

Quarterly Flip Book

SUMMER 2021

Data as of June 30, 2021

CIO Office



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Q3-2021

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Myths & Reality

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Market Timing in the Long Run



Q3-2021

Myth

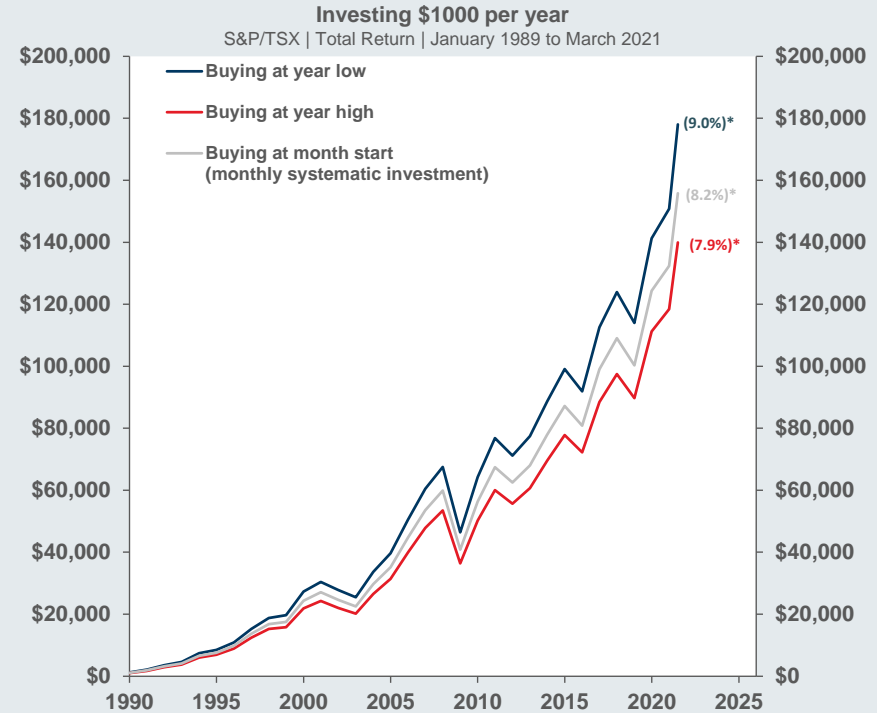
The timing of your annual savings investment is of utmost importance for the well-being of your portfolio in the long run.

Reality

The timing of your annual savings investment will make a difference in the long run, but it is far from being the critical factor many seem to believe.

Case in point: consider an investor blessed with the power of perfect market timing (blue line) compared to another investor cursed with systematically picking the worst possible day to invest each year, over 30 years (red line). In the end, the market timing champion would have outperformed the most unfortunate of all investors by a mild 1.1%/year. If we take the more realistic example of an investor saving systematically at the beginning of each month, this annual outperformance shrinks below 1%.

How is such a small gap possible? Simply because **in the long run, the first year's return is superfluous. What truly matters is the frequency of savings and passage of time, not market timing.**



Reasons to Sell?



Q3-2021

Myth

Selling in times of heightened uncertainty can protect investments from heavy losses.

Reality

Selling in times of heightened uncertainty is generally the best way to ensure heavy losses, as it often rhymes with selling low and missing the rebound.

More importantly, one should keep in mind that **the only certainty is that there will always be uncertainty, as it is the price to pay for capital appreciation in the long run.**

And – need we add – it isn't in the media's best interest to report the latest news with nuance and historical perspective; better to let fear and pessimism easily set in. However, the chart on the right should act as a reminder that letting emotions take over is a good recipe for short-term gain, but long-term pain.

Reasons (not?) to Sell

MSCI World total return since March 9, 2009



Average Return?



Q3-2021

Myth

Since the long-term historical average annual return on the stock market is ~10%, investors should expect to see calendar-year returns near 10%.

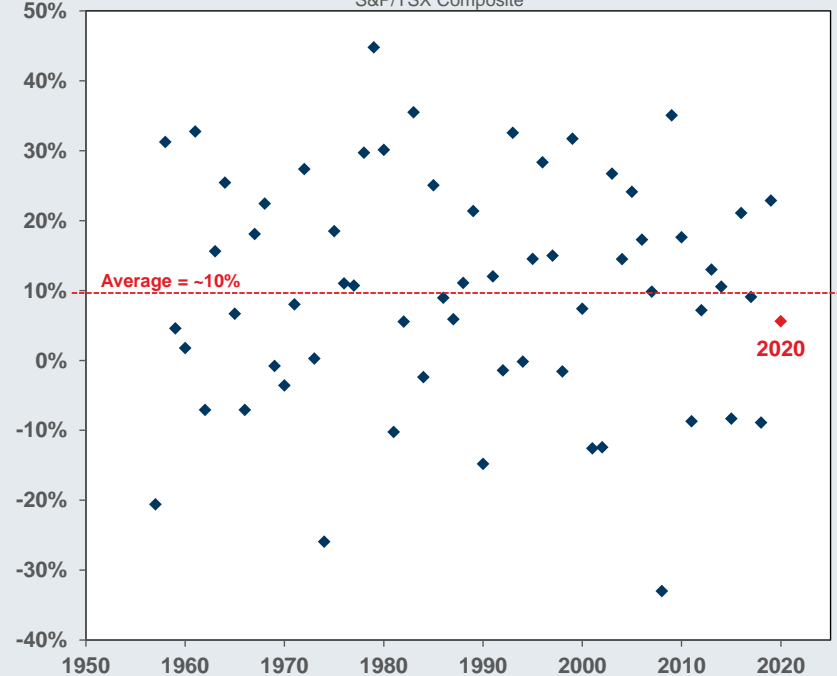
Reality

Quite the contrary, it is likely that **investors will only rarely see a calendar year where equity returns are close to their long-term historical averages.** Case in point: since 1957, only 8 years out of 63 have seen the Canadian stock market generate performance near average (+/- 2%).

One likely reason for this myth is the common misconception that “average” is synonymous with “typical.” However, there is no such thing as a “typical” year in the stock market.

As a result, investors should expect a wide range of possible outcomes in any given year, whereas only the passage of time can lead to an annualized return near the market’s long-term average.

Equity market calendar year total return: 1957 - 2020
S&P/TSX Composite



Equity Performance in the Long Run



Q3-2021

Myth

Investing in the stock market is akin to gambling at a casino.

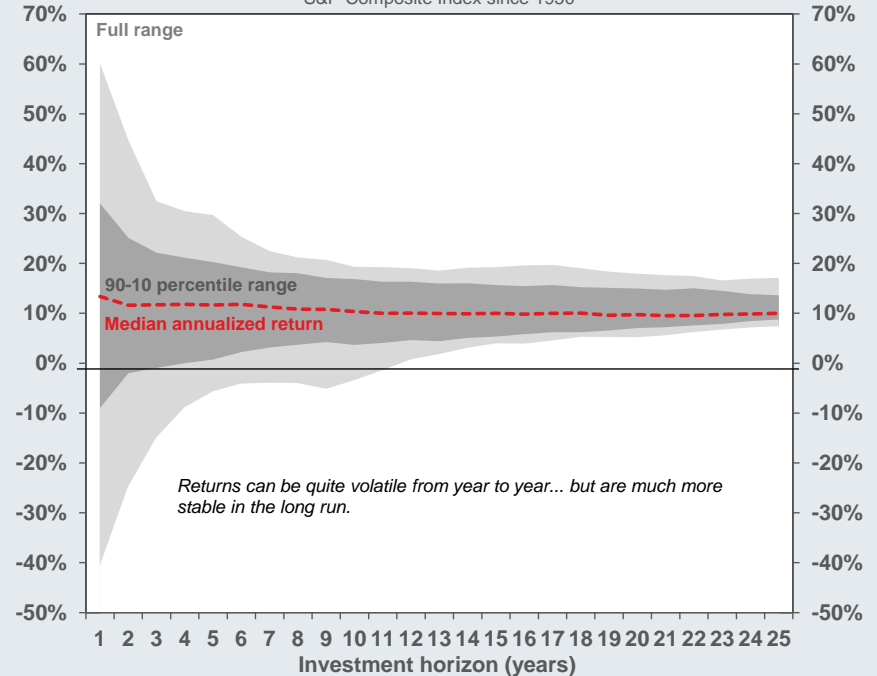
Reality

It is true that daily market fluctuations resemble a coin toss (see [page 35](#) for further details on this subject). Nevertheless, two fundamental reasons make investing completely different from gambling.

First, unlike the world of gambling, investing in the stock market is not a zero-sum game, as evidenced by the positive median annualized return (red dotted line). In the long run, equity returns come from companies' ability to grow their earnings, not from other investors' misfortune.

Second, while gambling remains just as uncertain no matter how long you “play”, the opposite occurs within equity markets, as evidenced by the narrowing range of outcomes over time (grey area). The longer one “plays” (i.e. remains invested), the greater the chances are of converging towards the premium investors earn for bearing equity risk.

Equity annualized total return over different investment horizons
S&P Composite Index since 1950



Dollar Cost Averaging or Lump Sum?



Q3-2021

Myth

Investors contemplating investing a large amount (e.g. an inheritance) are better off spreading their entry over time (dollar cost averaging) rather than committing the full amount immediately (lump sum).

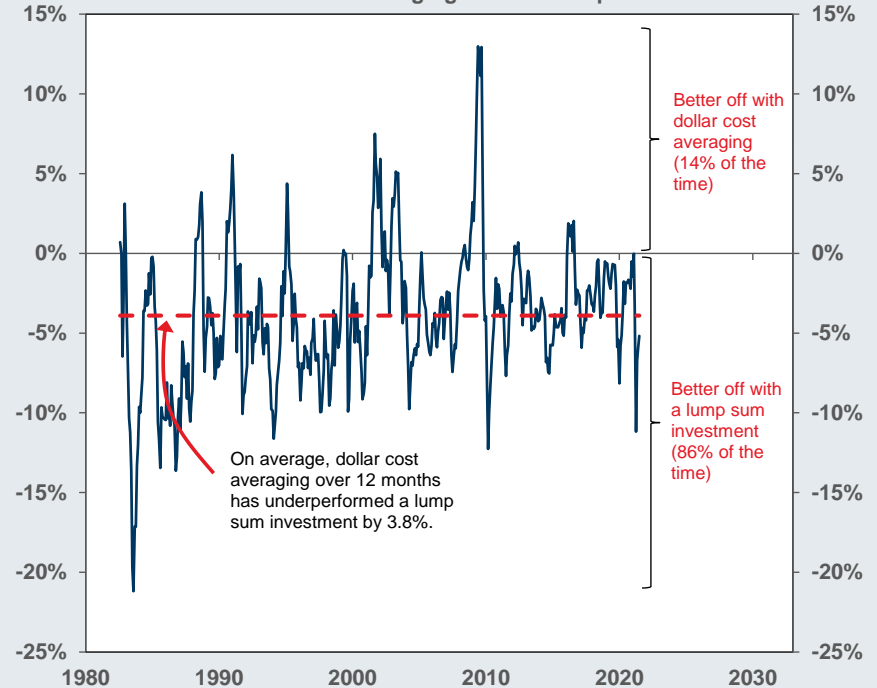
Reality

It depends. But since 1980, **you would have been better off investing the full amount right away 86% of the time**, while the decision to split the investment evenly over twelve months would have cost an average of 3.8% in lost returns. This simple study assumes a portfolio* evenly balanced between Canadian bonds and global equities.

Of course, no one wants to put money to work right before a market correction, this myth being a prime example of one of the most well documented behavioural biases in finance: loss aversion.

Yet, think of it this way. Would you invest in a strategy that loses 8 times out of 10 and by an average of 3.8%? After all, these are the historical properties of dollar cost averaging.

How often has dollar cost averaging beaten a lump sum investment?



Home Country Bias



Q3-2021

Myth

It is more prudent to invest most of your portfolio in companies domiciled at home and thus of greater familiarity than to “risk it” with foreign corporations.

Reality

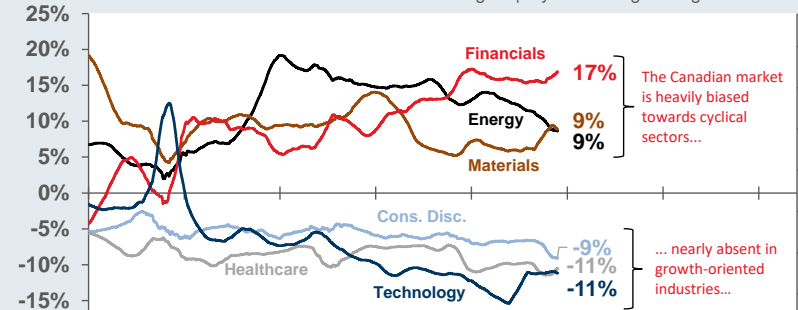
While predominantly investing in domestic equities might seem sufficient and feel comforting, **such a portfolio could, in fact, be just the opposite. Do not confuse familiarity with safety.**

For instance, Canada’s stock market’s high concentration in some of the most cyclical sectors and its relative lack of growth-oriented companies poses a risk that can result in unpleasant surprises if left undiversified.

The good news is that there are plenty of opportunities abroad to complement for such risks. After all, Canadian stocks only represent 3% of the global equity investment universe... a far cry from the ~45% they account for in Canadians’ portfolios*. Home bias indeed!

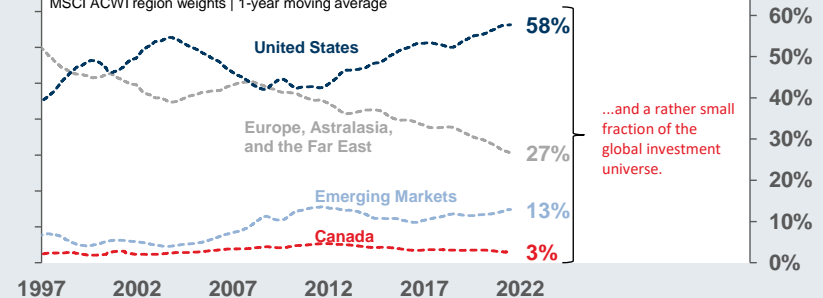
Sector allocation spread - Canadian vs. World Equities

S&P/TSX less MSCI ACWI sector weights | 1-year moving average



Share of world equities

MSCI ACWI region weights | 1-year moving average



Should Investors Fear Recessions?



Q3-2021

Myth

Investors should be fearful of recessions as they entail heavy financial losses.

Reality

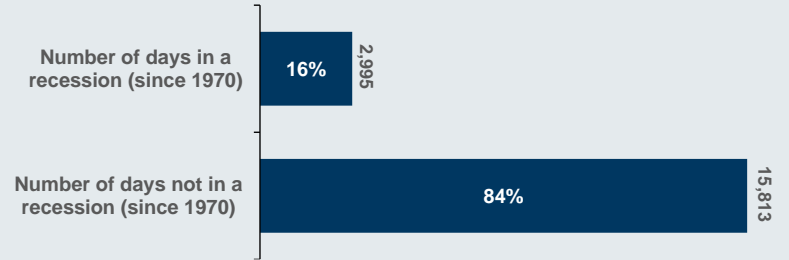
It is true that the most turbulent periods for markets are generally concomitant with recessions. As such, those with eyes riveted on daily stock exchange prices are very likely to experience fear in times of economic downturn.

However, if we step back from market fluctuations and look, rather, at the historical performance of a basic balanced portfolio* during the last six recessions, we see that **the average return was actually zero**. Not something to celebrate, but far from the financial catastrophe many seem to believe – especially when we consider returns in the previous and following years. What's more, let's not forget that recessions are relatively rare events, covering only 15% of the last 50 years.

Therefore, **it is not the recession that investors should fear, but fear itself...** or rather the risk of materializing heavy losses, when in the grip of emotion, at an untimely moment.

Balanced portfolio (60/40)* total return

| Recessions (NBER) | 12-months Before | During Recession | 12-months After | Full period** |
|---------------------|------------------|------------------|-----------------|---------------|
| Nov 1973 - Feb 1975 | 7% | -7% | 12% | 11% |
| Jan 1980 - Jun 1980 | 11% | 9% | 7% | 31% |
| Jul 1981 - Oct 1982 | 9% | 15% | 26% | 57% |
| Jul 1990 - Feb 1991 | 4% | 6% | 9% | 21% |
| Mar 2001 - Oct 2001 | -1% | -5% | -8% | -14% |
| Dec 2007 - May 2009 | 1% | -16% | 9% | -8% |
| Feb 2020 - ? | 16% | - | - | - |
| Average | 7% | 0% | 9% | 16% |



Are GICs a Risk-Free Alternative?



Q3-2021

Myth

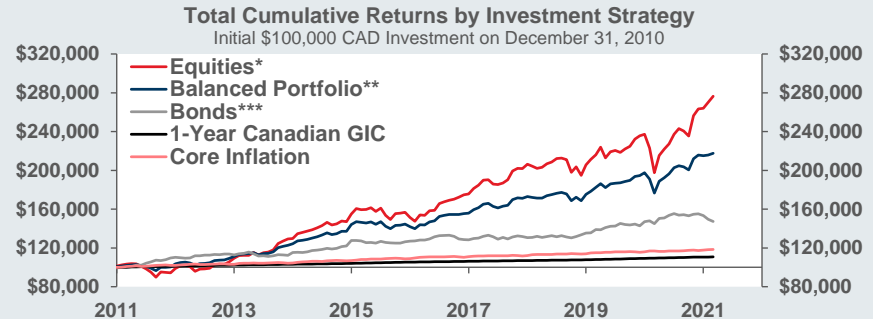
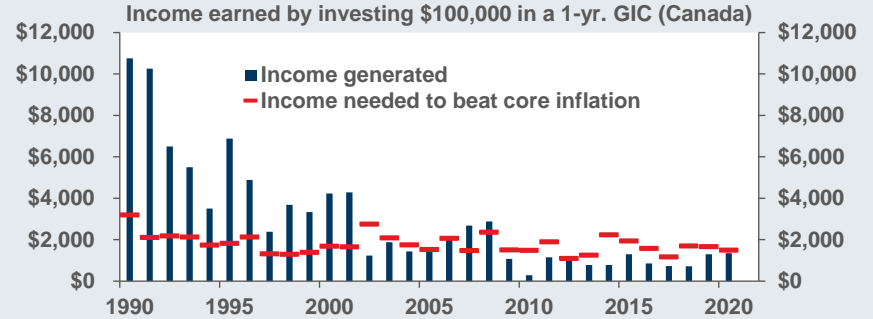
Guaranteed Investment Certificates (GICs) offer a risk-free alternative for investors seeking to at least preserve the purchasing power of their assets.

Reality

GICs are indeed among the safest investment vehicles available. However, their returns, while guaranteed, generally fail to cover inflation, leaving their holders at risk of seeing their purchasing power decline over time.

It should be specified that this observation is a reflection of the low interest rate environment prevailing over the past several years. For instance, although a 1-year GICs provided income above inflation in the 1990s, this has not been the case since 2009.

Ultimately, the selection of an investment vehicle depends on risk tolerance - GICs may therefore be the right choice for some. However, **a key risk for investors whose investment horizon is measured in years may not be the short-term volatility of other assets, but rather the potential erosion of their purchasing power over the long run.**



