation was much lower than in 2021.[24] Not surprisingly, a growing number of institutional investors have increased allocations to private equity and other real assets at the expense of fixed income given the increasing risks to bond returns.

Chart 9: Canada Bond Nominal and Inflation-Adjusted Yields



†The monthly core CPI (percentage change from 1-year ago) is used to derive inflation-adjusted yields

Source: Bank of Canada for nominal yields

Increased Volatility Risks – the potential for a less orderly adjustment in US Treasury yields has risen given the Fed-supported very high valuation of financial assets and volatility concerns. The Fed's massive purchases have encouraged many investors to buy a range of assets at levels well beyond the basis of traditional fundamentals. With increased potential rate volatility as Fed policy shifts, there is greater "risk of yields suddenly 'gapping' upwards given that we are starting with a combination of very low yields and extremely one-sided market positioning."[25] The volatile spike and then rapid partial retreat in short-term yields in late October and early November 2021 are instructive in this regard. Canadian, European and US markets sold off sharply in reaction to the unexpected lessening of monetary support by the BoC and the Reserve Bank of Australia, and then rallied swiftly with the Fed and BoE policy announcements.

Technical risks are also rising as the Fed reduces its asset purchases. Structural problems in the US Treasury market such as occurred in February 2021 and in March 2020 are of concern.[26] Post-GFC US reforms have lessened primary dealers' crucial provision of liquidity due to higher bank capital requirements against holdings of Treasury debt, and helped increase the role of hedge funds and high-frequency traders. The reduced market-making of primary dealers means that there is increased risk in volatile markets from high-frequency trading funds pulling out.

Countervailing Influences – in exploring the return and allocation risks for bonds in late 2021, several important countervailing factors remain in place. These include the ECB's adoption of a higher target inflation rate of inflation at 2% in mid 2021. Equally key is its decision to taper only its pandemic emergency purchase plan while maintaining its large-scale pre-COVID-19 asset-buying program. It means the ECB should absorb the full supply of new government issuance in Europe in late 2021 and nearly all of this new supply in 2022.[27] Given a global bond universe with 80% of bonds yielding 3% or less, and 20% with negative yields, continued ultra-loose ECB policy looms large in supporting low bond yields elsewhere.[28]

US and Canadian government debt's vital role in providing liquidity and high-quality assets for institutional portfolio managers will also continue to support US Treasuries and Canada bonds. Their liquidity and lesser volatility relative to equities in turbulent markets are crucial benefits, especially if equity markets wobble or decline substantially from their highly elevated levels in November 2021. Inertia and actual as well as perceived regulatory constraints further support bond demand.[29] Accordingly, US Treasuries and Canada bonds may remain at low nominal yields and substantially negative real yields, albeit with increasing return risks and greater volatility.

CONCLUSION

The Fed’s extraordinary pandemic support was decisive during the pandemic’s emergency phase in stabilizing financial markets and helping prevent an even worse economic contraction. Its communication success and QE approach through November 2021 contained US Treasury yields despite the robust US economic rebound and the surge in inflation.

Looking ahead, however, the combination of higher US inflation in mid and late 2021 and continued solid US economic growth has fundamentally changed the policy environment. Consumer and producer price pressures as well as personal and business expectations of inflation have risen materially. Severe global and US supply chain problems persist, and financial market valuations are highly elevated. A growing chorus of leading economists and market analysts has criticized the Fed’s approach as late, slow and insufficient in its magnitudes and sequencing. It is clear that the Fed faces a difficult task in keeping inflation fears at bay. There is a narrow path to success for the Fed to unwind its enormous pandemic support without spurring much higher Treasury yields and credit spreads. It must also gauge the risks and uncertainty from COVID-19's Delta and new variants (*e.g.*, Omicron).

For Canada, the Fed’s transition to tapering creates increased policy “room” for the BoC to move more rapidly in its reinvestment and runoff phases. The risks in the Fed’s approach include much higher Canadian yields and greater volatility. Combined with the BoC completing its QE tapering, the Fed’s unwinding of ultra-loose policy has repercussions for Canada bond yields and credit spreads. Its policy pivot adds further pressure upon the substantial negative real yields of Canada bonds from rising Canadian inflation. It reinforces the merits of re-assessing the optimal size of fixed income allocations in portfolios in late 2021 and beyond.

From a risk perspective, the potential for a less orderly adjustment in US Treasury yields and other major debt markets such as Canada’s has grown significantly with the Fed starting to taper its pandemic QE. The Fed’s asset purchases and ultra-low rate guidance have encouraged many investors to buy many assets at very expensive prices. Combined with increased potential rate volatility as Fed policy shifts, there is a greater risk of yields abruptly adjusting, further complicating the role of bonds in Canadian institutional and individual investors’ portfolios.

ENDNOTES

1. See for example, Mohamed A. El-Erian, The Only Game in Town: Central Banks, Instability, and Avoiding the Next Collapse, (New York: Ram House, 2016). In his December 2018 press conference, then-ECB President Mario Draghi highlighted QE's significance in assessing the ECB's QE program impact during 2015-2018, stating that "especially in some parts of this period of time, QE has been the only driver of this [European] recovery."

2. This included the open-ended commitment in March 2020 to "continue to purchase Treasury securities and agency mortgage-backed securities in the amounts needed to support smooth market functioning".