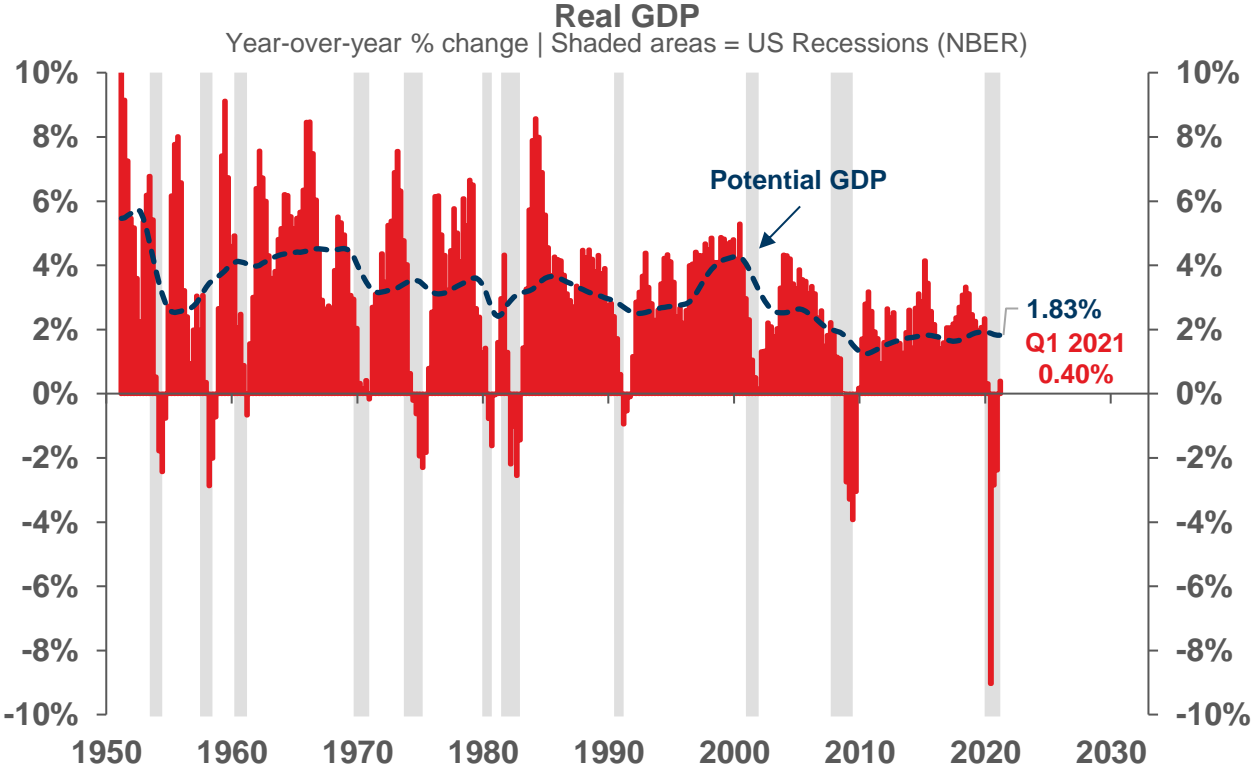
Economy

Q3-2021

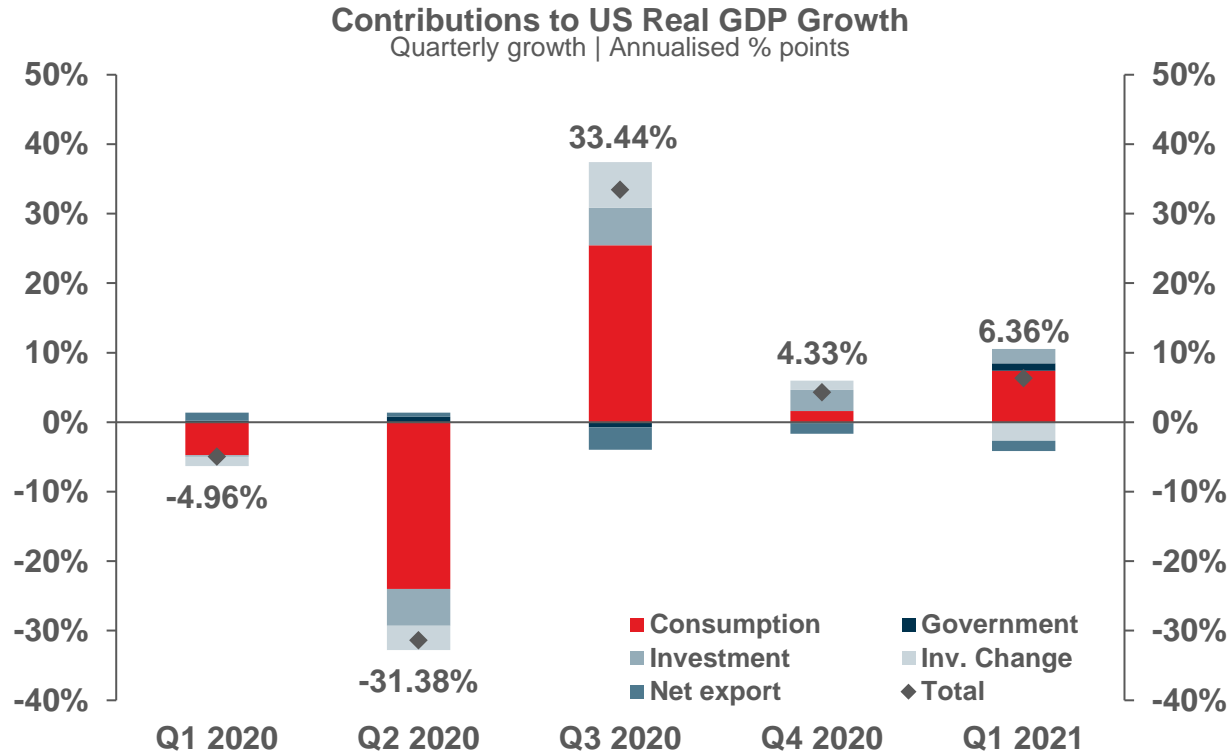
CIO Office



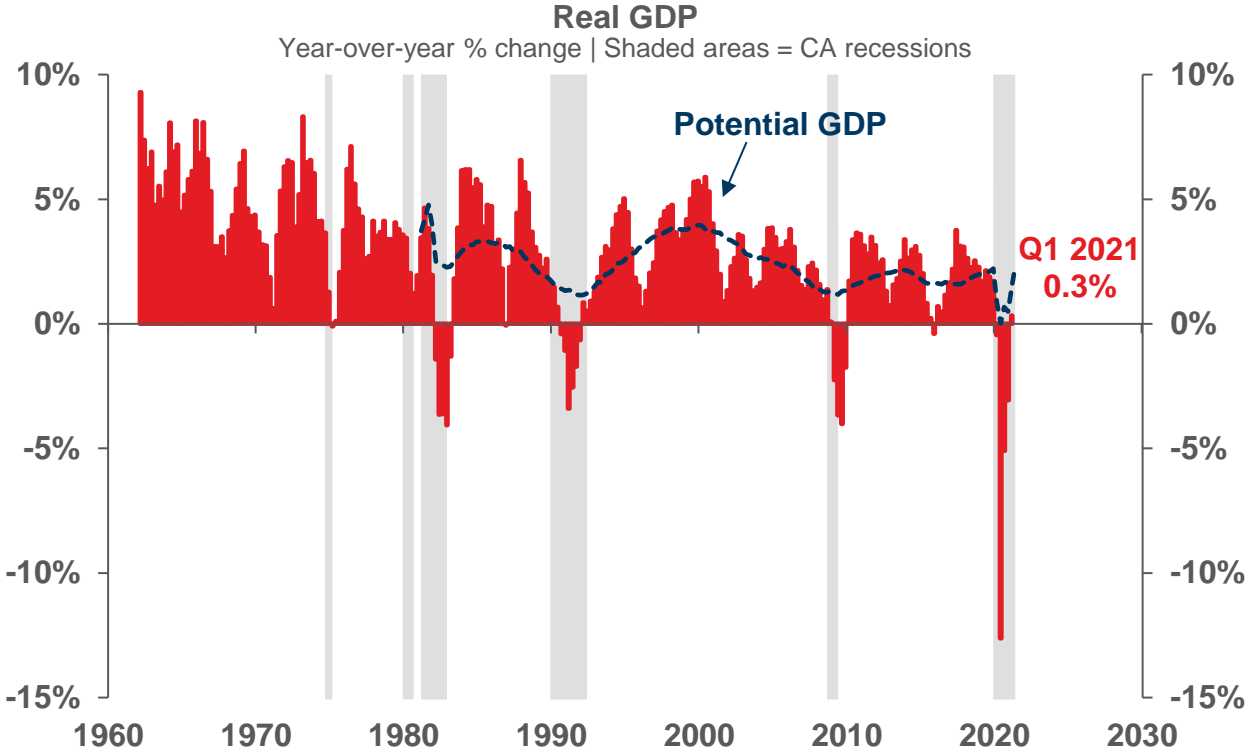
Historical US Economic Growth



Recent US Economic Growth



Historical Canadian Economic Growth

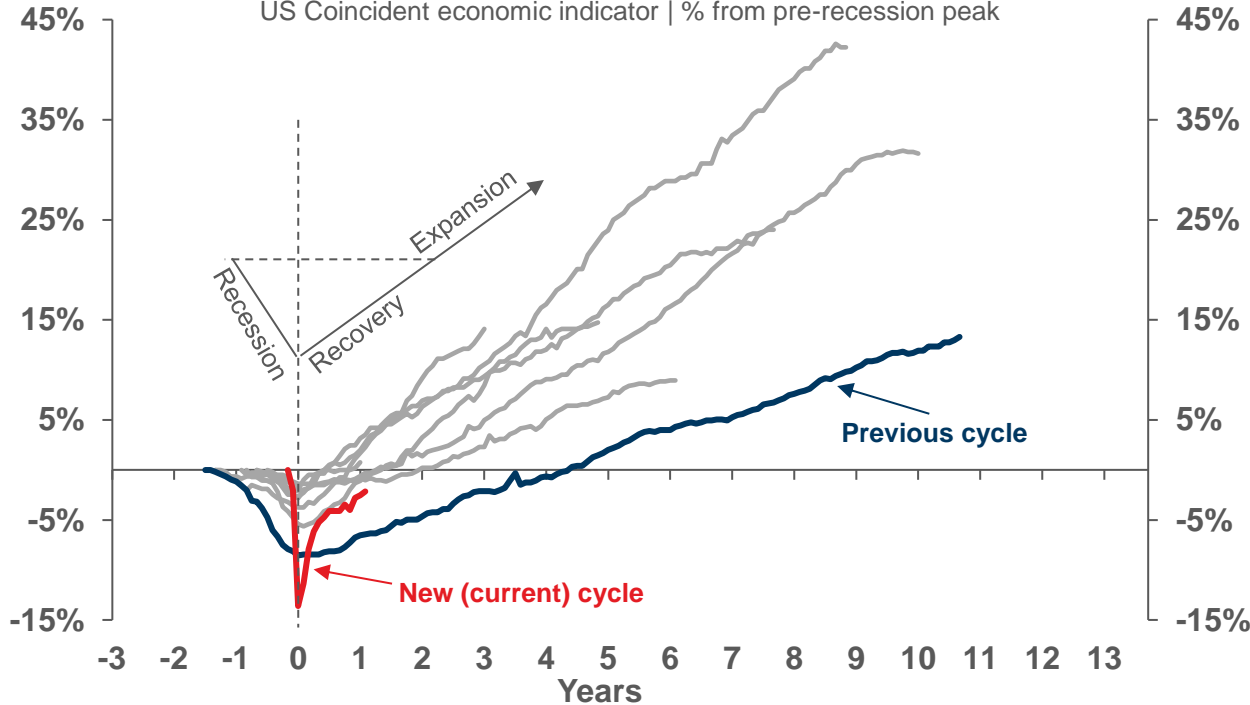


US Economic Cycles



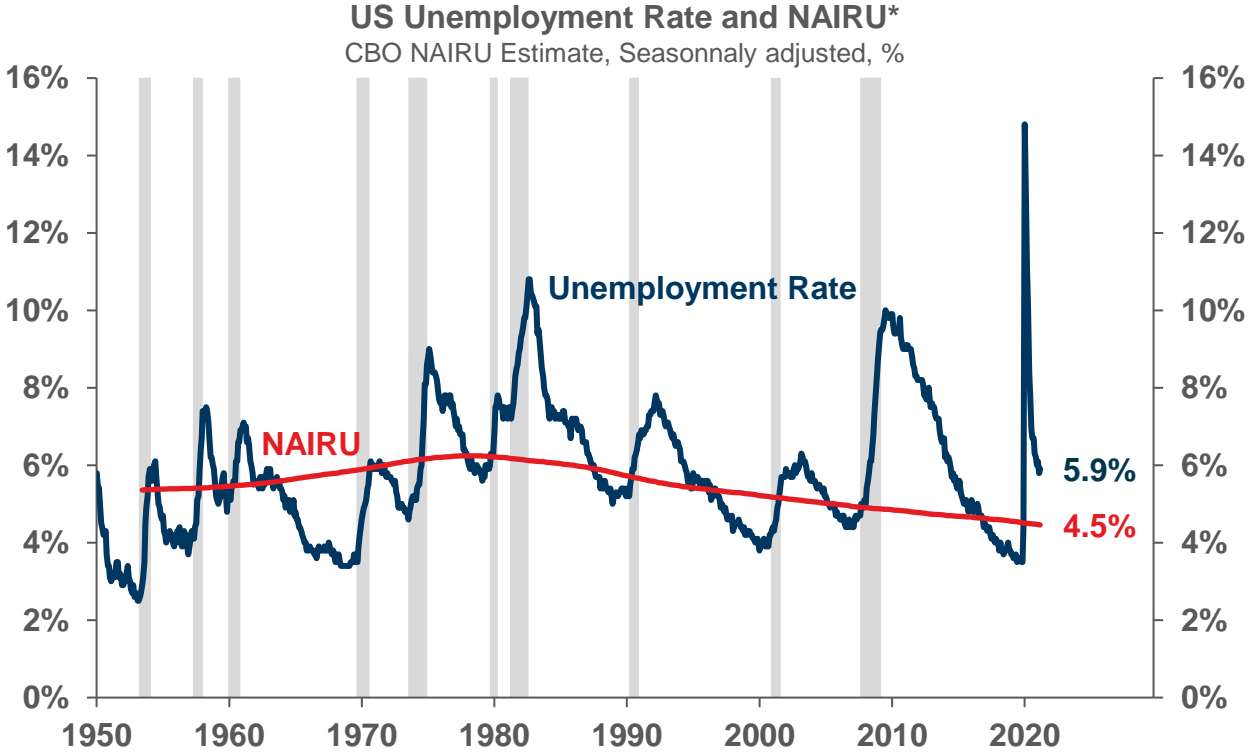
Normalized US economic cycles

US Coincident economic indicator | % from pre-recession peak

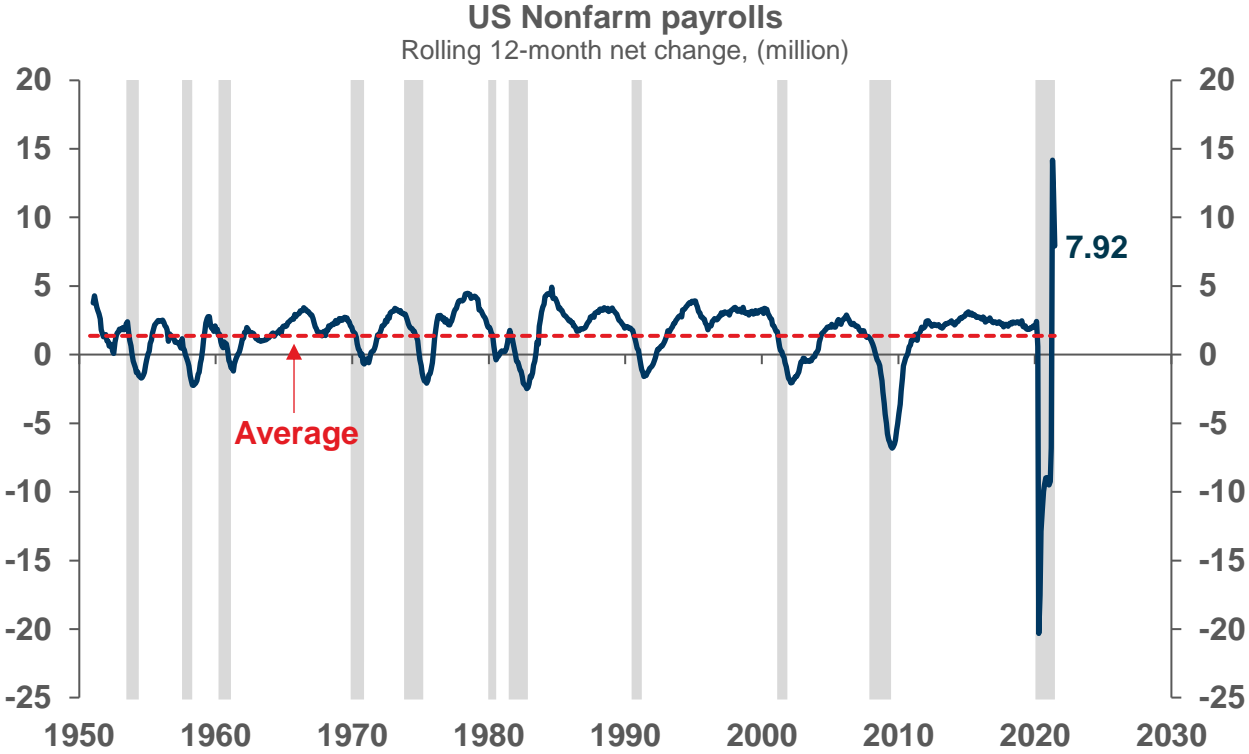


The current cycle began in February 2020, at the peak of the previous cycle. The recent economic rebound indicates that the recession phase is probably already over, making it one of the deepest and shortest in history.

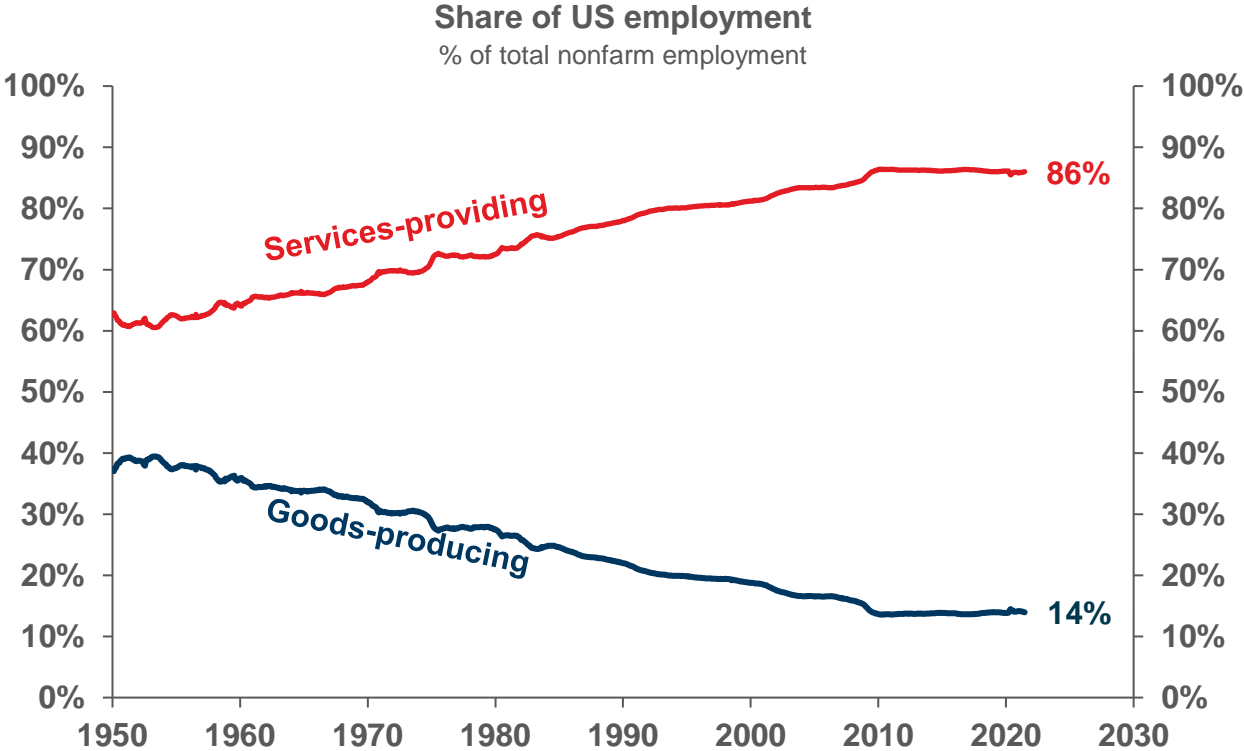
US Unemployment Rate



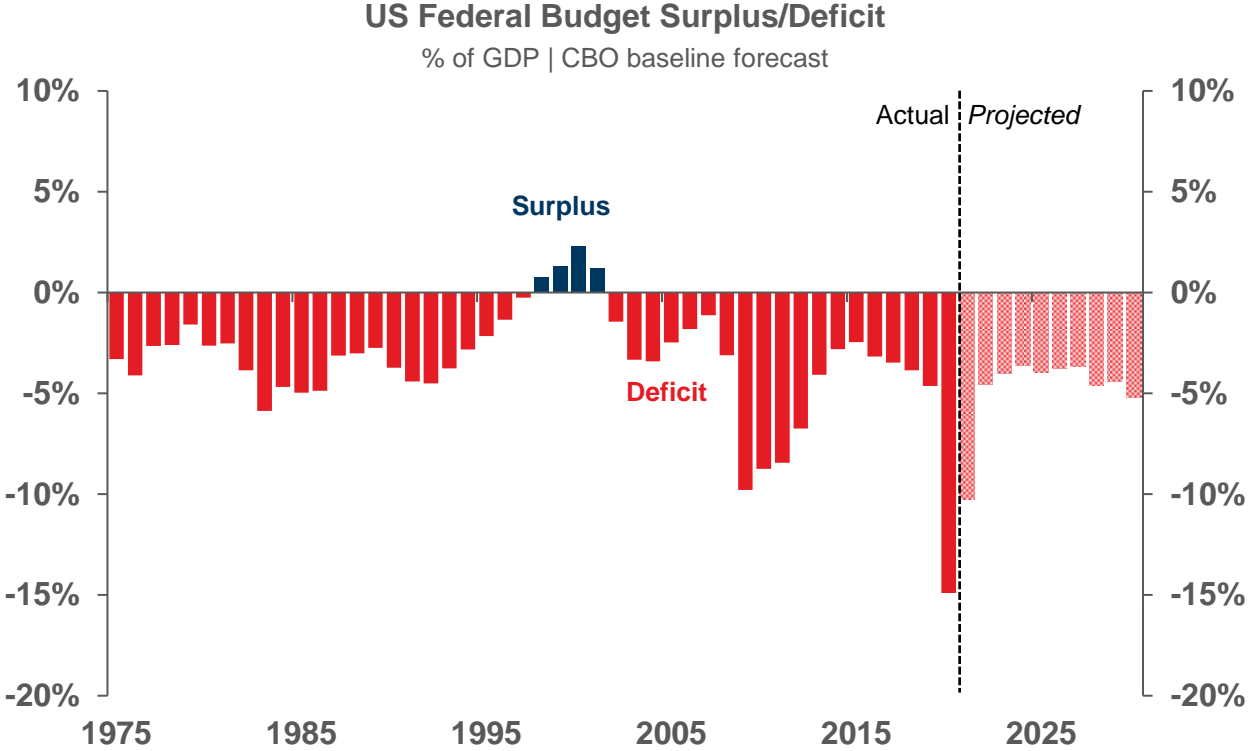
US Labour Market – Payrolls



US Labour Market – Employment Sector



US Federal Finances – Surplus & Deficits

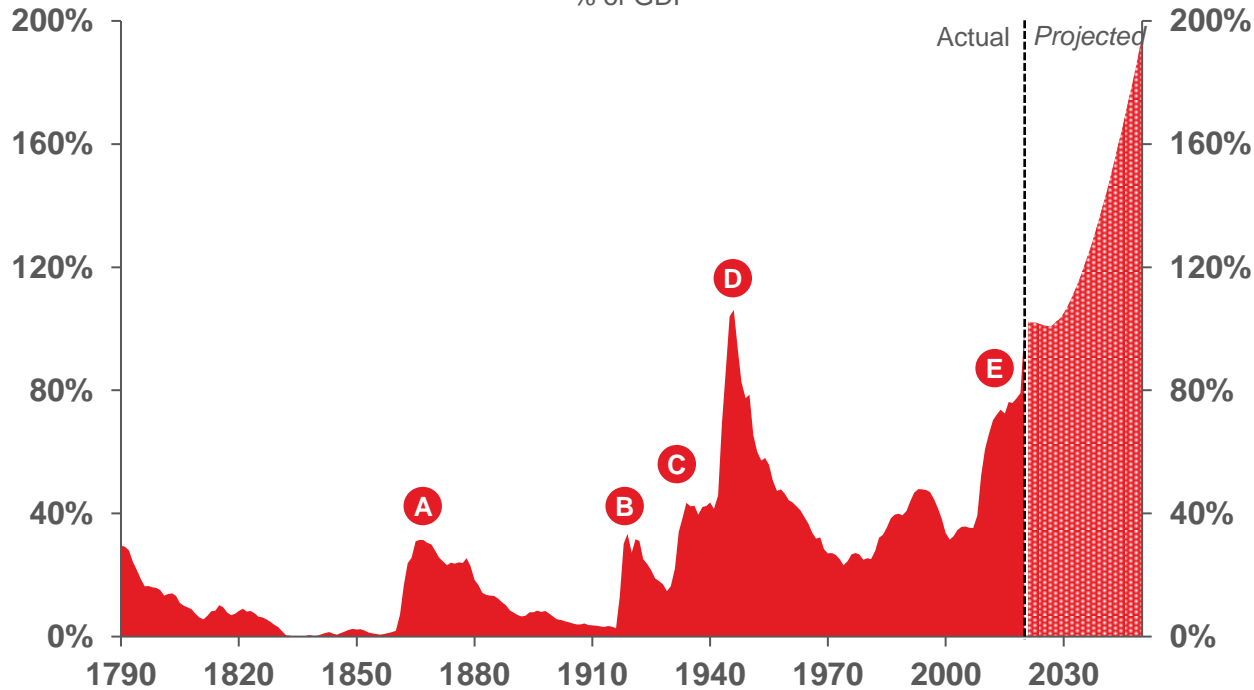


US Federal Finances – Debt Held by the Public



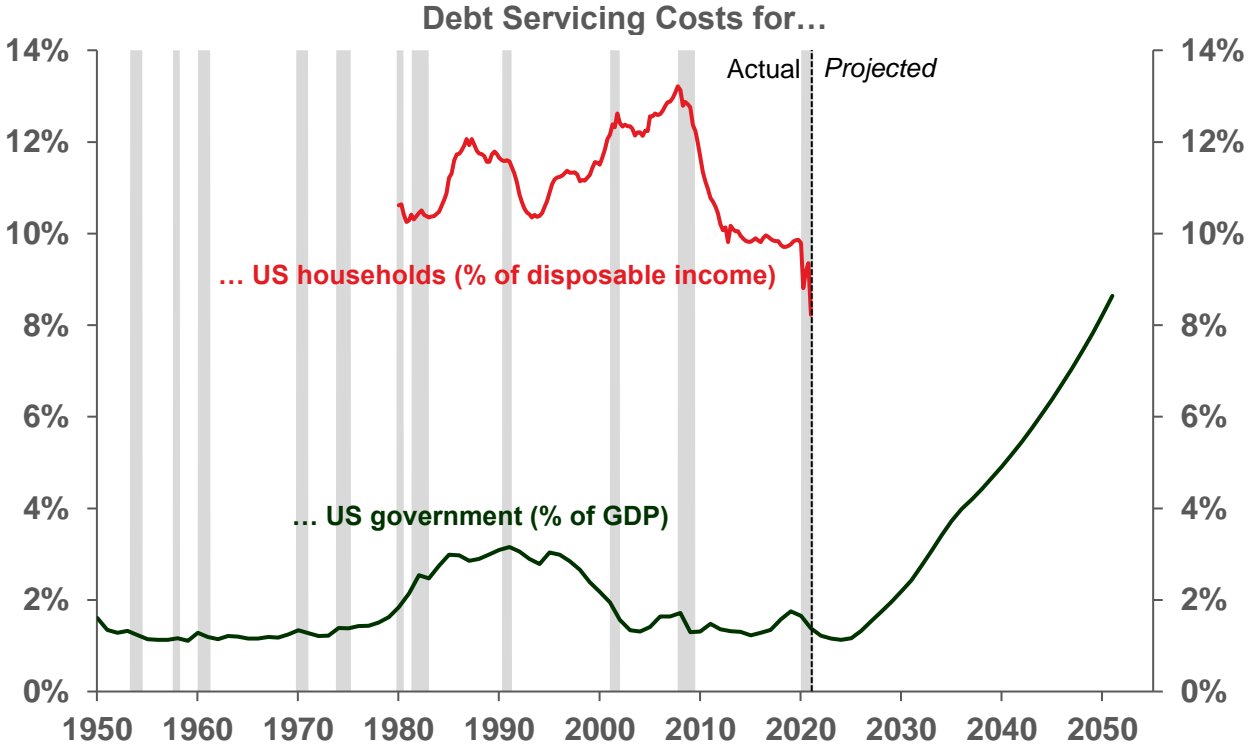
250 Years of Federal Debt Held by the Public

% of GDP



- A** Civil War
- B** World War I
- C** Great Depression
- D** World War II
- E** COVID-19

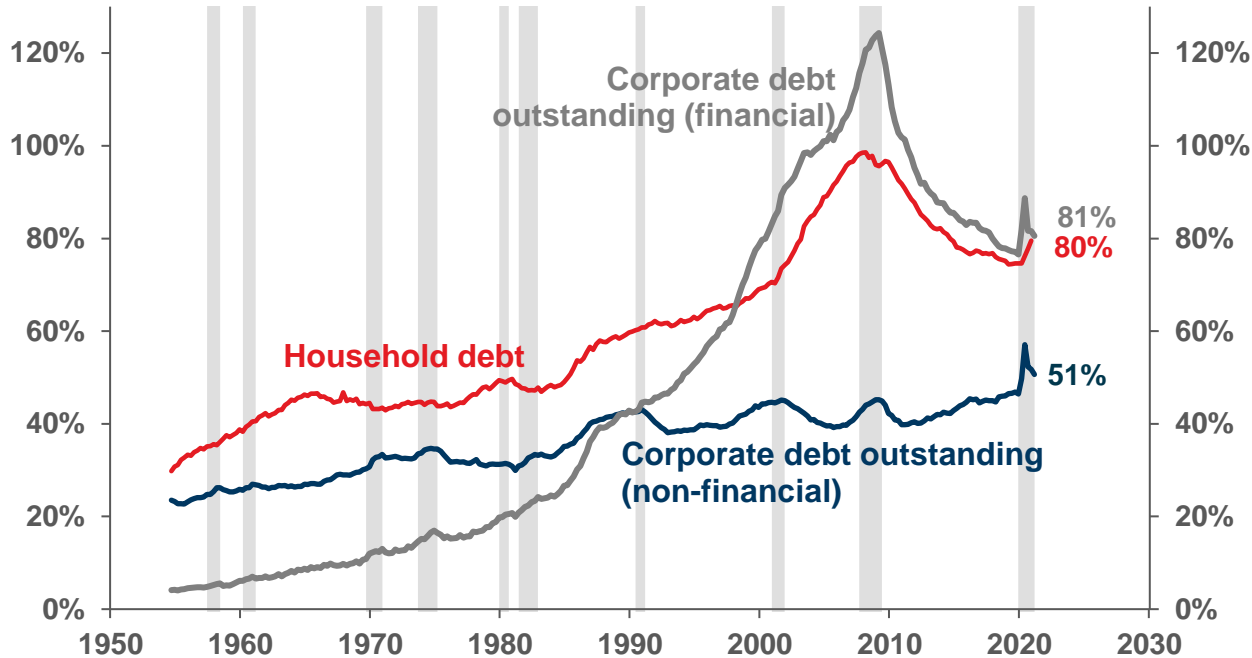
Cost of Debt in the US



US Corporate and Household Debt



US Corporate and Household Debt
In % of GDP



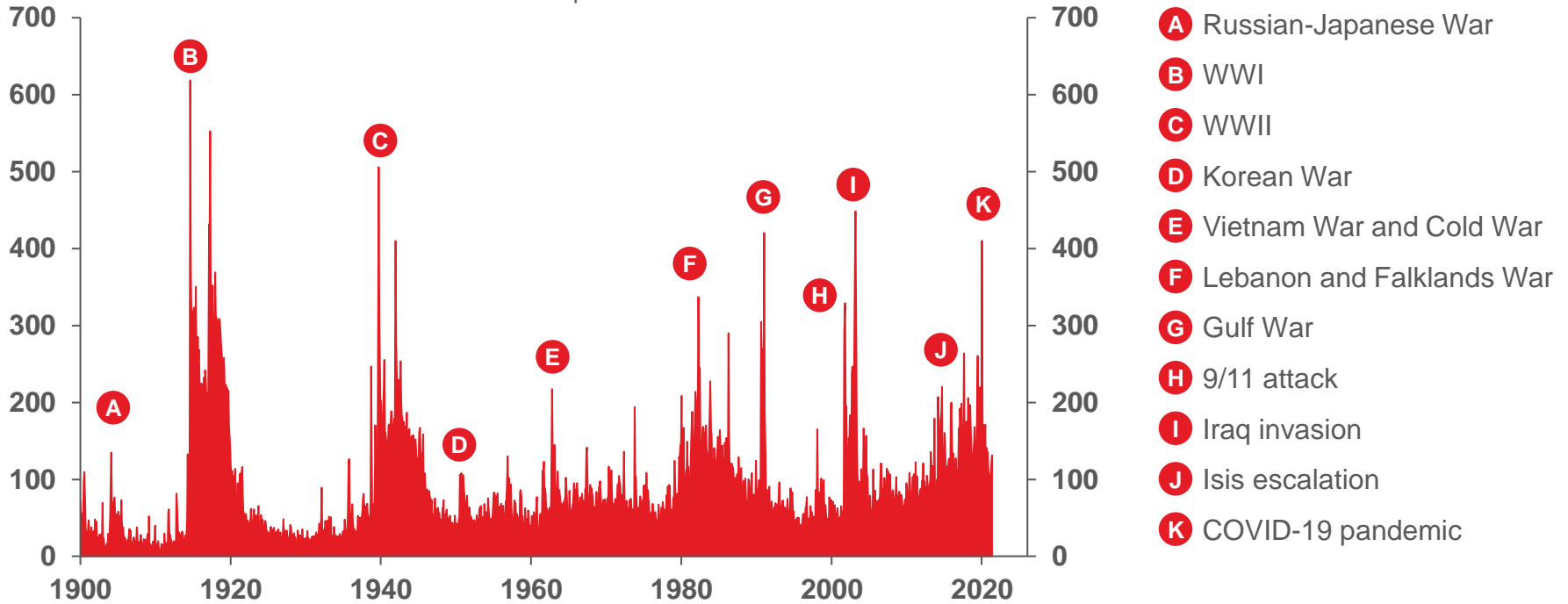
US households and financial corporations had significantly de-leveraged over the last decade...

... but COVID-induced lockdowns pushed both to re-capitalise quickly and significantly.

Risk and Uncertainty – Geopolitical Risk



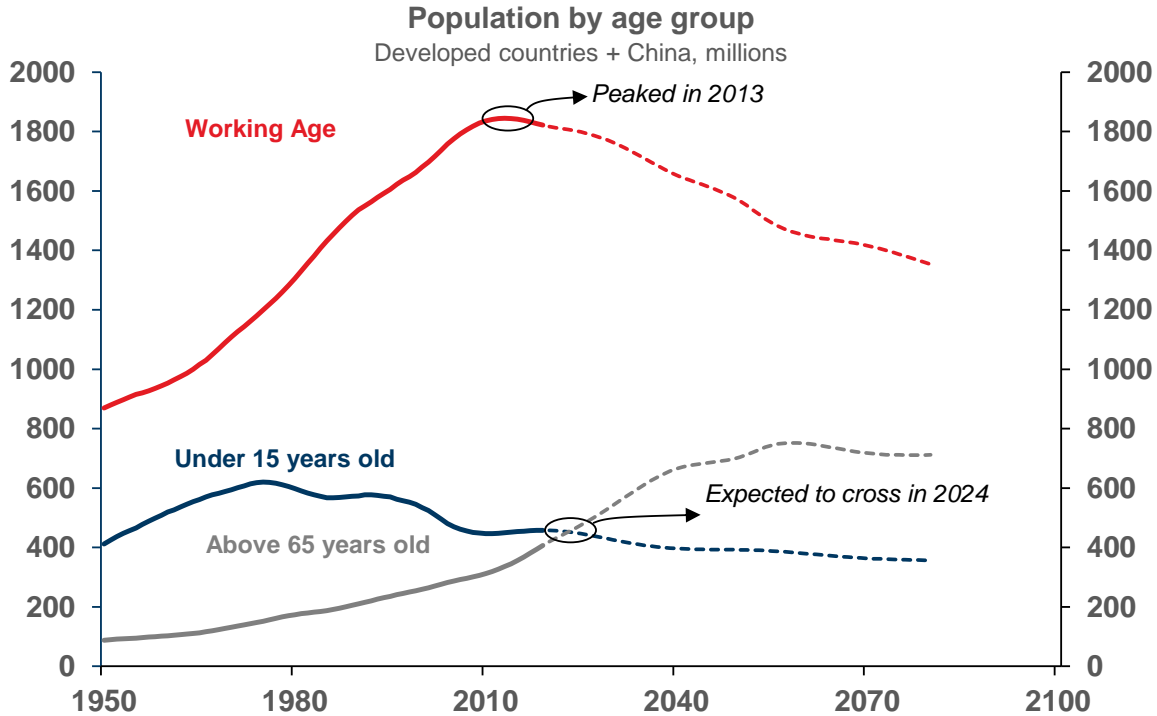
Geopolitical risk since 1899
Matteo Lacoviello Geopolitical Risk Index



Risk and Uncertainty – Economic Policy Uncertainty



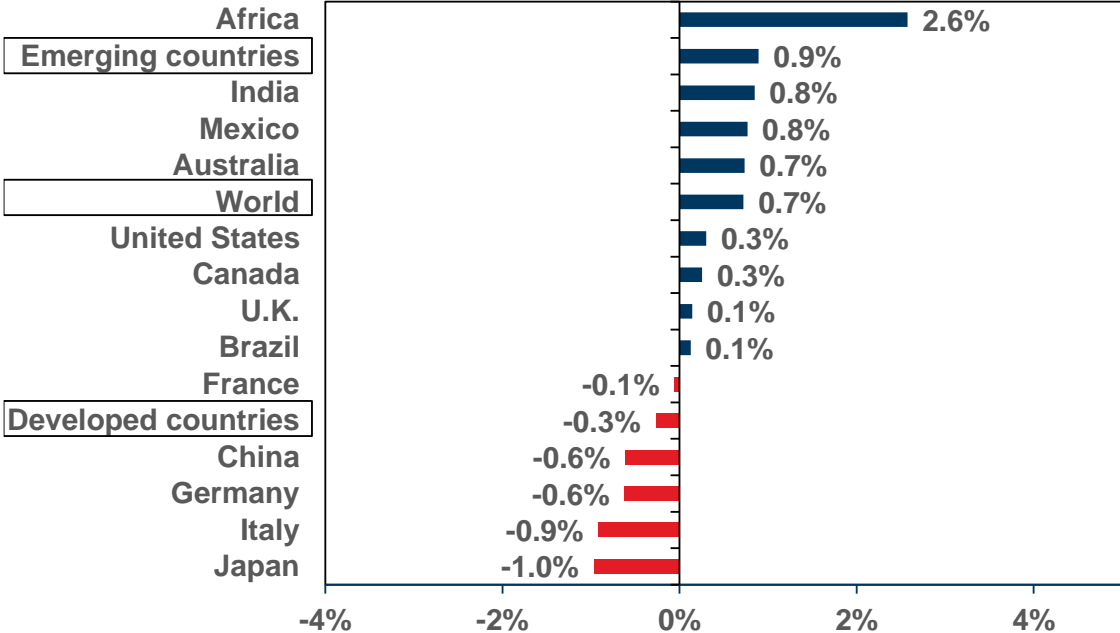
World Demographics – Age Group Trends



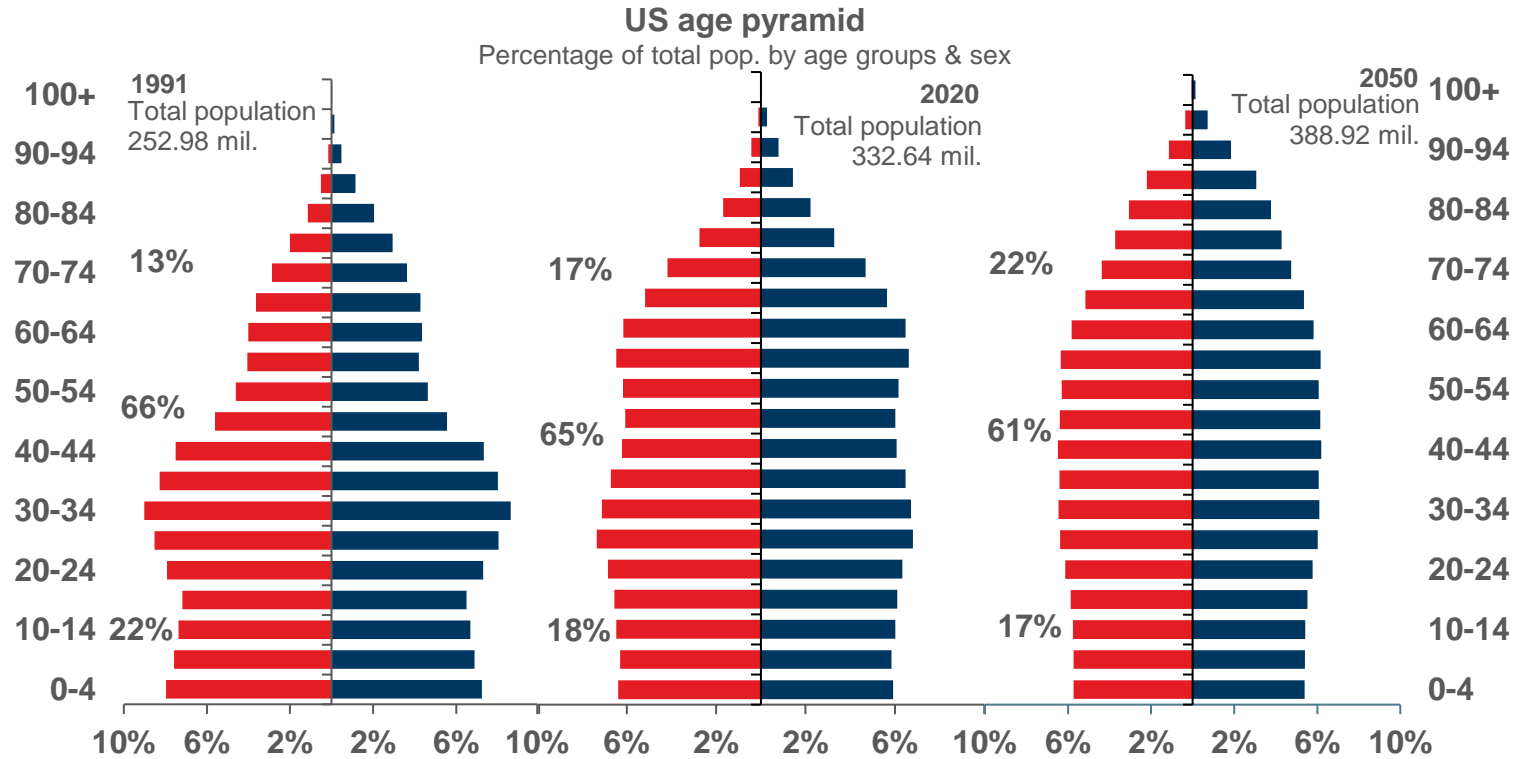
World Demographics – Geographical Breakdown



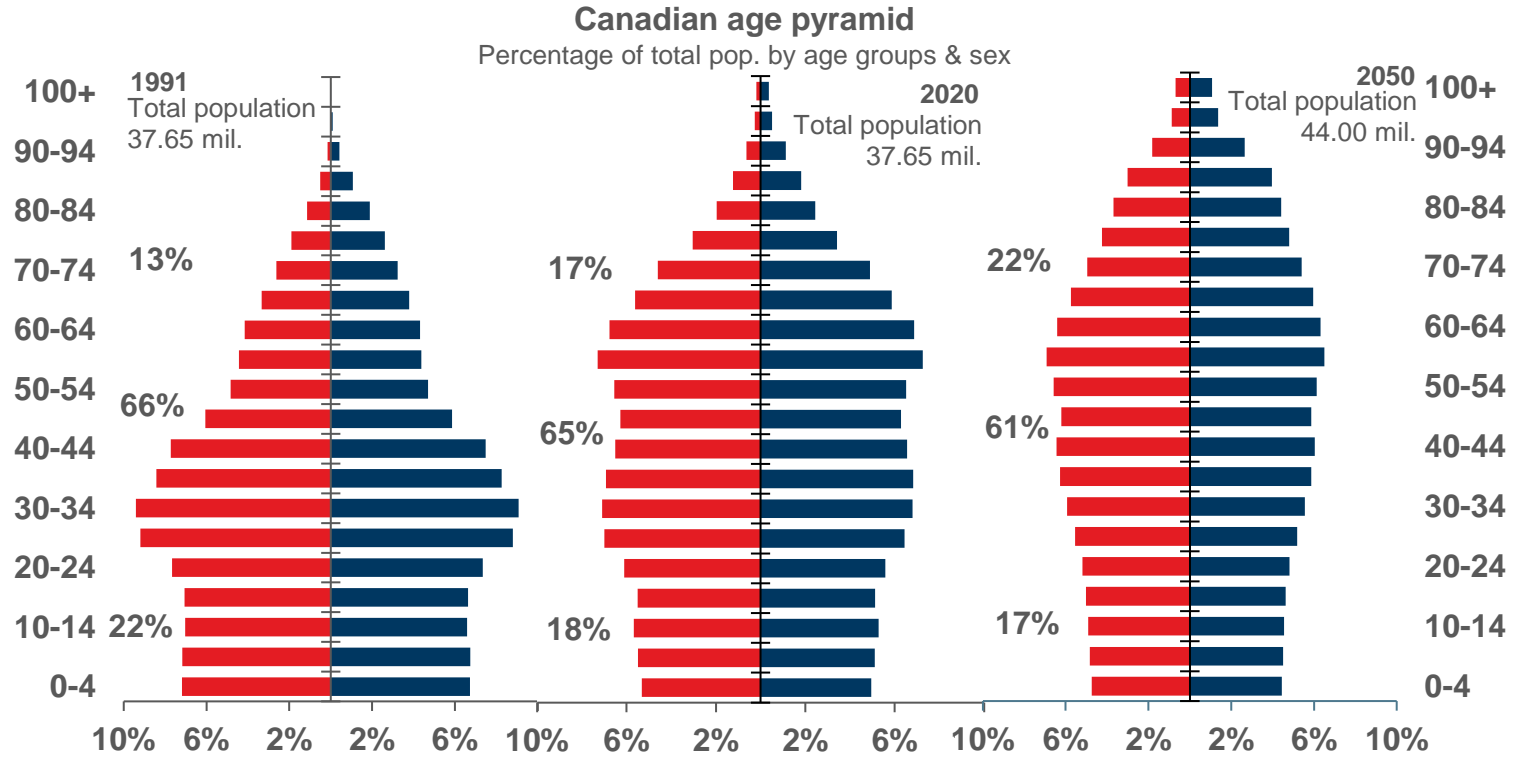
Working age population growth
Expected annualized growth over the next 25 years