3. William White, "Recognizing the Economy as a Complex, Adaptive System: Implications for Central Banks" in The Changing Fortunes of Central Banking, P. Hartmann, H. Huang, & D. Schoenmaker (eds.), (Cambridge: Cambridge University Press, 2018), chapter 21; and William White, "It's Worse than 'Reverse': The Full Case Against Ultra-Low and Negative Interest Rates", Working Paper No. 151 (New York: Institute for New Economic Thinking, 2021).

4. Van R. Hoisington & Lacy Hunt, "Quarterly Review and Outlook: Second Quarter 2020", Hoisington Investment Management Company, pp. 2-3, 5.

5. John Authers, "The Fed's Stocks Policy is Exuberantly Asymmetric", *Bloomberg Opinion*, August 4th, 2020.

6. Group of Thirty, "Fundamentals of Central Banking: Lessons from the Crisis" (October, 2015), pp. 43-44.

7. Lawrence Summers and Olivier Blanchard's views on the rapidly rising risks of inflation in early 2021 with article links in Martin Wolf, "Fed policy must adjust for inflation", *Financial Times*, November 16, 2021; Rhaguram Rajan's comments in Michelle Jamrisko, "Fed Now Risks Too-Slow Taper After Too Fast in 2013, Rajan Says", *Bloomberg Economics*, August 30, 2021; Mohamed A. El-Erian, "Bond sell-off is a warning to the Fed", *Financial Times*, September 29, 2021; Bill Dudley, "The Federal Reserve Put Itself Between a Rock and a Hard Place", *Bloomberg Economics*, November 15, 2021; Lawrence Summers, "On inflation, it's past time for team 'transitory' to stand down", *The Washington Post*, November 15, 2021; and Wolf, "Fed policy must adjust for inflation".

8. On the importance of restoring monetary policy room by reducing asset purchases after the crisis period, see Andrew Bailey's speech, "The central bank balance sheet as a policy tool: past, present and future", at *Macroeconomic Policy in an Uneven Economy*, economic policy symposium, Jackson Hole, August 28, 2021.

9. Stephen Roach, "The Sequencing Trap that risks Stagflation 2.0", *Financial Times*, October 13, 2021.

10. Willem Buiter, "The Fed must abandon average inflation targeting", *Financial Times*, November 14, 2021.

11. U.S. Bureau of Labor Statistics, retrieved from FRED, Federal Reserve Bank of St. Louis.

12. Charles Goodhart & Manoj Pradhan, The Great Demographic Reversal: Ageing Societies, Waning Inequality, and an Inflation Revival (London: Palgrave Macmillan, 2020).

13. Tommy Stubbington, "Bond investors brace for change of tack by central banks", *Financial Times*, September 27, 2021.

14. "Central banks face a daunting task: tapering without the tantrum", *The Economist*, July 10, 2021.

15. *Ibid.*. For an analysis of Fed signalling and absolute yield and yield curve moves after the FOMC's November 2021 tapering announcement, see Joe Weisenthal, "We Just Learned Another Lesson About What QE Actually Does", *Bloomberg Odd Lots*, November 5, 2021.

16. Warren Lovely & Taylor Schleich, "This is 40 (percent ownership of GoC market", *Market View: Economics and Strategy*, National Bank of Canada Financial Markets, April 6, 2021, pp.1-2; and Taylor Schleich, "Is QE in the eye of the beholder?", *Market View: Economics and Strategy*, National Bank of Canada Financial Markets, February 16, 2021, pp. 1-2.

17. Mathieu Arsenau and Alexandra Ducharme, “Canada: Inflation registers its largest annual print since February 2003”, National Bank of Canada Financial Markets, October 20, 2021.
18. Mark Rendell, “High inflation is ‘transitory but not short-lived,’ says BoC governor Tiff Macklem”, *The Globe and Mail*, November 7, 2021.
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20. El-Erian, “Fed meeting turns into a test of its inflation narrative”.
21. Scott Barlow, “Scotiabank warns of more pain to come for bond investors”, *The Globe and Mail*, November 10, 2021.
22. For example, see the interview comments of a leading Canadian pension fund executive and advisor in Barbara Schecter, “Jim Keohane sees troubling signs in markets, limited options for policymakers”, *Financial Post*, October 7, 2021; and those of award-winning financial journalist Merryn Somerset Webb in her article, “Bonds? Why should we bother?”, *Financial Times*, September 27, 2021.
23. Cited in Somerset Webb, “Bonds? Why should we bother?”.
24. Barlow, “Scotiabank warns of more pain to come for bond investors”, *The Globe and Mail*, November 10, 2021.
25. El-Erian, “Bond sell-off is a warning to the Fed”.
26. Kate Duguid, “US government bond specialists warn of fragility in Fed pullout”, *Financial Times*, October 7, 2021. US Treasury price action and liquidity in October and early November reinforced these concerns. Kate Duguid, “Liquidity drought in Treasury market accompanies unexpected rally”, *Financial Times*, November 9, 2021.
27. See Martin Arnold, “ECB to slow bond-buying as Europe’s economy improves”, *Financial Times*, September 9, 2021; and Stubbington, “Bond investors brace for change of tack by central banks”.
28. Somerset Webb, “Bonds? Why should we bother?”.
29. *Ibid*.