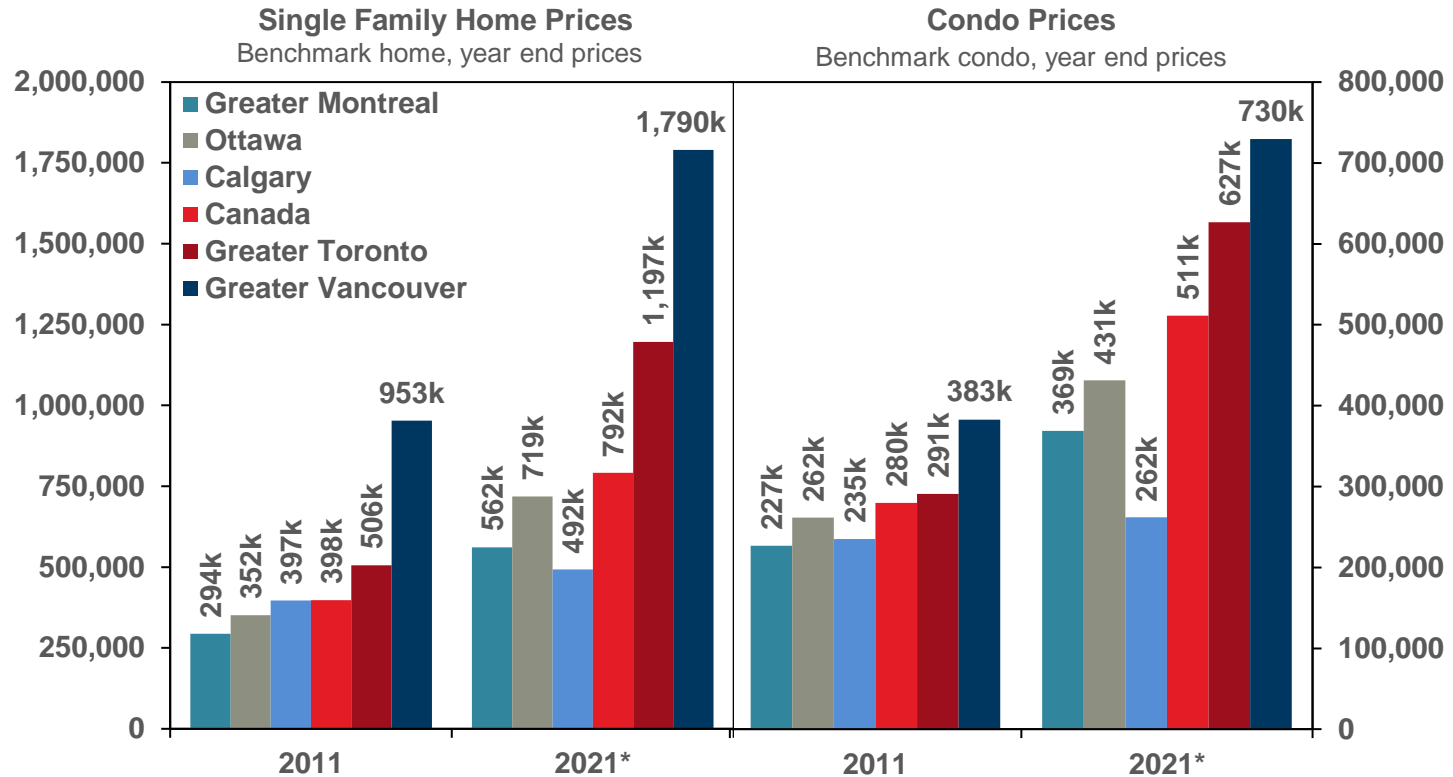
US Demographics



Canadian Demographics



Canadian Residential Real Estate



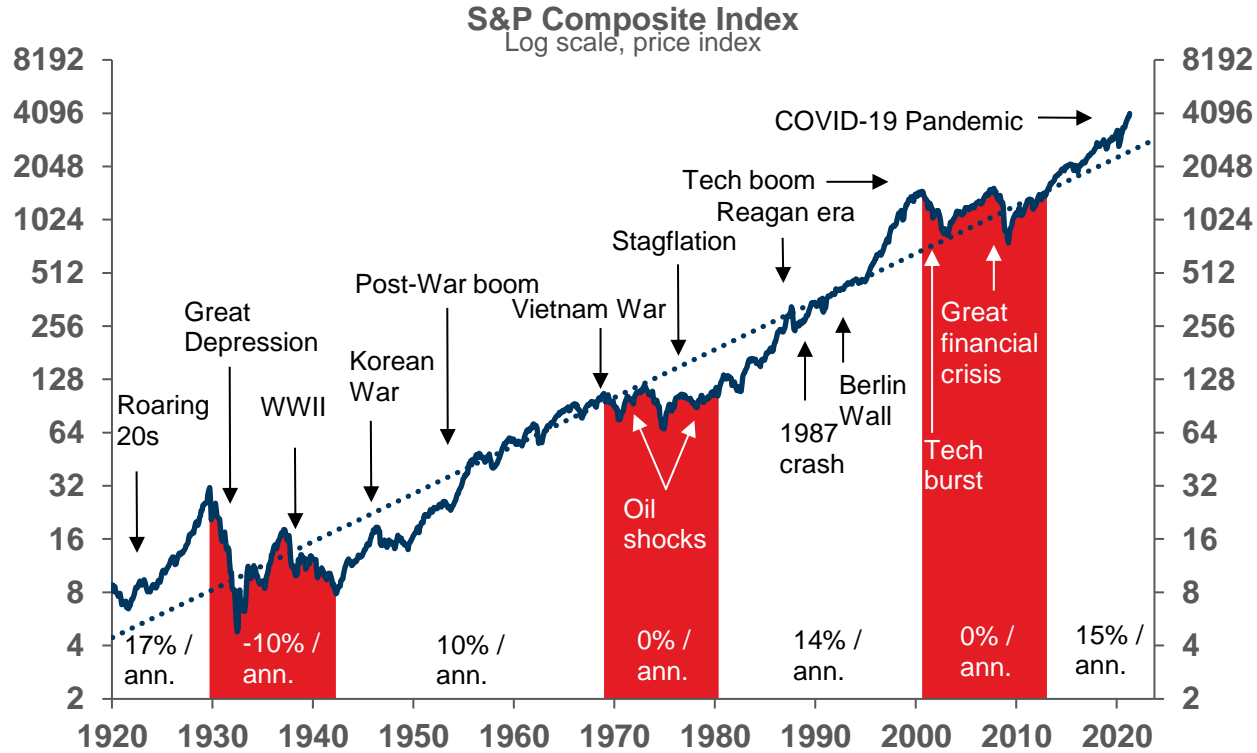
Equities

Q3-2021

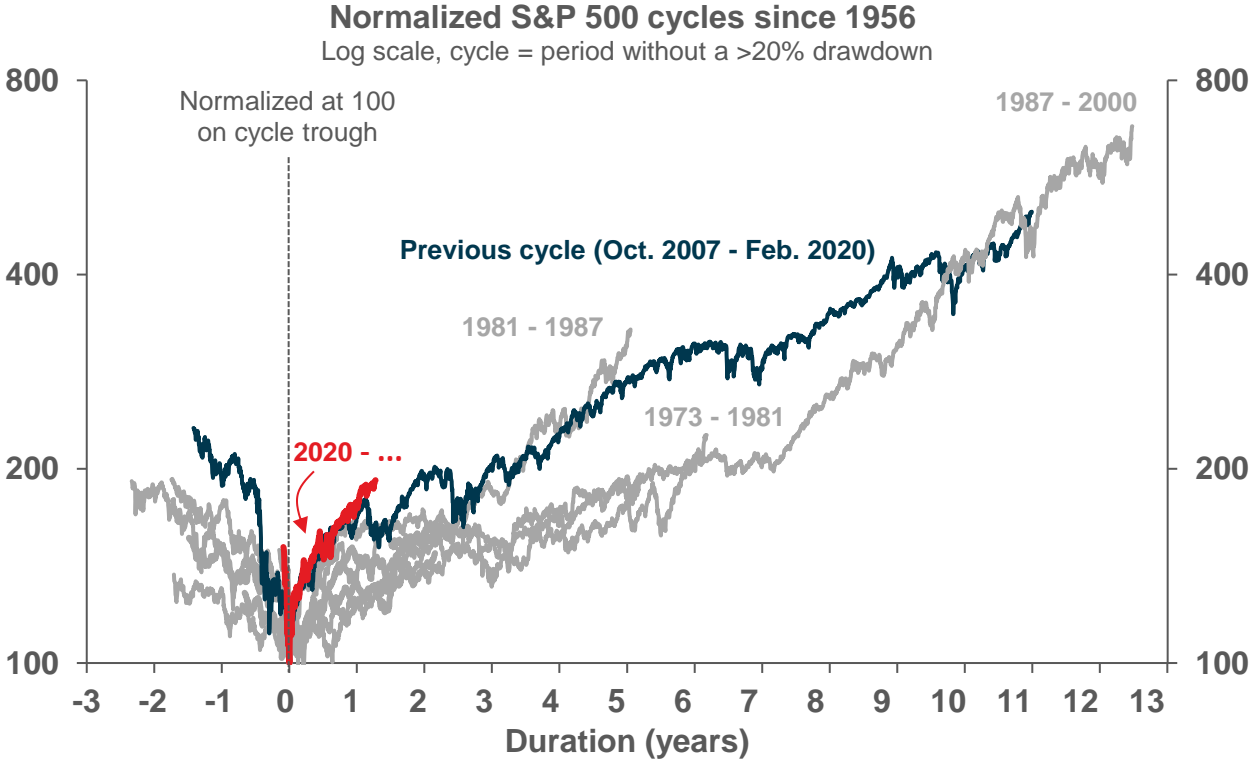
CIO Office



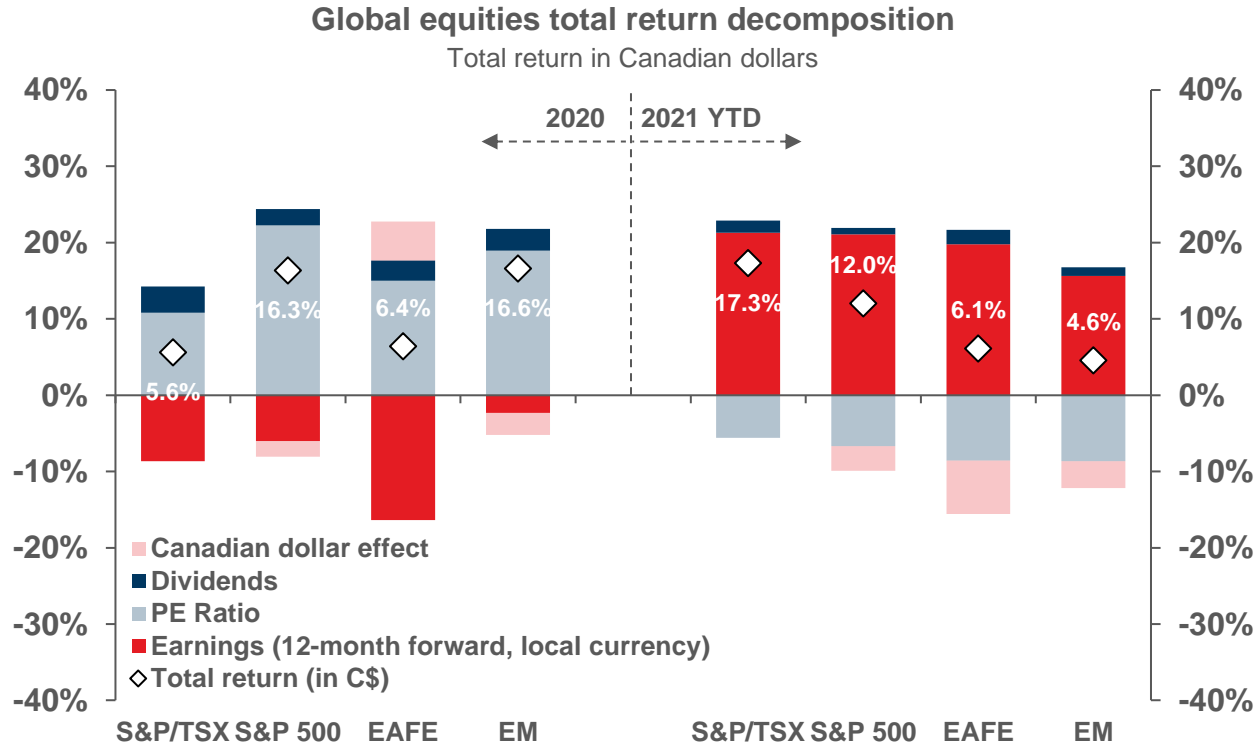
US Equity Market since 1920



US Equity Market Cycles



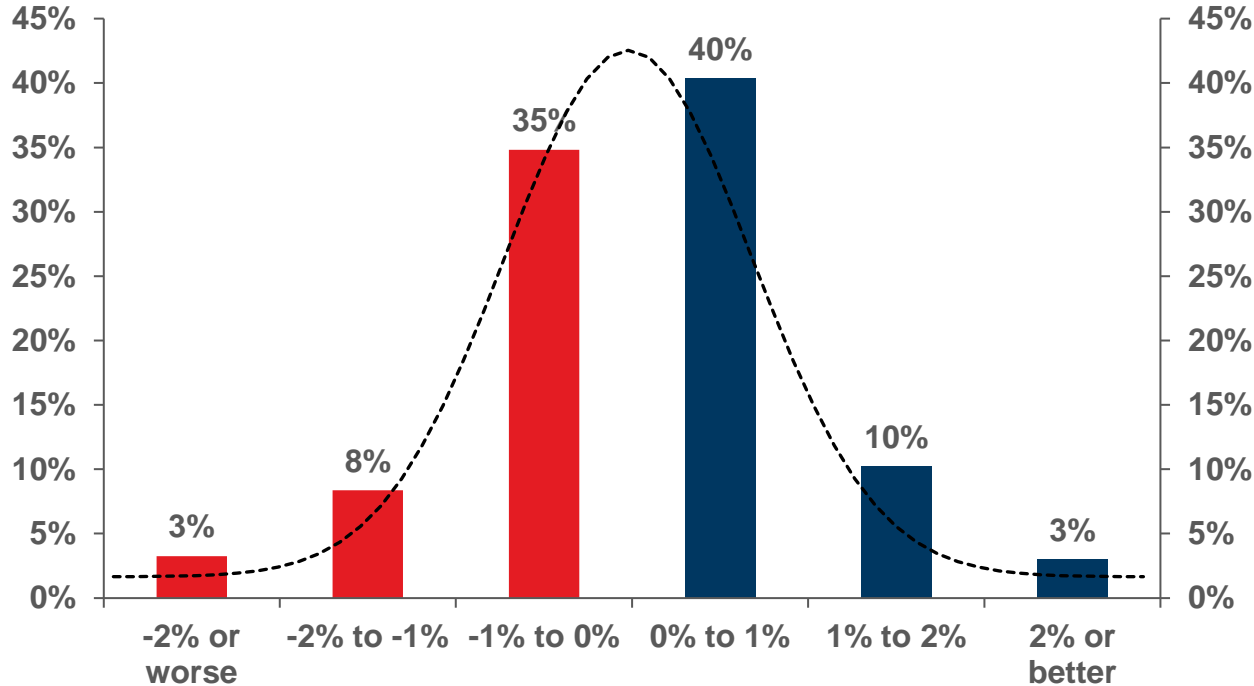
Decomposition of Equity Returns



Daily Stock Market Fluctuations



Distribution of daily S&P 500 fluctuations
S&P 500 index over the last 40 years

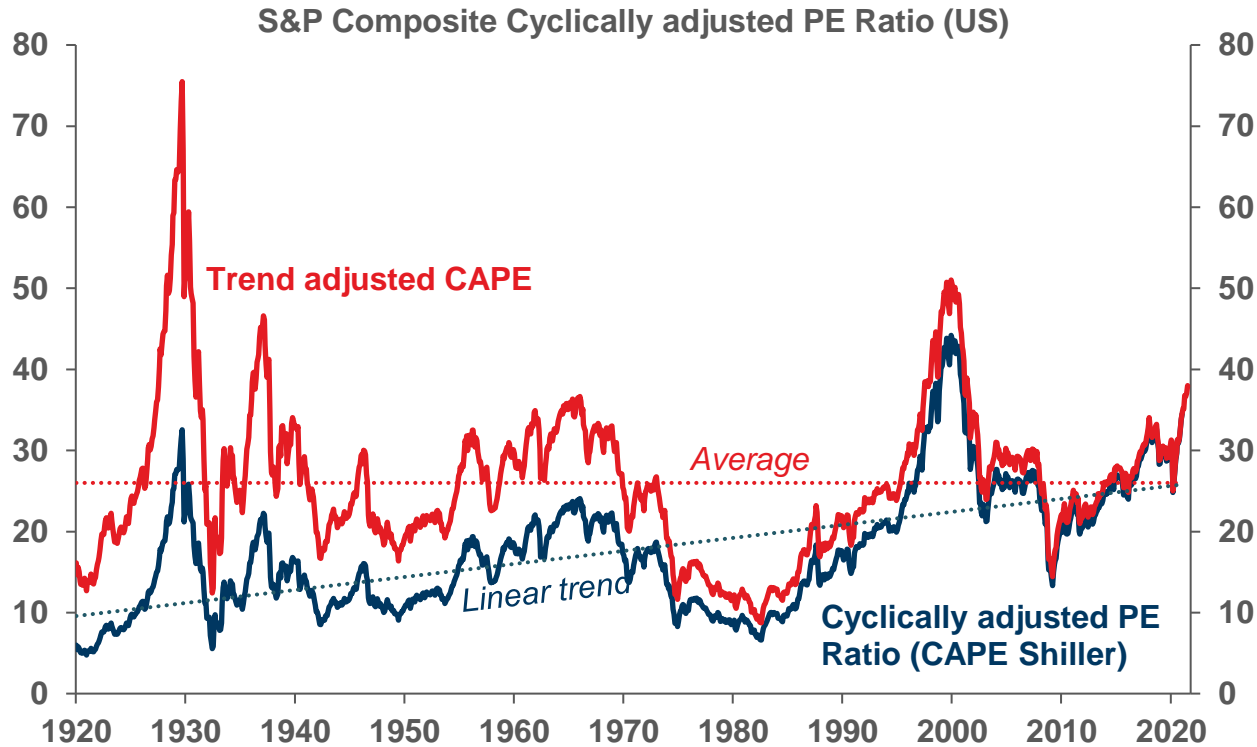


Market fluctuations are normal, both mathematically* and literally. While only the few "extremes" end up in the evening news and morning shows, the truth is they don't matter all that much.

What really matters is the accumulation of "0% to 1%" days that rarely make the headlines, but explain much of the 12.3% S&P 500 annualized total return over the last 40 years...

...despite the fact that the index closes in the red almost every other day.

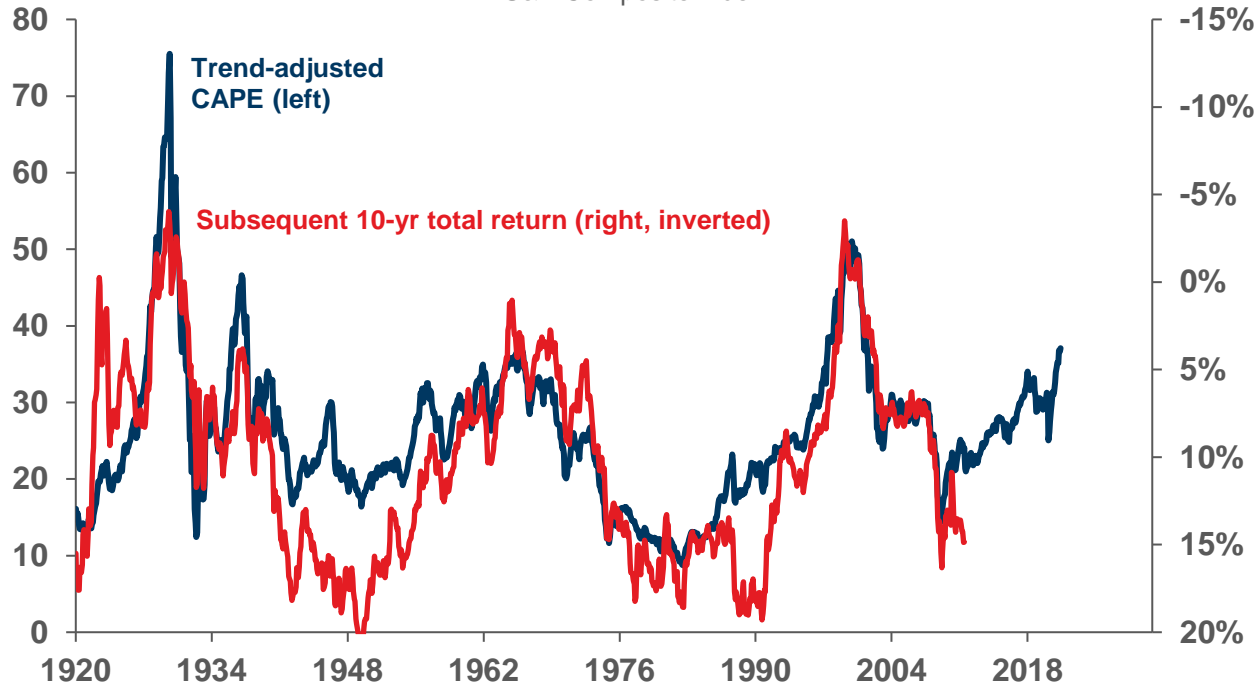
Equity Valuations since 1920



Valuations and Equity Returns since 1920 – Part I



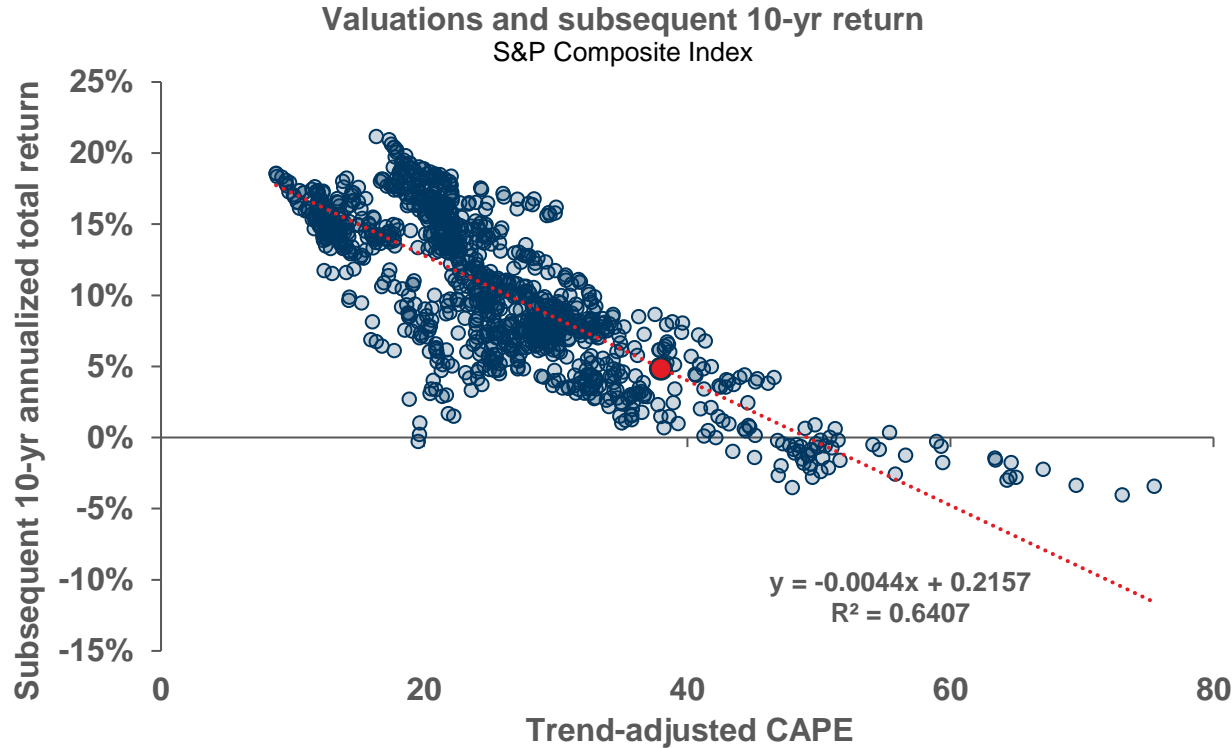
Valuations and subsequent 10-yr return
S&P Composite Index



Robert J. Shiller's Cyclically-Adjusted Price-Earnings ratio, or CAPE, is often used to estimate long-term (10-15 years) equity returns.

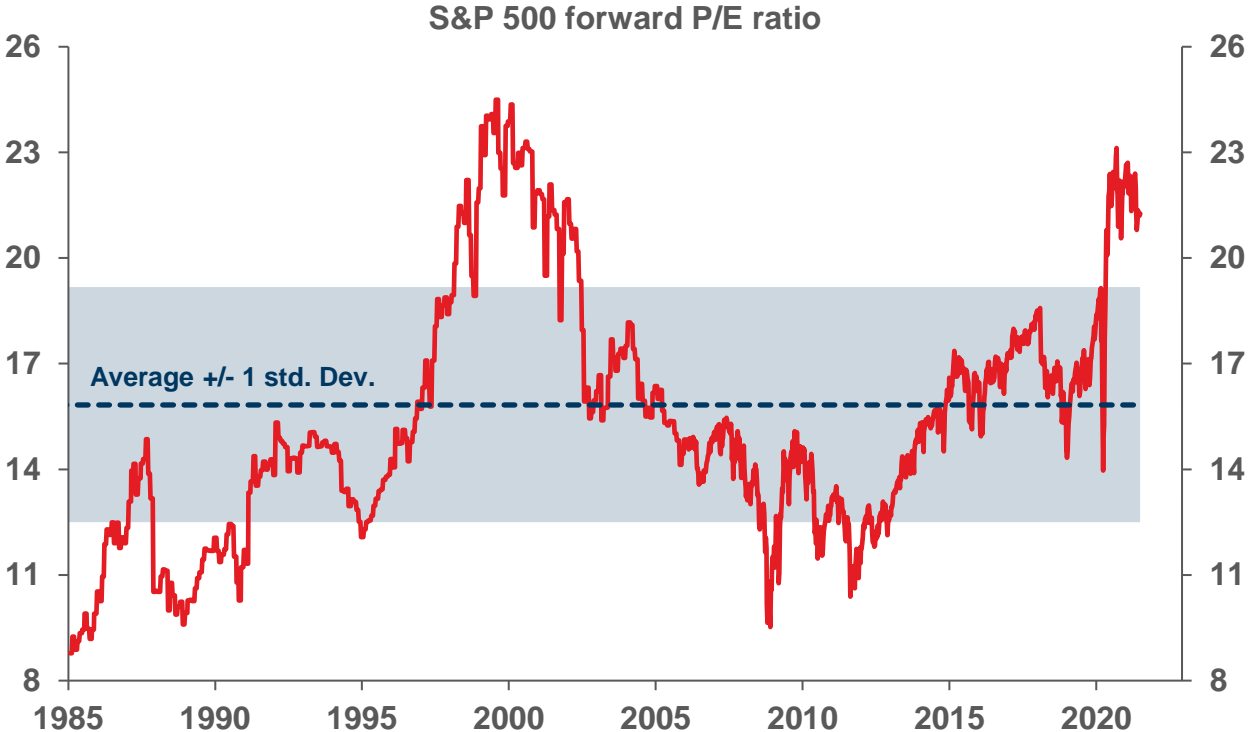
The measure shows a strong inverse relationship between a current equity valuations and subsequent annualized returns, going back all the way to 1920.

Valuations and Equity Returns since 1920 – Part II

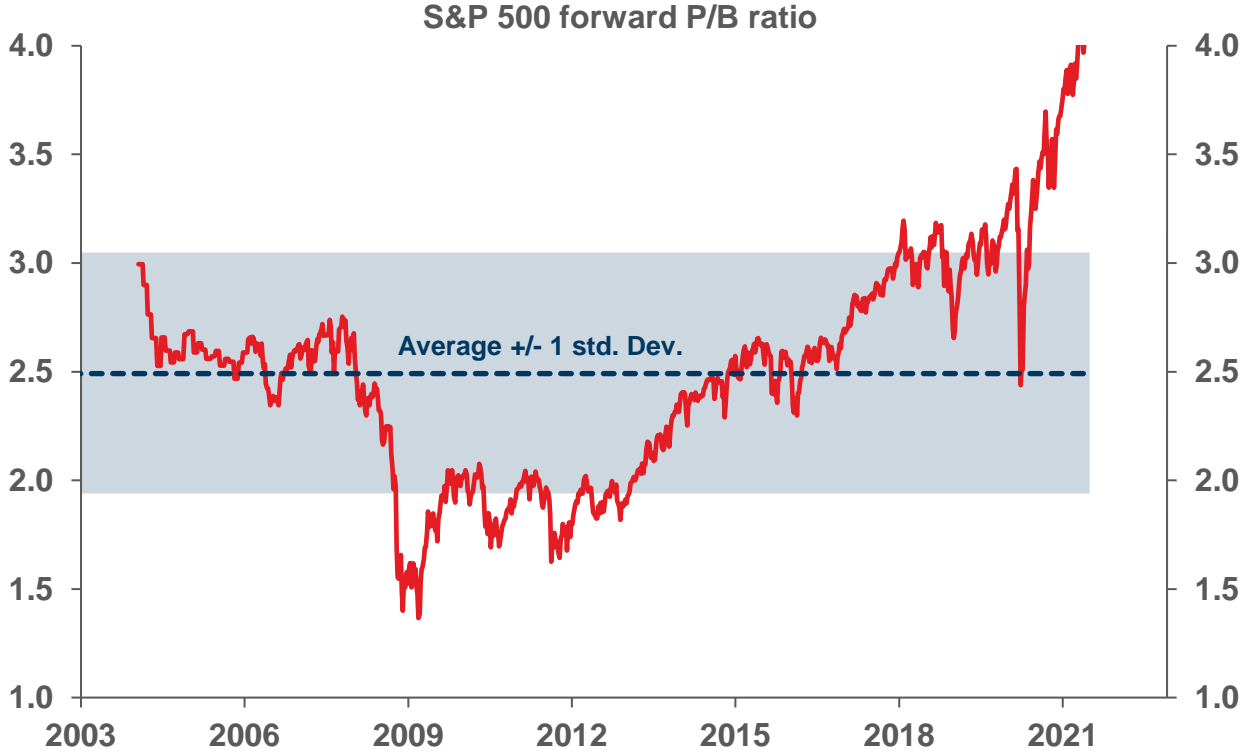


Current valuations suggest a
● 4.9% annualized total
return over the next 10 years.

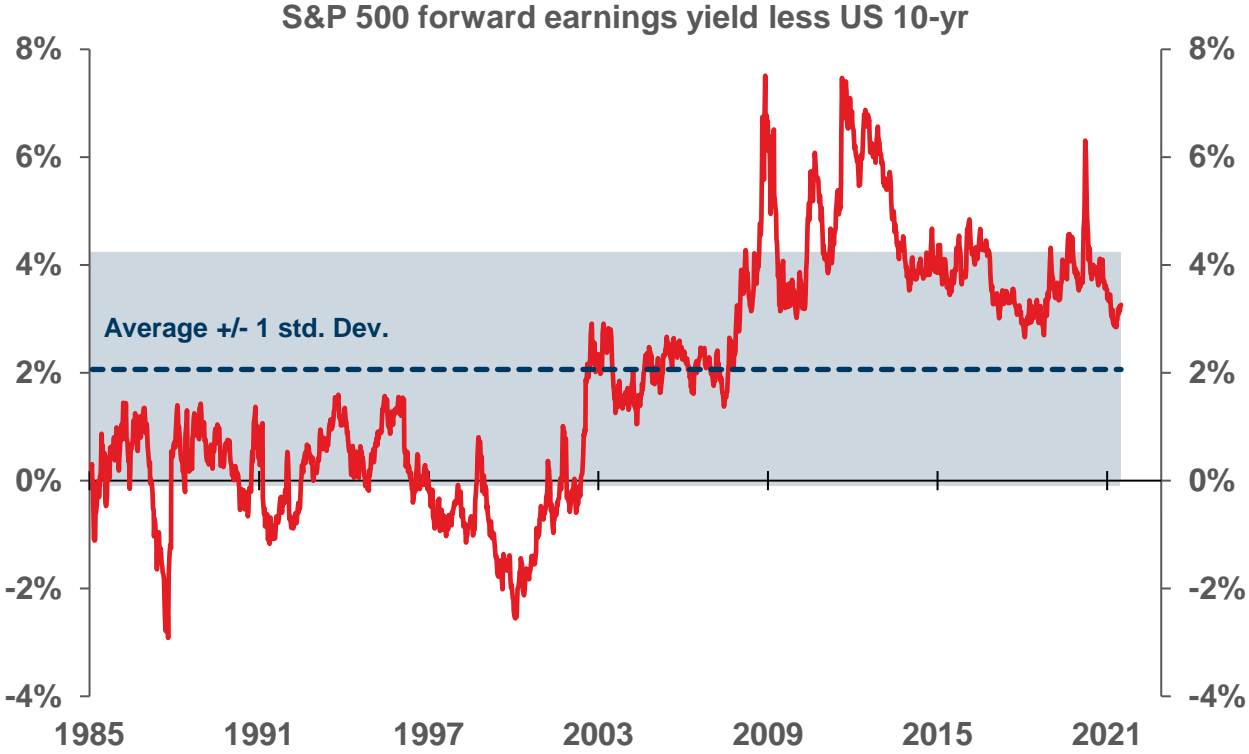
US Equity Valuation Metrics – P/E



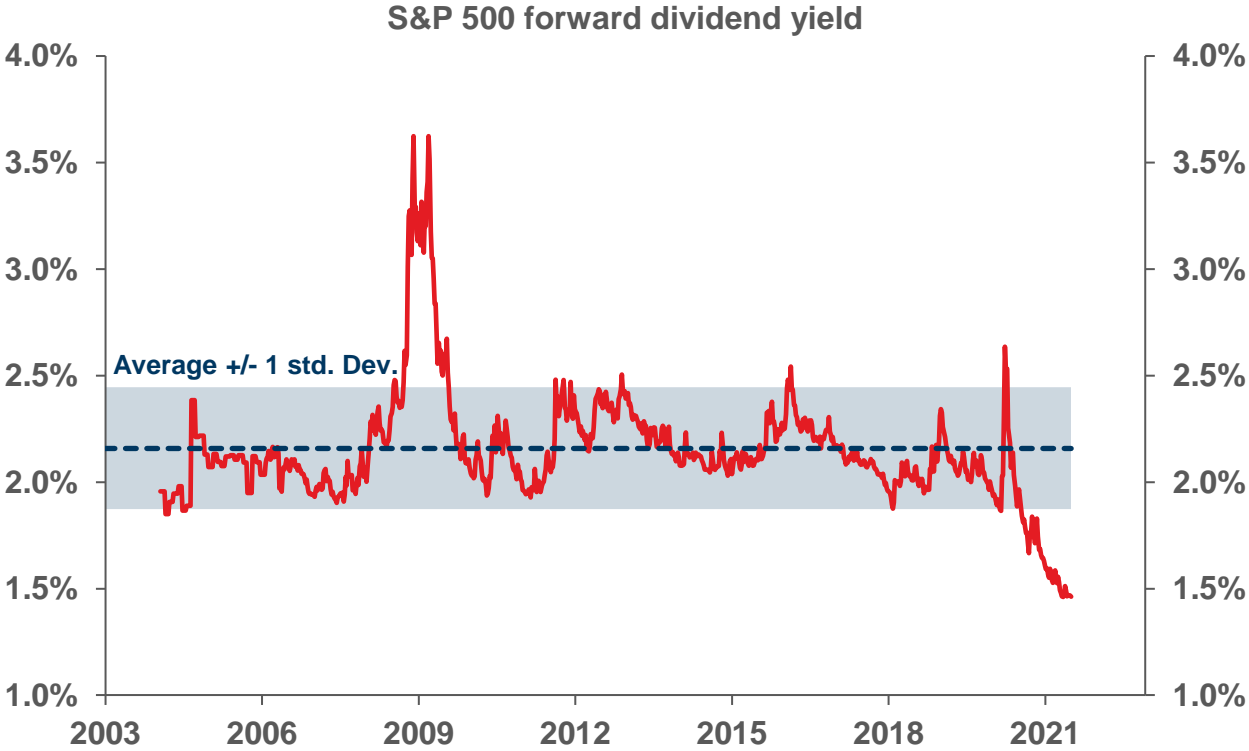
US Equity Valuation Metrics – P/B



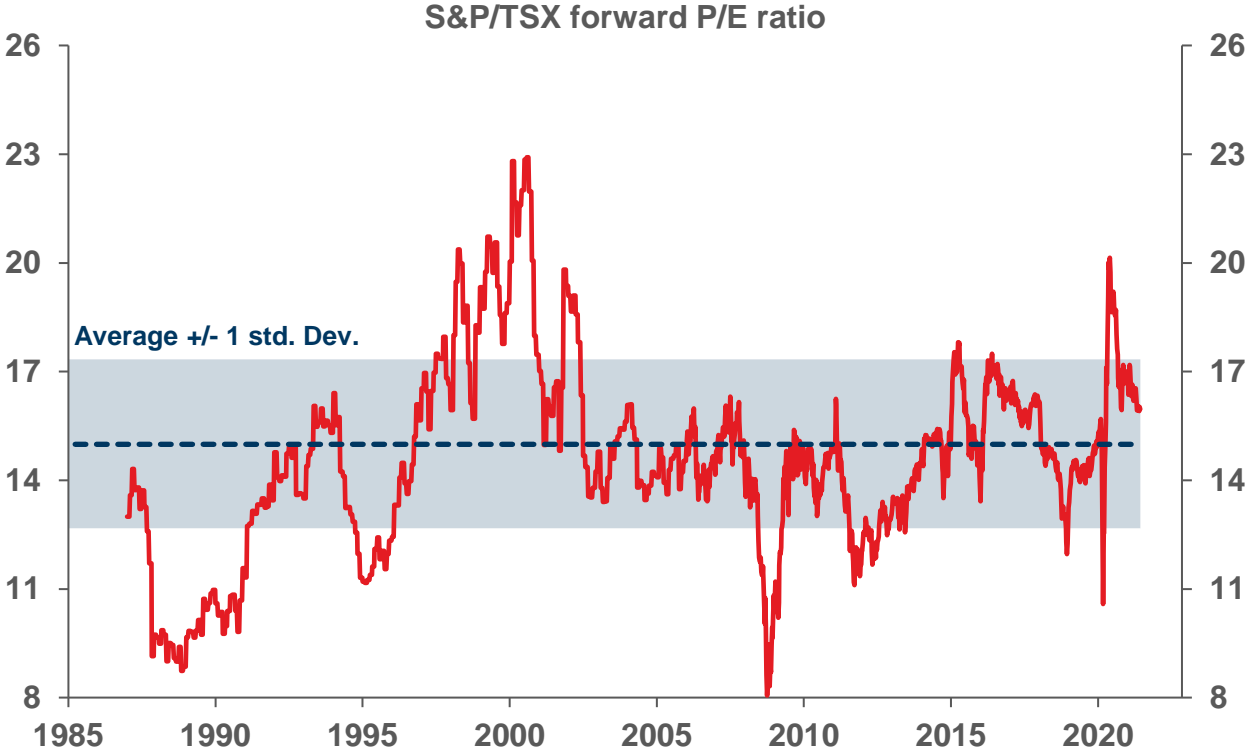
US Equity Valuation Metrics – Earnings Yield & Rates



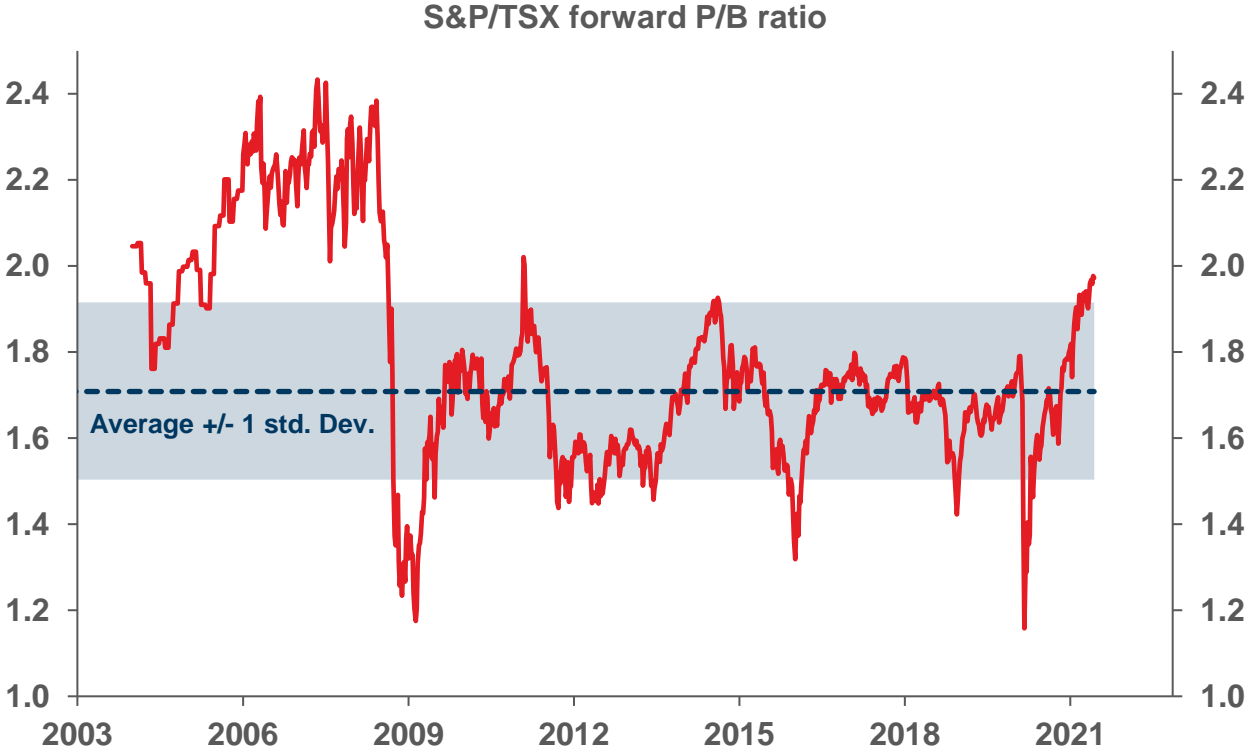
US Equity Valuation Metrics – Dividend Yield



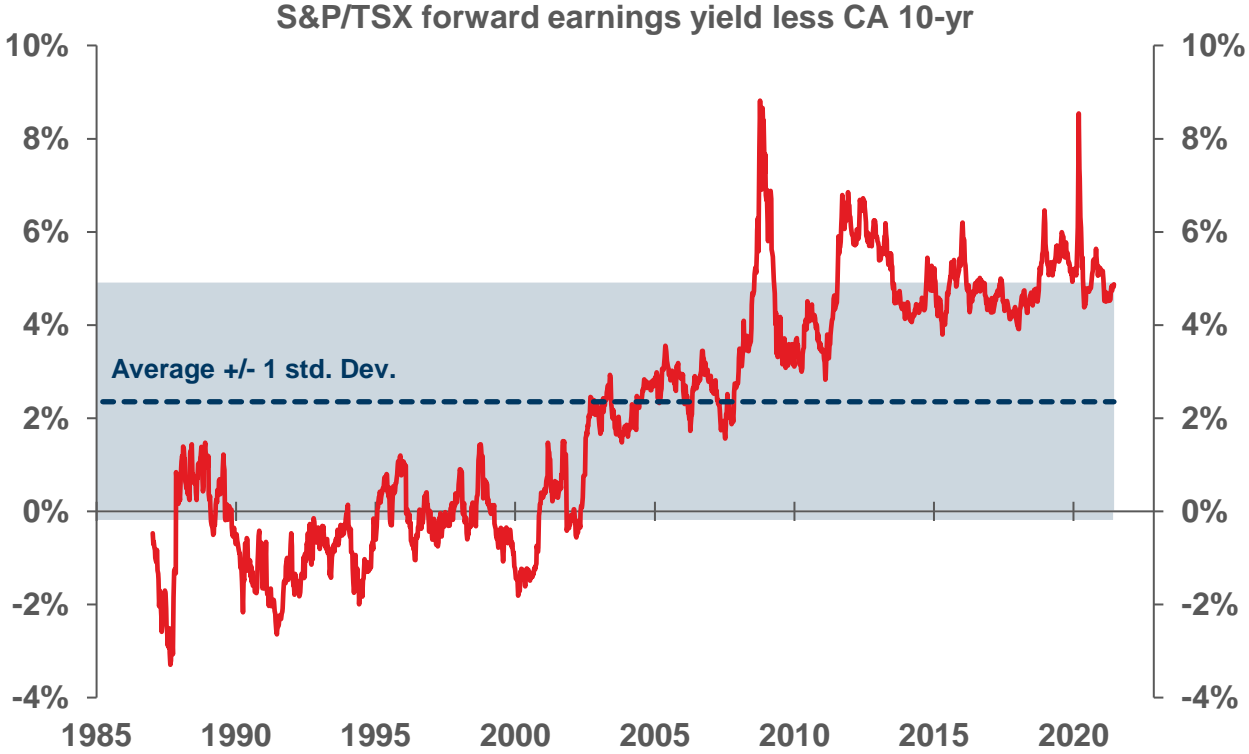
Canadian Equity Valuation Metrics – P/E



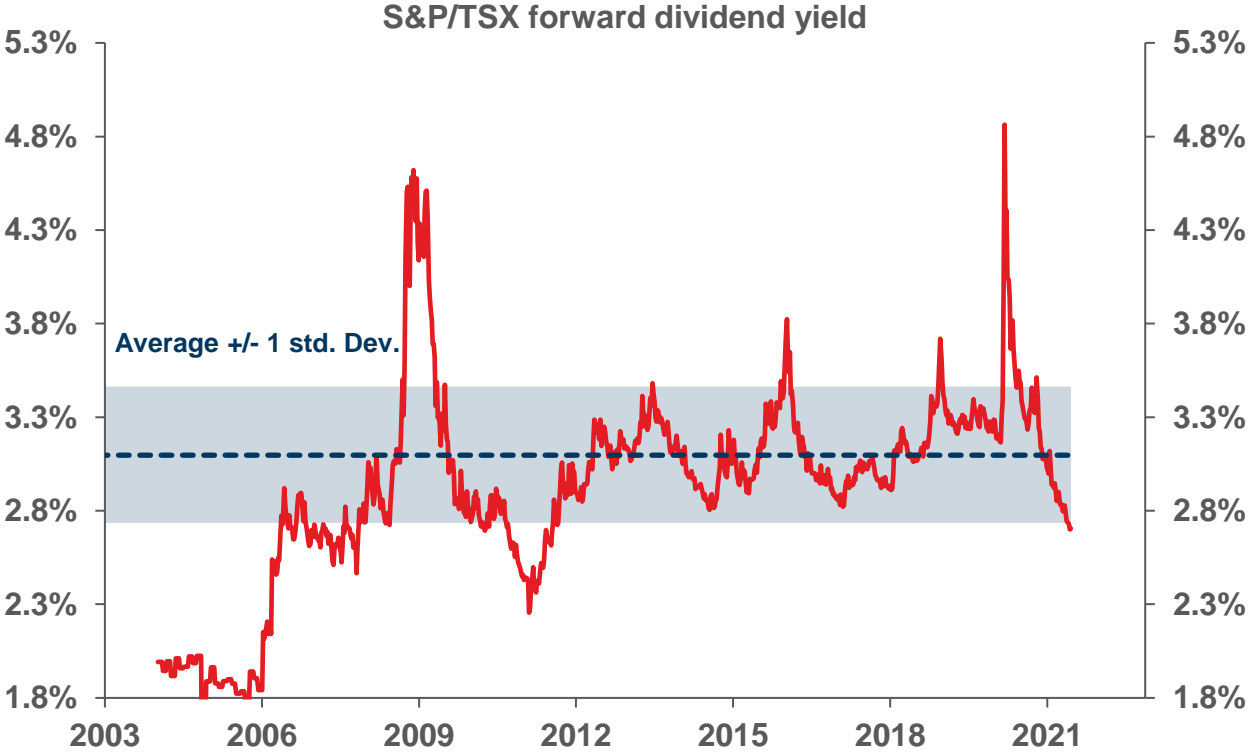
Canadian Equity Valuation Metrics – P/B



Canadian Equity Val. Metrics – Earnings Yield & Rates



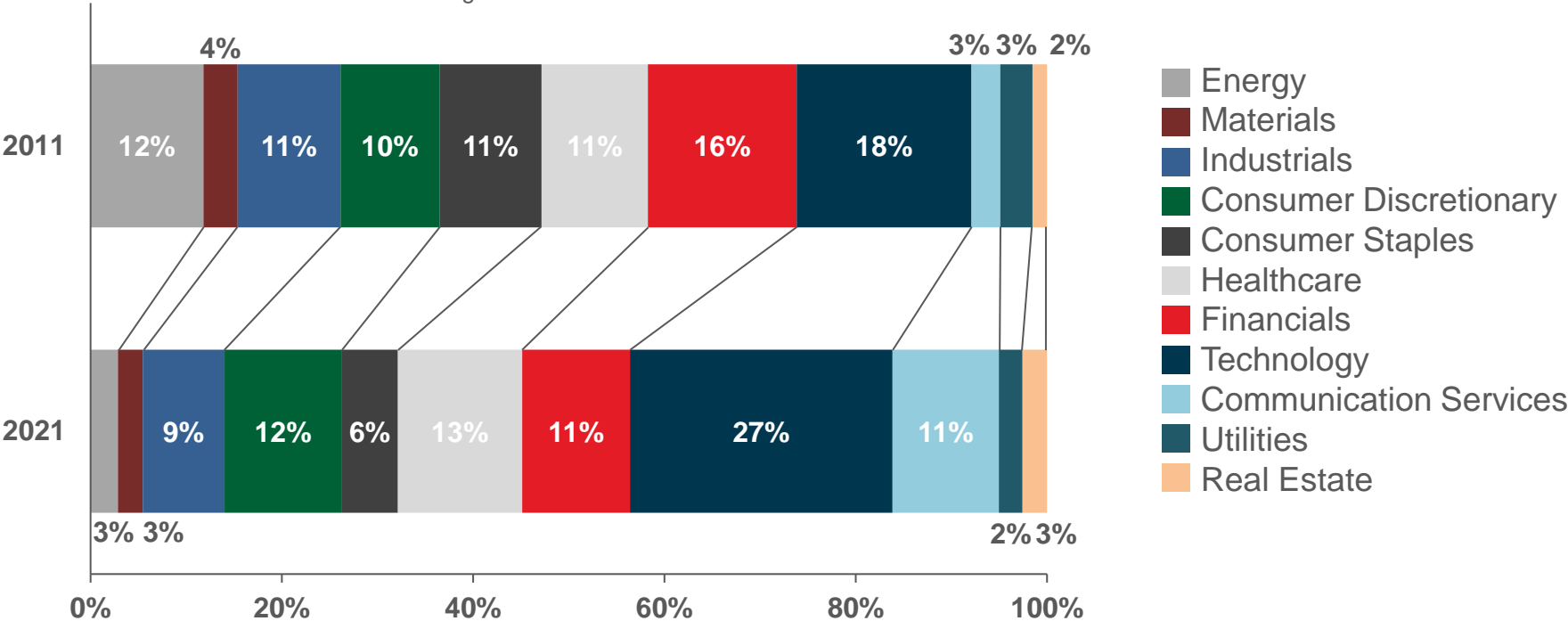
Canadian Equity Valuation Metrics – Dividend Yield



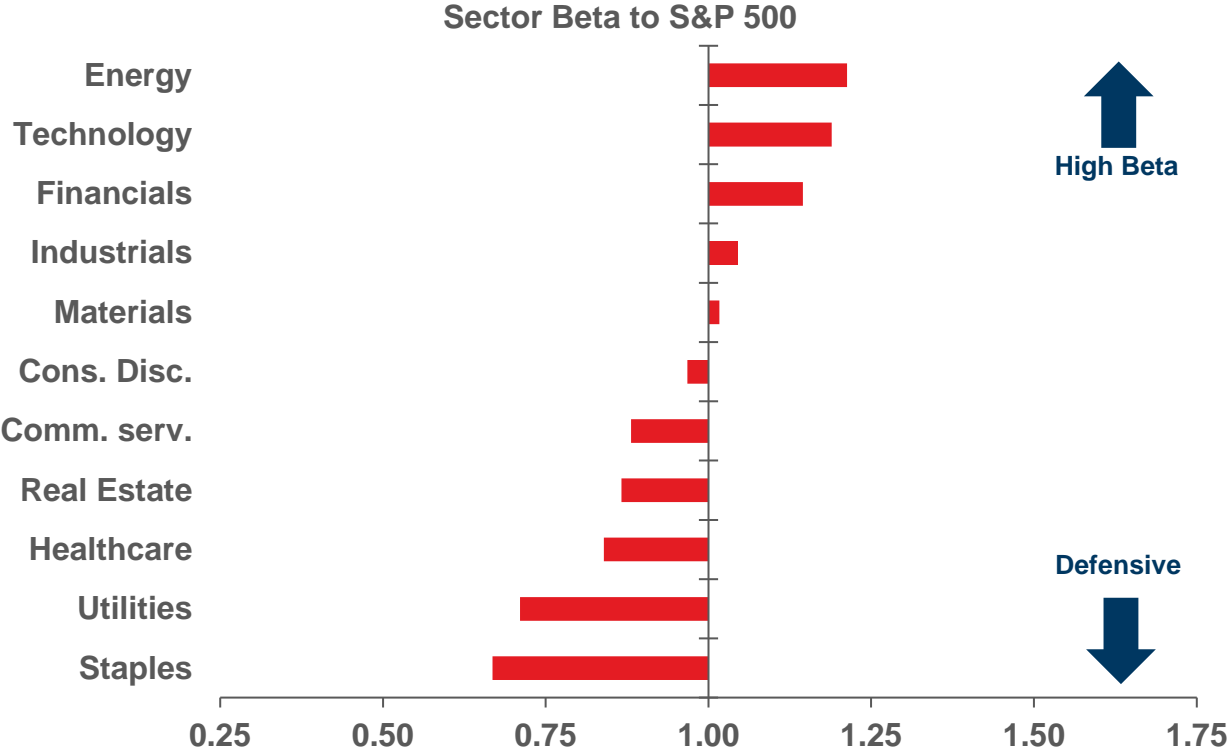
S&P 500 Sector Weights



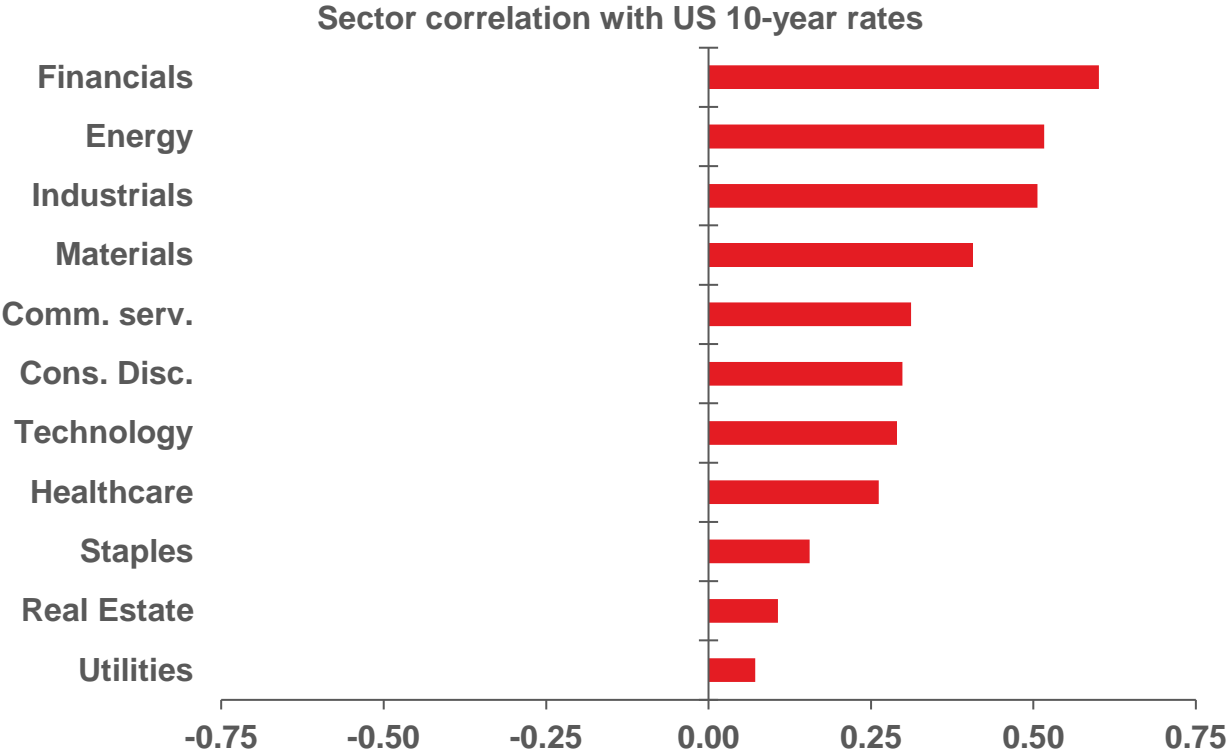
S&P 500 sector weights
Percentage of index market value



S&P 500 Sector Properties – Beta to Index



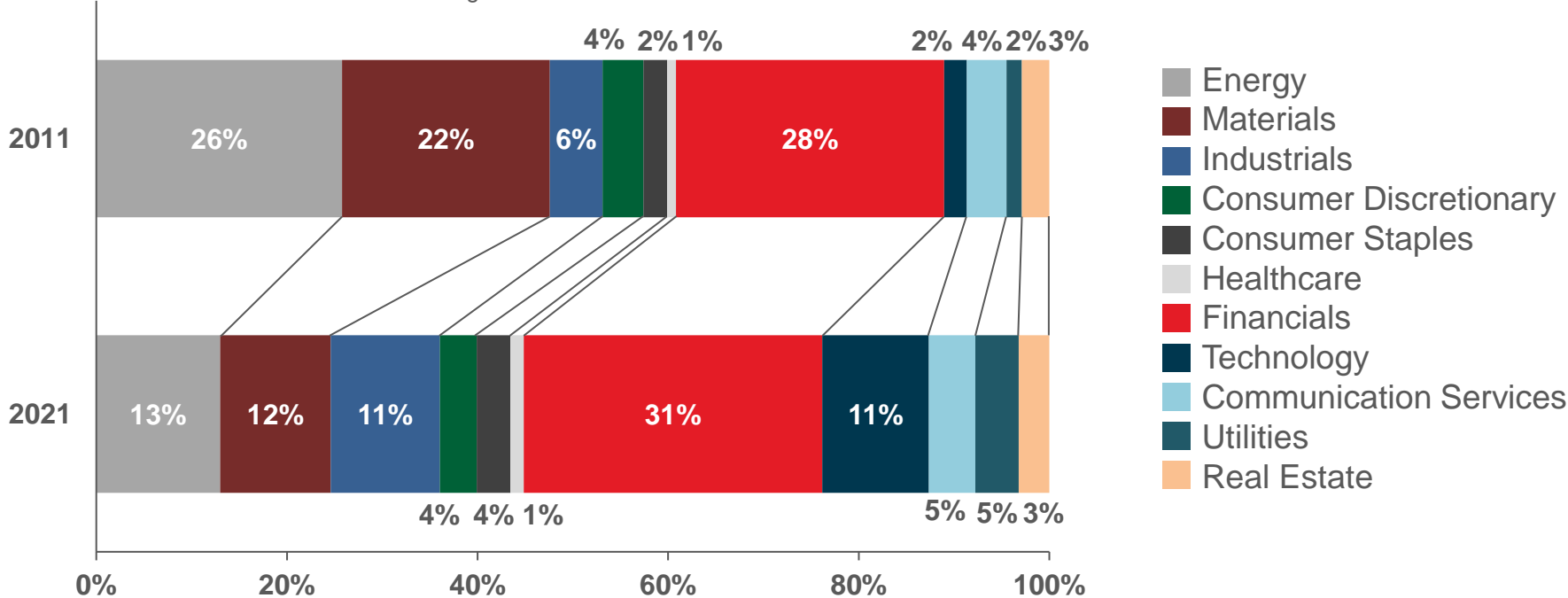
S&P 500 Sector Properties – Correlation to 10-Year Rates



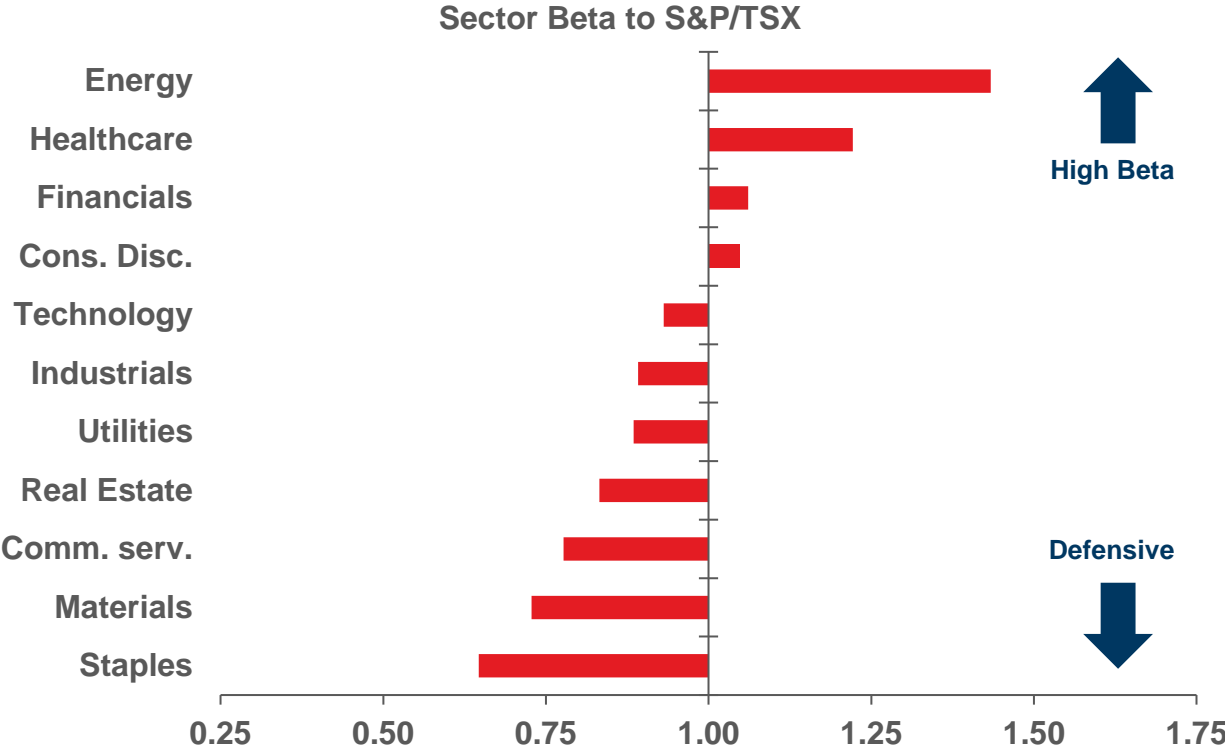
S&P/TSX Sector Weights



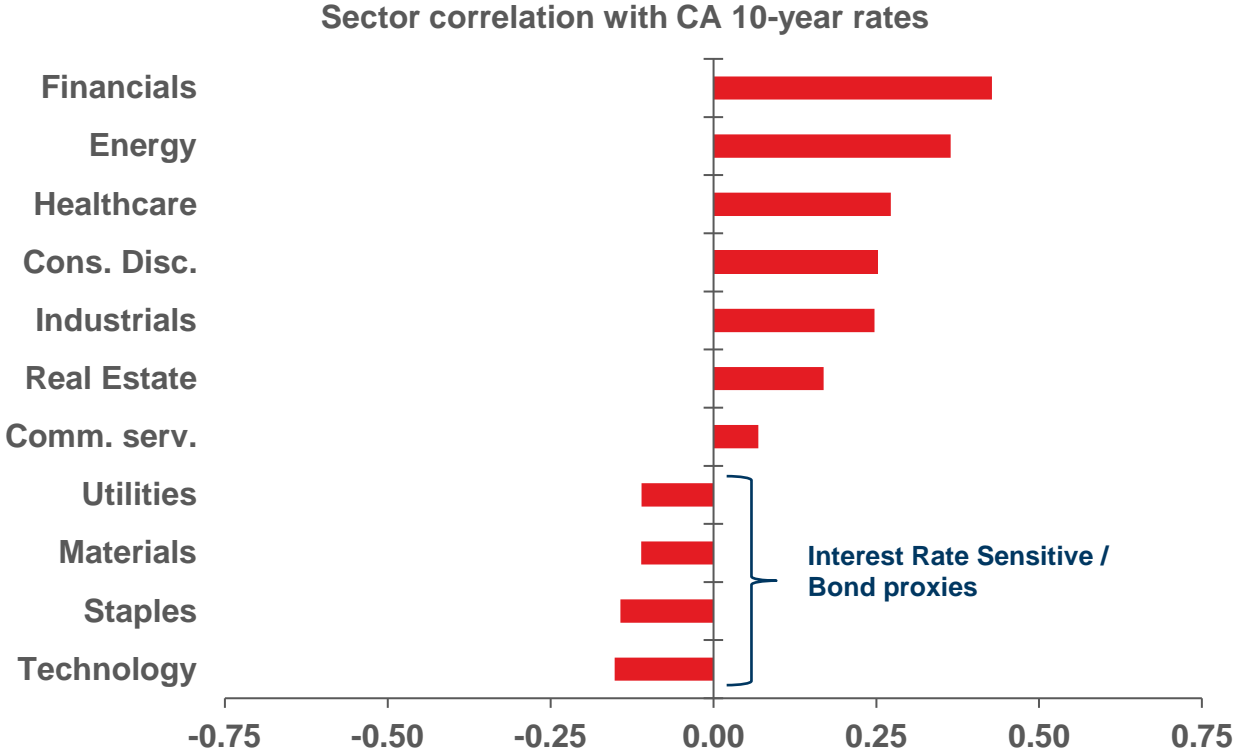
S&P/TSX sector weights
Percentage of index market value



S&P/TSX Sector Properties – Beta to Index



S&P/TSX Sector Properties – Correlation to 10-Year Rates

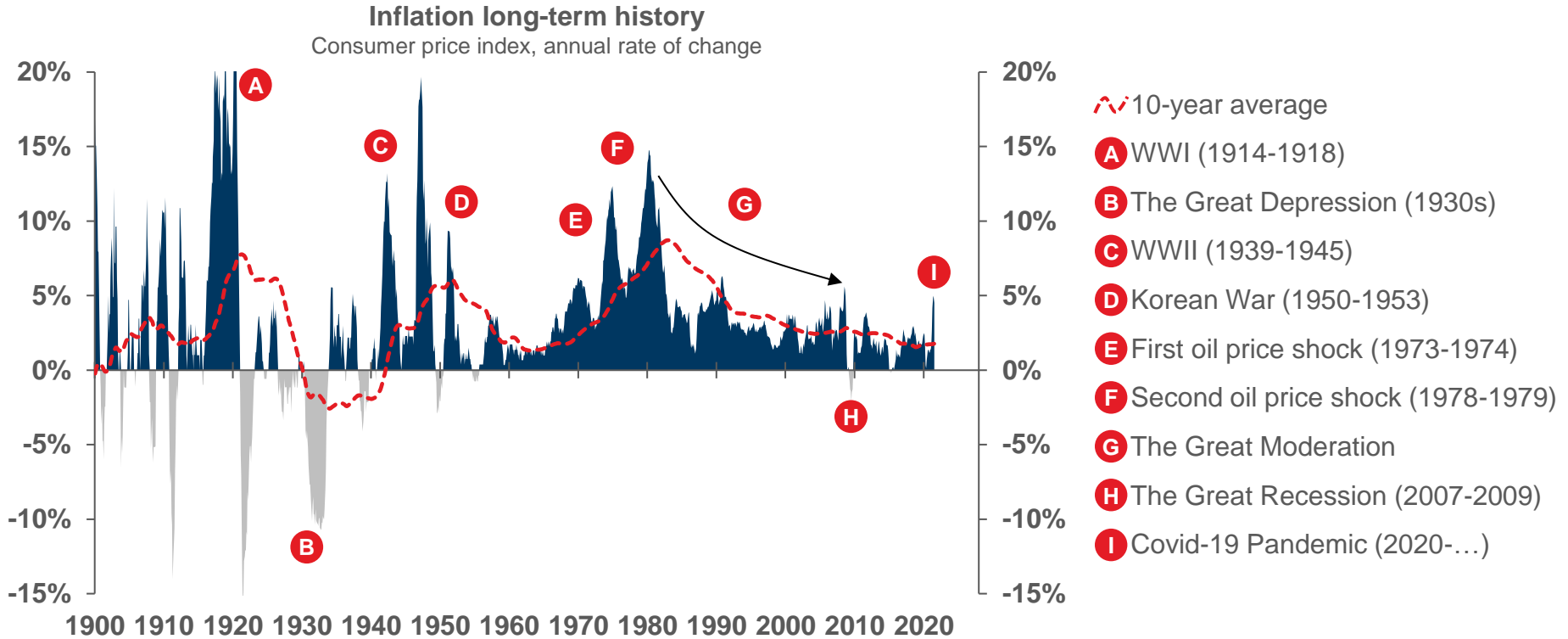


Rates

Q3-2021

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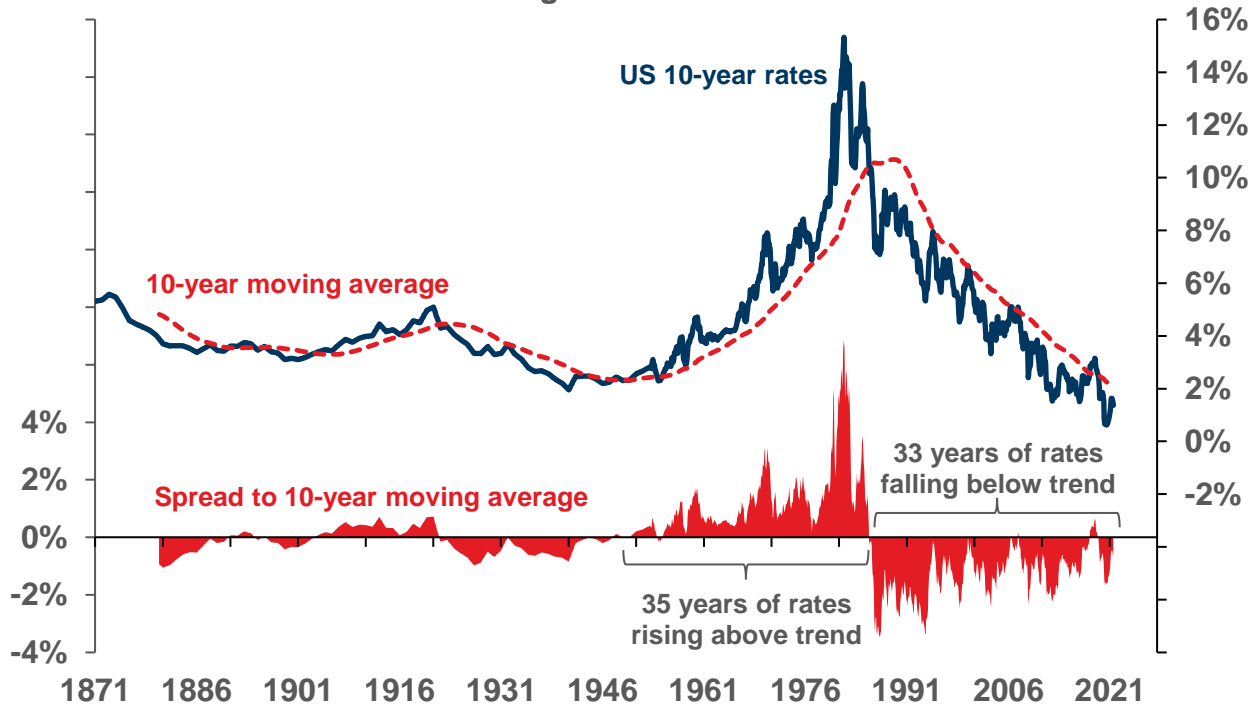
Inflation Long-Term History



US Rates: Looking Back 150 Years



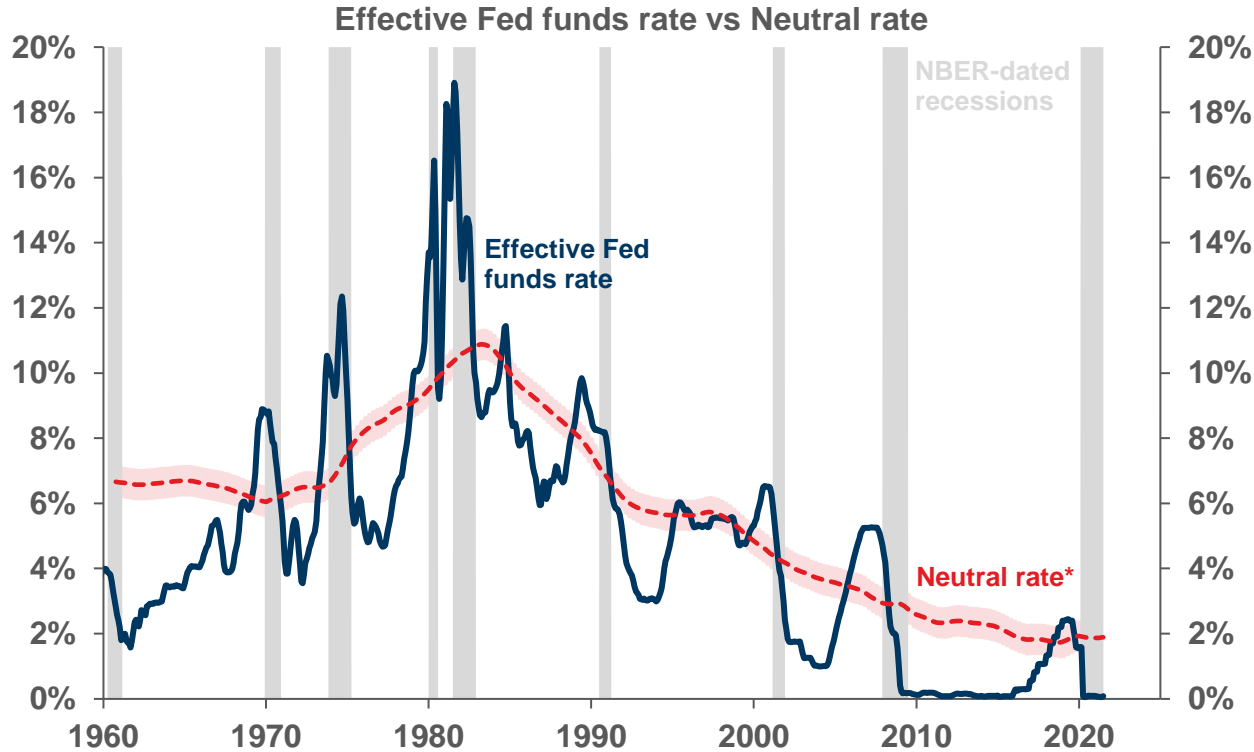
Long-term US rates



Interest rates have been steadily declining since reaching their peak in 1981.

It remains to be seen if this trend can persist or whether the pandemic-induced recession and subsequent recovery will push rates in a new direction.

US Monetary Policy



! As of November 30, 2020, the Federal Reserve suspended updates to their estimate of the neutral rate as a result of extreme volatility in GDP owing to the COVID-19 pandemic.

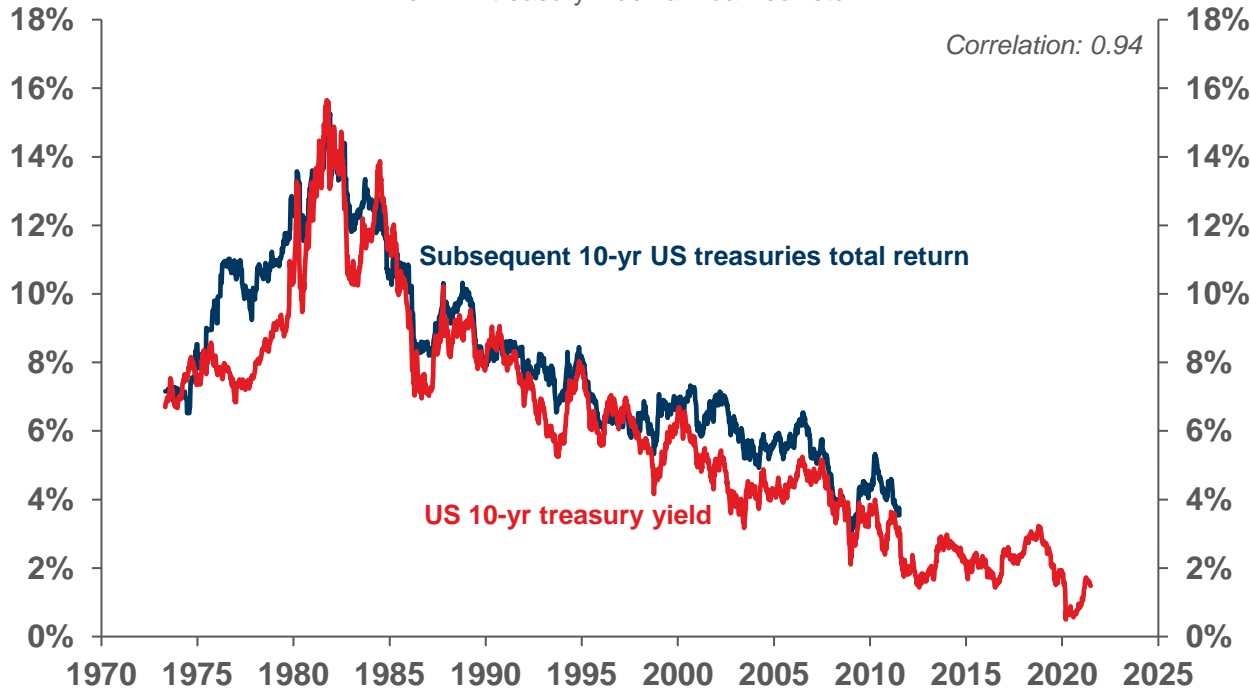
We will update this measure as soon as new data become available.

Fixed Income Return Expectations – Treasuries



US Treasury yield and subsequent return

BofAML treasury index annualized return



Over an investment period matching a bond's maturity, subsequent annualized returns will match closely the starting yield to maturity.

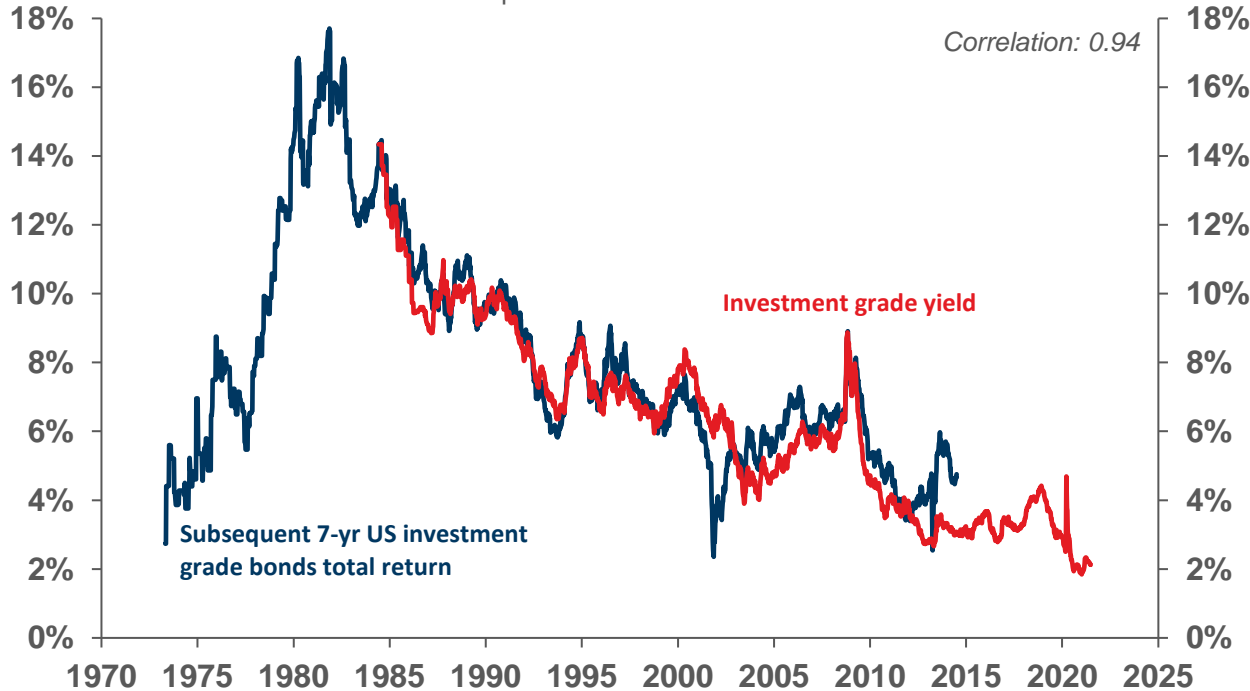
In the case of government bond indexes, differences between the two measures can occur due to reinvestment risk and the changes in index composition over time.

Fixed Income Return Expectations – Investment Grade



US IG bonds yield and subsequent return

BofAML US corporate bonds index annualized return



Over an investment period matching a bond's maturity, subsequent annualized returns will match closely the starting yield to maturity.

In the case of investment grade corporate credit indexes, differences between the two measures can occur due to reinvestment risk, changes in index composition over time, as well as downgrades and defaults.

Sovereign Bond Yield Curves



| | 3 month | 6 month | 1 year | 2 year | 5 year | 10 year | 15 year | 20 year | 30 year |
|---------------|---------|---------|--------|--------|--------|---------|---------|---------|---------|
| Switzerland | -0.79% | -0.80% | -0.80% | -0.76% | -0.56% | -0.24% | -0.04% | 0.03% | 0.05% |
| Netherlands | -0.64% | -0.63% | | -0.68% | -0.51% | -0.09% | 0.09% | 0.19% | 0.37% |
| Germany | -0.65% | -0.63% | -0.61% | -0.66% | -0.59% | -0.20% | 0.06% | 0.04% | 0.29% |
| Belgium | -0.63% | -0.64% | -0.63% | -0.65% | -0.45% | 0.11% | 0.26% | 0.60% | 0.89% |
| Finland | | | | -0.64% | -0.49% | -0.03% | 0.28% | | 0.57% |
| France | -0.63% | -0.63% | -0.62% | -0.63% | -0.43% | 0.13% | 0.42% | 0.58% | 0.92% |
| Austria | | | -0.64% | -0.61% | -0.41% | 0.01% | 0.26% | 0.47% | 0.64% |
| Ireland | -0.49% | -0.48% | -0.53% | -0.57% | -0.39% | 0.17% | 0.38% | 0.47% | 0.86% |
| Portugal | -0.58% | -0.59% | -0.63% | -0.57% | -0.31% | 0.41% | 0.72% | 0.76% | 1.36% |
| Spain | -0.58% | -0.59% | -0.54% | -0.50% | -0.24% | 0.42% | 0.96% | 1.12% | 1.41% |
| Denmark | -0.50% | -0.42% | -0.55% | -0.48% | -0.39% | 0.09% | | 0.26% | |
| Italy | -0.54% | -0.53% | -0.49% | -0.36% | 0.10% | 0.83% | 1.30% | 1.55% | 1.85% |
| Sweden | -0.14% | -0.13% | | -0.25% | -0.01% | 0.33% | 0.21% | 0.71% | |
| Japan | -0.10% | -0.10% | -0.12% | -0.11% | -0.10% | 0.05% | 0.27% | 0.44% | 0.69% |
| UK | 0.07% | 0.07% | 0.04% | 0.06% | 0.33% | 0.72% | 1.07% | 1.21% | 1.24% |
| Australia | | | 0.01% | 0.07% | 0.85% | 1.51% | 1.93% | 2.16% | 2.32% |
| United States | 0.05% | 0.06% | 0.07% | 0.25% | 0.88% | 1.44% | | | 2.07% |
| Canada | 0.15% | 0.17% | 0.24% | 0.45% | 0.98% | 1.39% | | 1.71% | 1.84% |
| New Zealand | 0.38% | 0.41% | 0.27% | 0.55% | 1.15% | 1.80% | 1.98% | 2.62% | |

Cross Assets

Q3-2021

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U.S. Risk Premiums – Summary



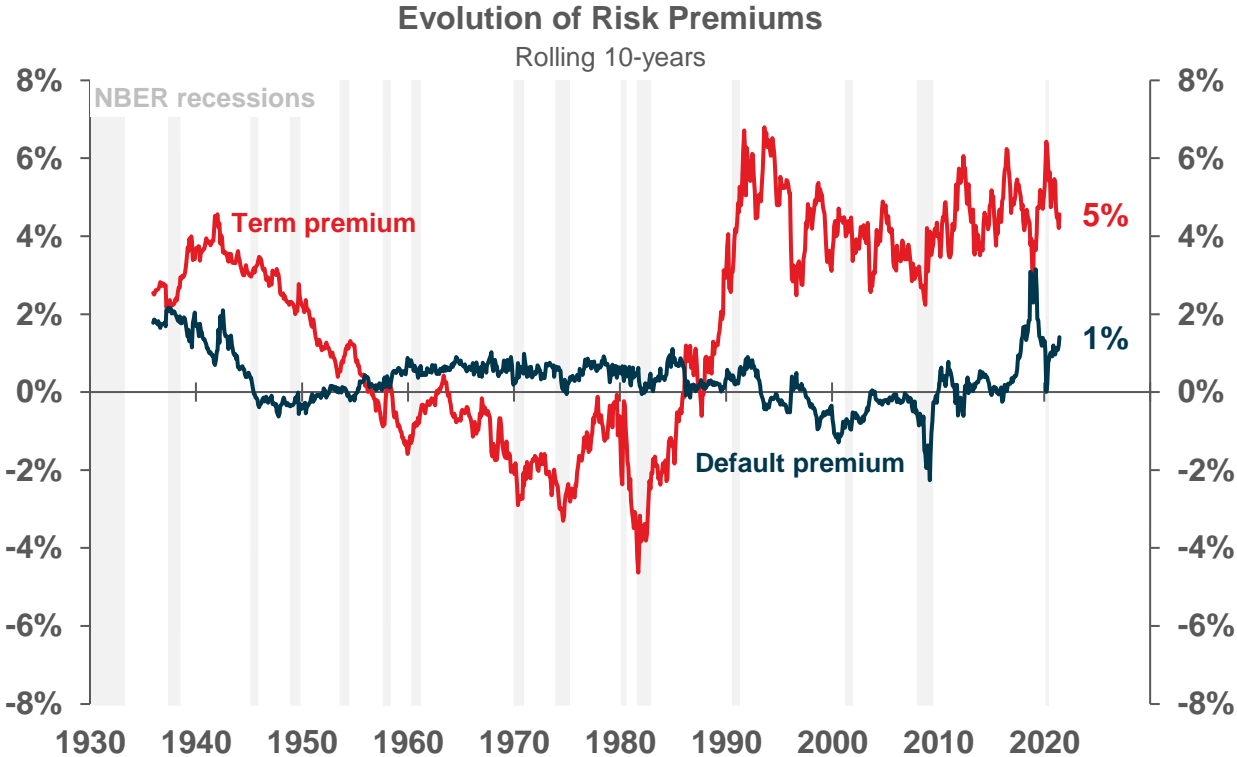
Historical returns, volatility, and risk premiums

| Asset classes | Volatility | Real returns | Risk premiums | Full period* | Past ten years |
|----------------------|------------|--------------|---------------|--------------|----------------|
| Inflation | 1.8% | 2.9% | | | |
| 3-month T-bills | 1.8% | 0.4% | | | |
| Long-term Treasuries | 8.9% | 2.6% | Term | 2.2% | 5.5% |
| Long-term corps | 7.9% | 3.1% | Default | 0.5% | 1.7% |
| Large cap equities | 18.7% | 7.3% | Equity | 4.7% | 8.6% |
| Small cap equities | 28.2% | 9.1% | Size | 1.8% | -1.5% |

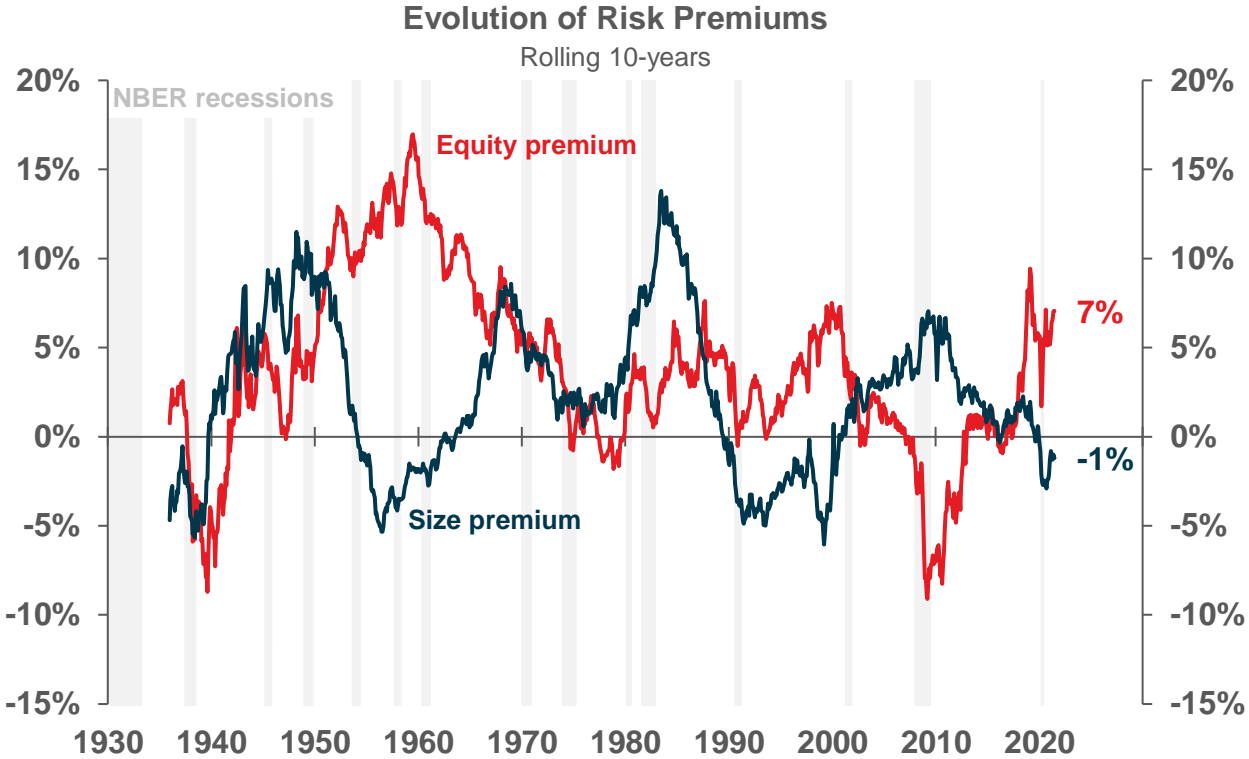
Risk premiums within US capital markets have been well documented and tend to be stable over long enough periods of time (15-20+ years).

Important deviations can occur though over shorter timespans, as was evident for the Term, Equity and Size premiums these past ten years, with a respective spread against their historical measures of 3.2%, 3.9%, and -3.3%.

U.S. Risk Premiums – Fixed Income



U.S. Risk Premiums – Equities

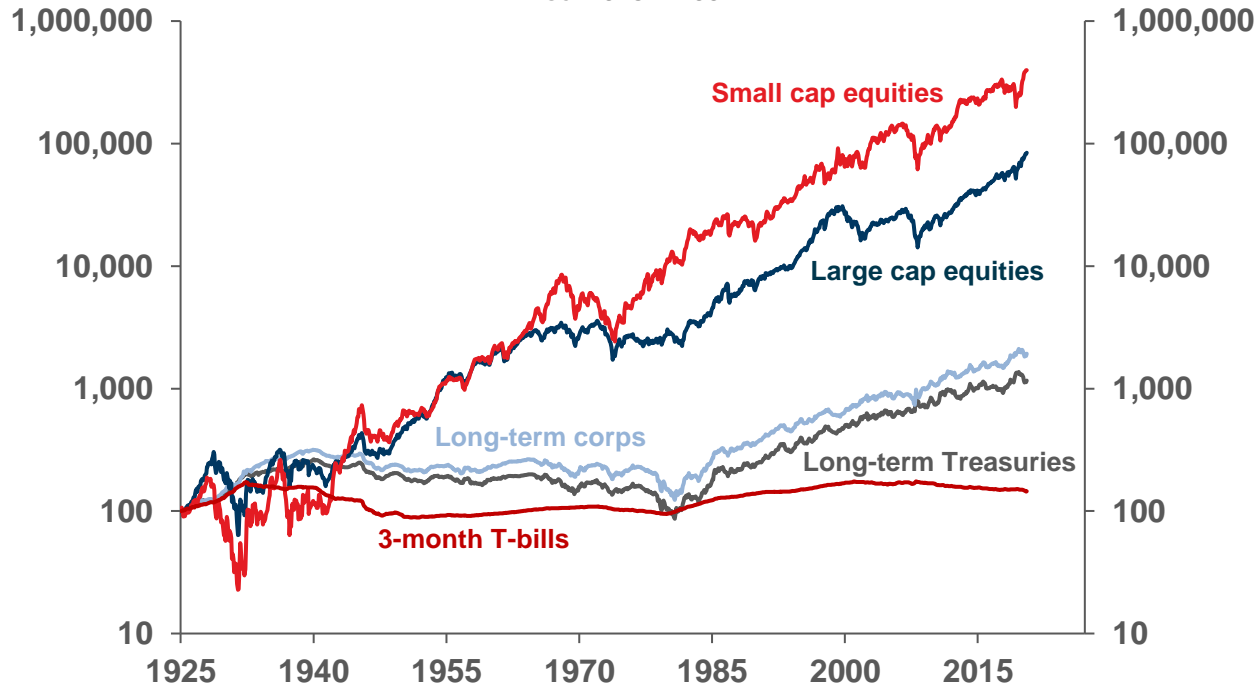


U.S. Risk Premiums – Cumulative Returns



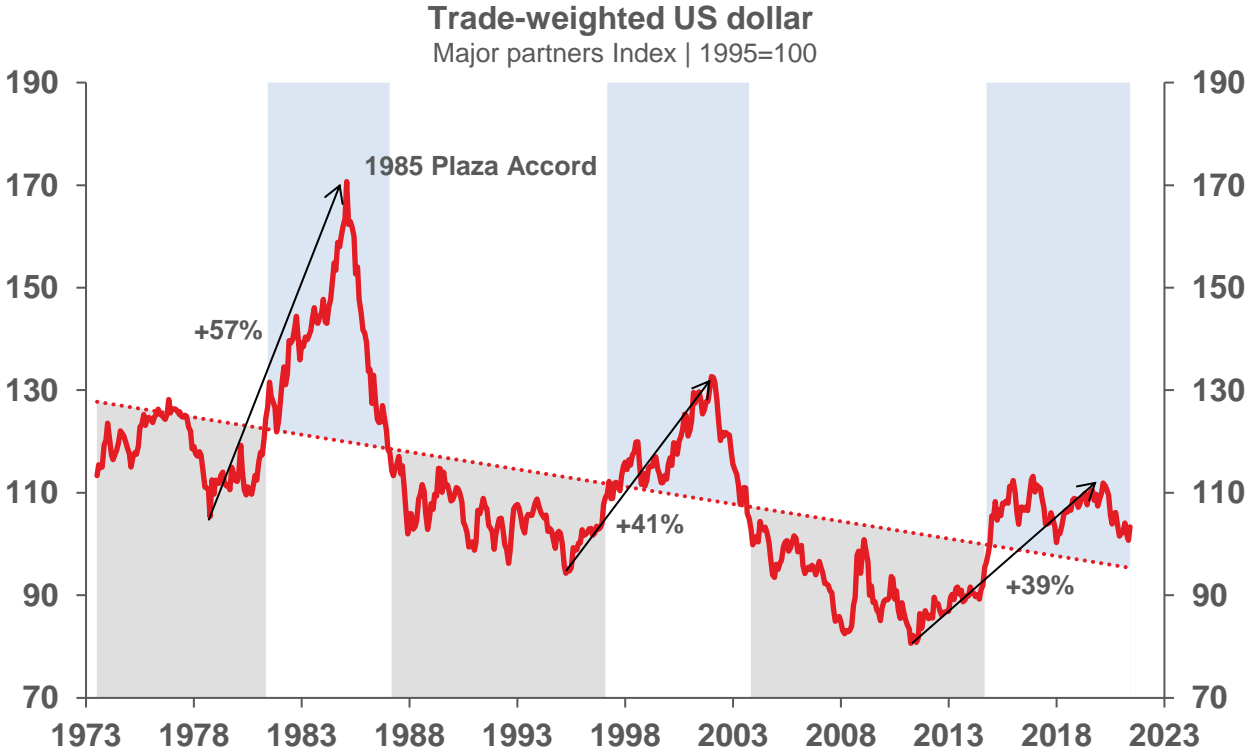
Real Total Cumulative Returns

Dec. 1925 = 100

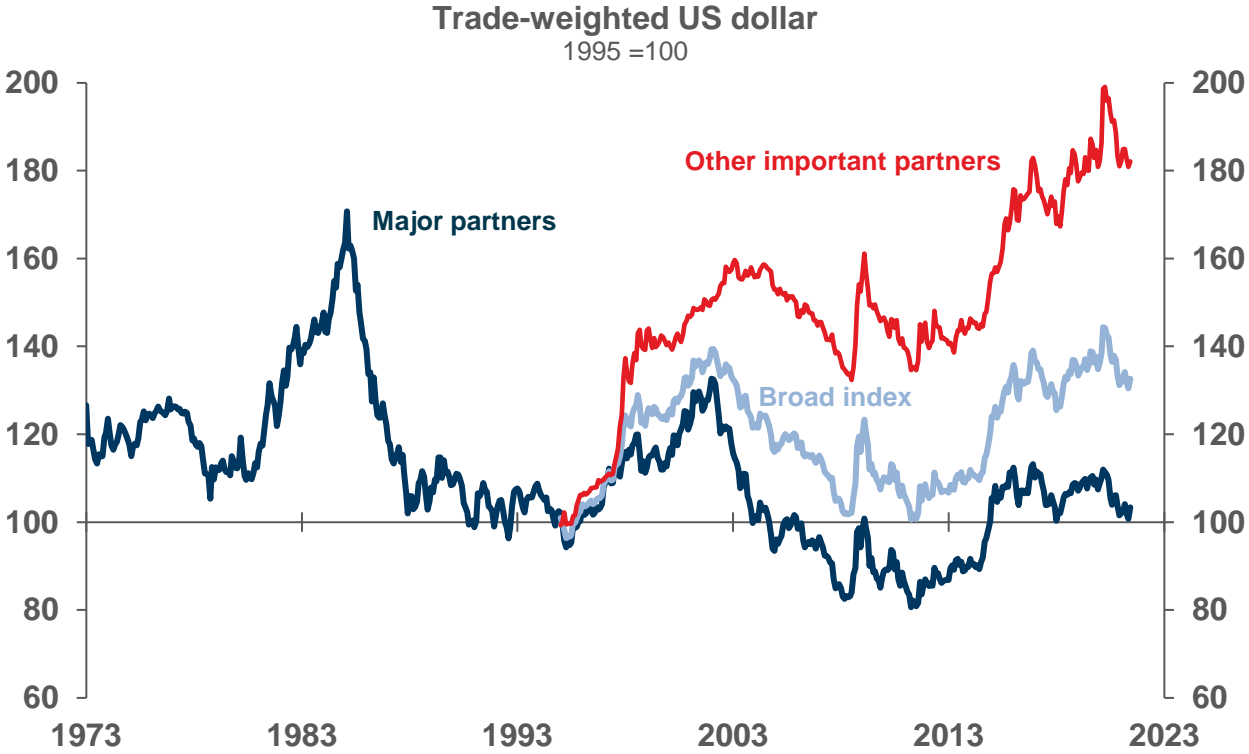


Over long enough investment horizons, the importance of volatility risk diminishes (see [page 7 – Equity Performance in the Long Run](#)), while the risk of underperforming through poor asset allocation decisions can increase significantly.

US Dollar Secular Trend & Components – Part I



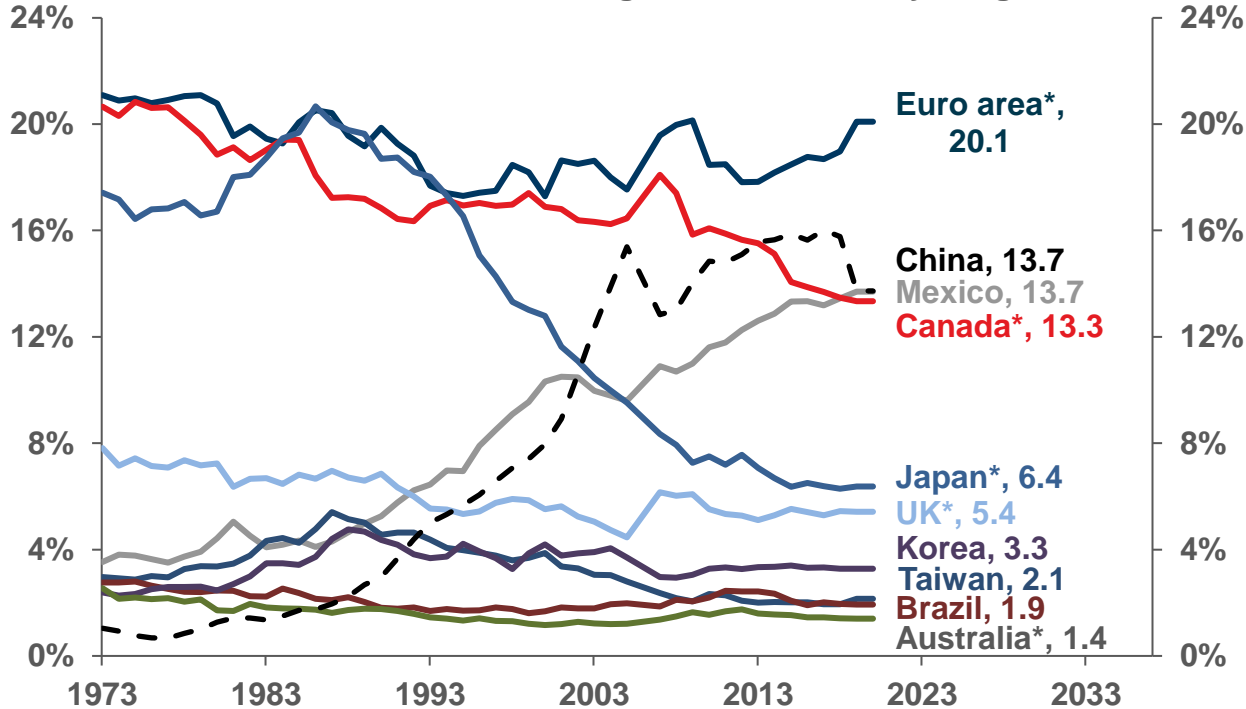
US Dollar Secular Trend & Components – Part II



US Dollar Secular Trend & Components – Part III

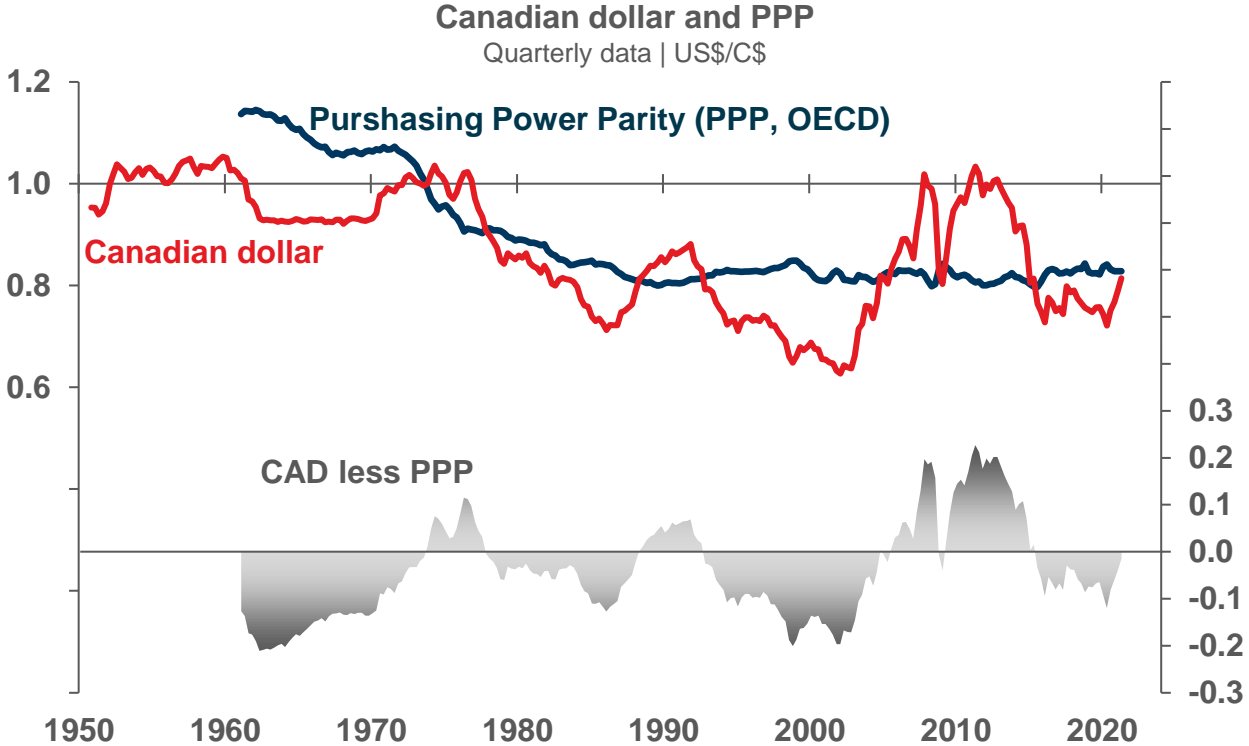


Evolution of USD Trade-Weighted Index Country Weights



A reduction of trade barriers between the US and China, as well as Mexico since the 90s has helped the latter two countries gain more prominence as trading partners.

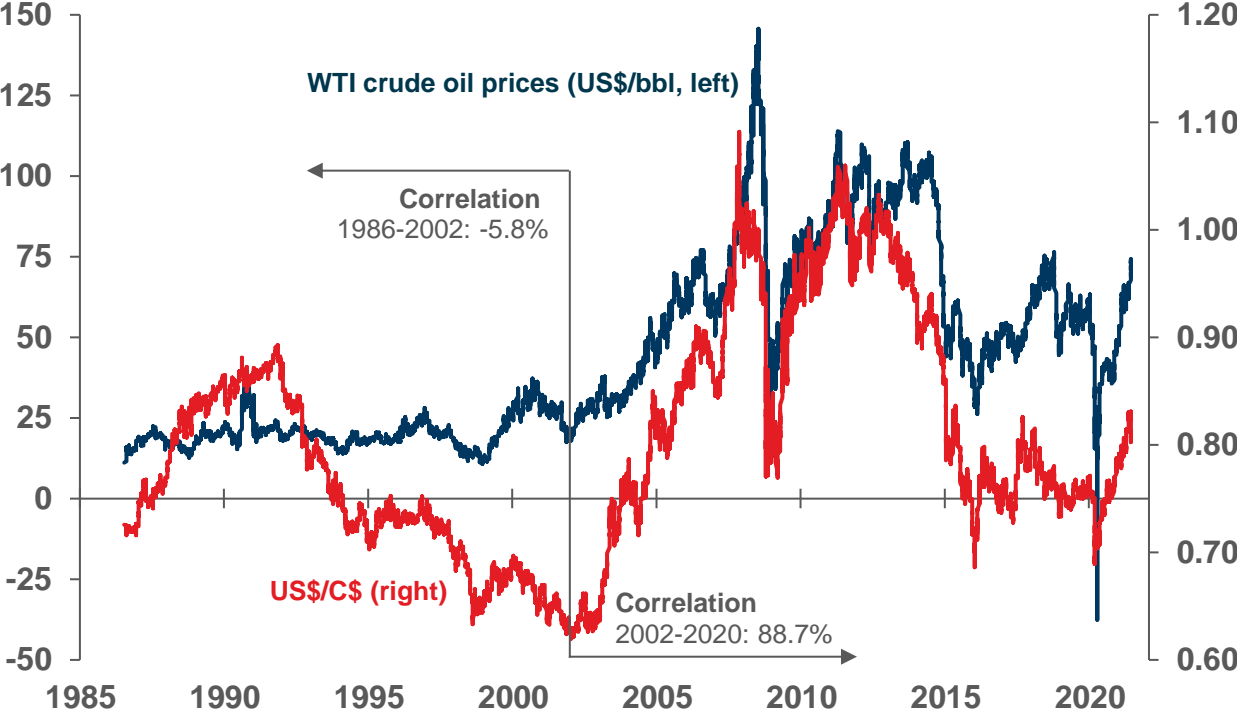
Canadian Dollar & Purchasing Power Parity



Canadian Dollar & Crude Oil



Canadian dollar and oil prices

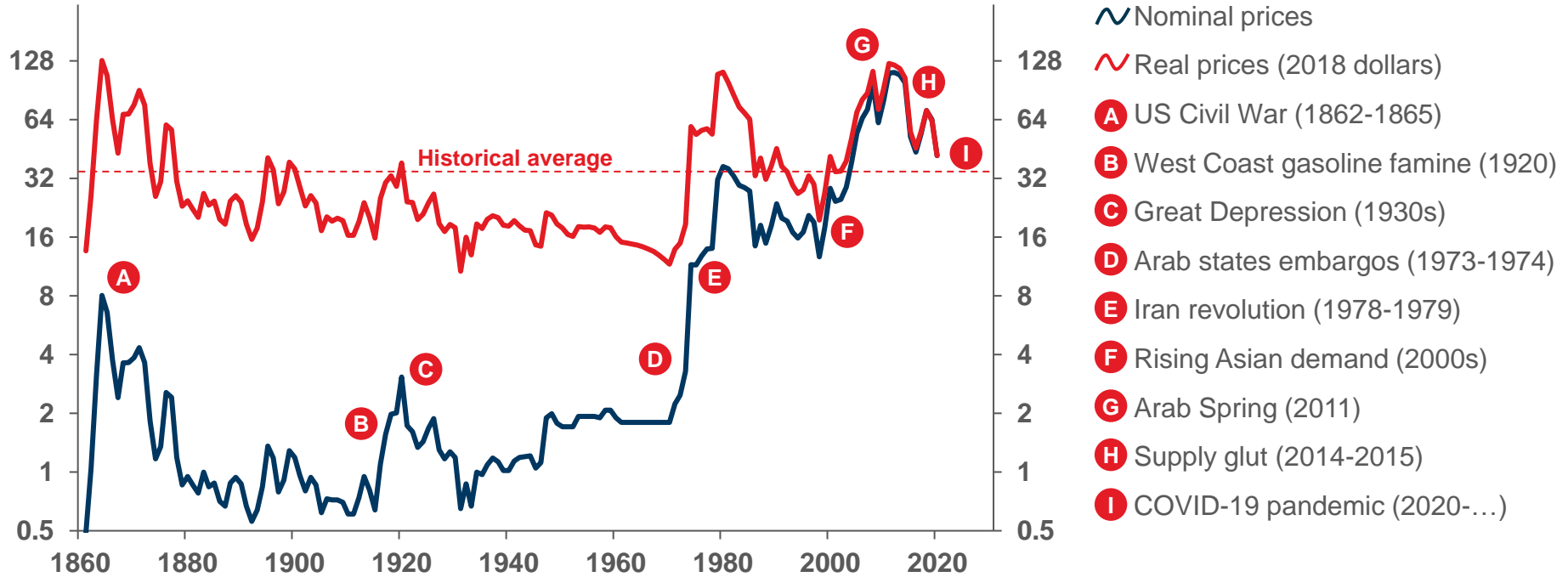


As Canadian oil and crude bitumen exports grew rapidly starting in the mid-2000s, the country's currency became more closely entangled with those assets' price movements.

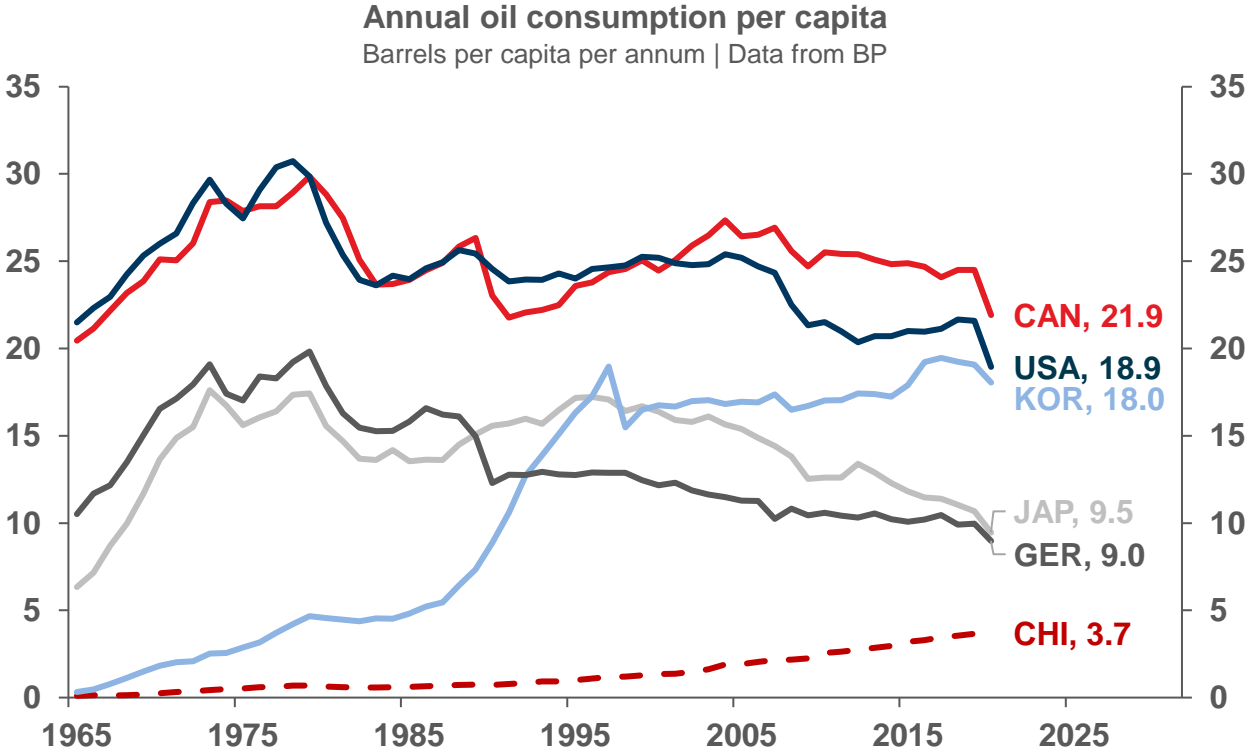
Oil Prices – Nominal vs Real Prices



Historical oil prices - Nominal vs Real
US\$ per barrel* | log scale | 1861-2020



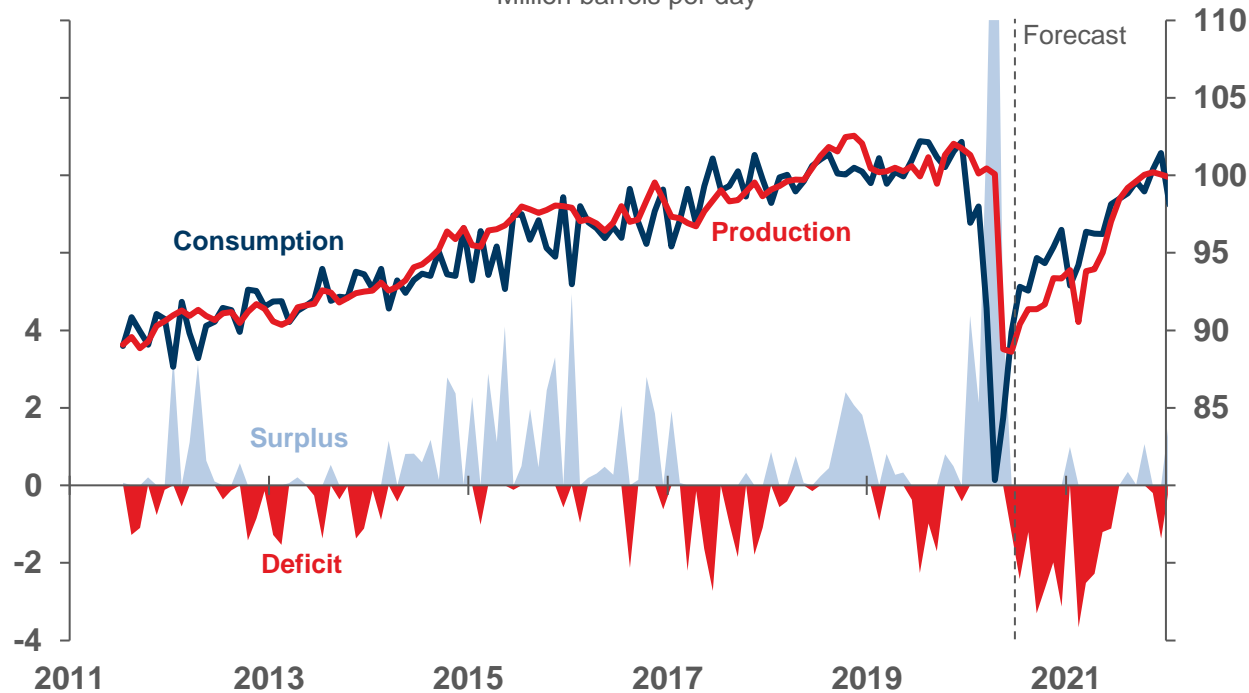
Oil Prices – Consumption by Country



Oil Prices – World Supply and Demand



World supply and demand
Million barrels per day



Pandemic-induced lockdowns across the globe led to sharp increases in oil surpluses in 2020, pushing prices to historic lows.

Meanwhile, 2021 and beyond are more likely to see deficits build up and prices climb as producers have slashed production and countries in the process of easing COVID-19 social restrictions should put upward pressure on demand.

Bear Market Performances – Price Returns



S&P 500 Bear Markets (1950-2020)

| Peak | Trough | # days | Period Drawdown | # days to recover | Cumulative price return over the following: | | | |
|------------|-----------------|------------|-----------------|-------------------|---|------------|------------|------------|
| | | | | | 6 months | 12 months | 24 months | 36 months |
| 1956-08-02 | 1957-10-22 | 446 | -22% | 337 | 8% | 31% | 47% | 42% |
| 1961-12-12 | 1962-06-26 | 196 | -28% | 434 | 20% | 34% | 53% | 71% |
| 1966-02-09 | 1966-10-07 | 240 | -22% | 209 | 22% | 32% | 37% | 30% |
| 1968-11-29 | 1970-05-26 | 543 | -36% | 650 | 19% | 48% | 54% | 61% |
| 1973-01-11 | 1974-10-03 | 630 | -48% | 2,114 | 35% | 37% | 68% | 54% |
| 1980-11-28 | 1982-08-12 | 622 | -27% | 83 | 43% | 58% | 48% | 88% |
| 1987-08-25 | 1987-12-04 | 101 | -34% | 600 | 13% | 19% | 50% | 35% |
| 2000-03-24 | 2002-10-09 | 929 | -49% | 1,694 | 13% | 28% | 45% | 57% |
| 2007-10-09 | 2009-03-09 | 517 | -57% | 1,480 | 48% | 63% | 96% | 94% |
| 2020-02-19 | 2020-03-23 | 33 | -34% | 148 | 52% | 74% | -- | -- |
| | Average: | 426 | -36% | 775 | 27% | 43% | 55% | 59% |

Bear Market Performances – Excess Returns



Average Excess* Total Returns Following S&P 500 Bear Markets (1980-2020**)

| Asset (USD) | Beta*** | Avg. bear market excess returns | Cumulative excess return over the following: | | | |
|------------------------|---------|---------------------------------|--|-----------|-----------|-----------|
| | | | 6 months | 12 months | 24 months | 36 months |
| MSCI World Index | 1.02 | 2% | 7% | 8% | 8% | 13% |
| WTI | 1.01 | 11% | 4% | 22% | -9% | 51% |
| S&P/TSX (CAD) | 0.84 | -2% | 6% | 10% | 10% | 19% |
| Gold | 0.00 | 34% | -12% | -31% | -41% | -35% |
| FTSE Canada Overall | -0.02 | 45% | -18% | -30% | -34% | -20% |
| DXY | -0.14 | 45% | -33% | -48% | -57% | -64% |
| U.S. 10-yr Gov't Bench | -0.16 | 53% | -23% | -39% | -42% | -29% |

Performance Quilts

Q3-2021

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Cross Assets – I of II



| Year-to-date Total Returns | | | | | | |
|----------------------------|------------------------|----------------------|----------------------|-------------------------|--------------------|--------------------|
| Cross Assets | Fixed Income | S&P/TSX Sectors | S&P500 Sectors | Equity Regions (in C\$) | U.S. Factors | CA Factors |
| Commo. 31.4% | Prefs (Can) 14.3% | Energy 37.0% | Energy 45.6% | Canada 17.3% | Small 18.7% | High Div. 25.6% |
| S&P/TSX 17.3% | HY (US) 3.7% | Financials 23.4% | Financials 25.7% | EMEA (EM) 13.0% | Value 16.3% | Value 21.8% |
| S&P 500 15.3% | Short (Can) -0.5% | Health Care 22.0% | Real Estate 23.3% | U.S. 12.0% | Quality 15.0% | Large 18.6% |
| Can Pref. 14.3% | IG (US) -1.1% | Real Estate 21.7% | Materials 20.3% | World 9.4% | MSCI USA 14.9% | S&P/TSX 17.3% |
| EAFE 9.2% | Corp (Can) -2.3% | Techno 21.7% | Comm. serv. 19.7% | Europe 9.1% | Large 14.6% | Small 16.8% |
| EM 7.6% | Fed. (Can) -2.9% | Comm. serv. 18.2% | Industrials 16.4% | EAFE 6.1% | Growth 13.2% | Low Vol. 15.3% |
| Balanced* 5.8% | Overall (Can) -3.5% | Disc. 17.6% | Techno 13.8% | LatAm (EM) 6.0% | High Div. 12.1% | Quality 9.6% |
| US HY 3.7% | Real (Can) -3.8% | Staples 8.5% | Health Care 11.9% | Emerg Mrkts 4.6% | Low Vol. 9.1% | Growth 8.9% |
| C\$ per USD -2.8% | Muni. (Can) -4.0% | Industrials 6.8% | Disc. 10.3% | Asia (EM) 3.2% | Momentum 7.2% | Momentum 6.0% |
| Can Bonds -3.5% | Prov. (Can) -4.7% | Utilities 4.9% | Staples 5.0% | Japan -1.6% | | |
| Gold -7.0% | Long (Can) -7.4% | Materials -0.4% | Utilities 2.4% | | | |

Cross Assets – II of II



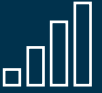
| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 YTD |
|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|--------------------------|
| Can Bonds 9.7% | EM 18.6% | S&P 500 32.4% | S&P 500 13.7% | C\$ per USD 19.9% | S&P/TSX 21.1% | EM 37.8% | C\$ per USD 9.0% | S&P 500 31.5% | Gold 20.9% | Commo. 31.4% |
| Gold 9.6% | EAFE 17.9% | EAFE 23.3% | Balanced* 11.7% | Balanced* 6.7% | US HY 17.5% | EAFE 25.6% | Can Bonds 1.4% | S&P/TSX 22.9% | EM 18.7% | S&P/TSX 17.3% |
| Can Pref. 5.8% | S&P 500 16.0% | Balanced* 15.0% | S&P/TSX 10.6% | Can Bonds 3.5% | S&P 500 12.0% | S&P 500 21.8% | Balanced* -1.5% | EAFE 22.7% | S&P 500 18.4% | S&P 500 15.3% |
| US HY 4.4% | US HY 15.6% | S&P/TSX 13.0% | C\$ per USD 9.0% | S&P 500 1.4% | EM 11.6% | Can Pref. 13.6% | US HY -2.3% | EM 18.9% | Balanced* 9.8% | Can Pref. 14.3% |
| C\$ per USD 2.5% | Balanced* 8.6% | US HY 7.4% | Can Bonds 8.8% | EAFE -0.4% | Commo. 11.4% | Gold 12.8% | Gold -2.8% | Gold 18.0% | Can Bonds 8.7% | EAFE 9.2% |
| S&P 500 2.1% | S&P/TSX 7.2% | C\$ per USD 6.7% | Can Pref. 6.8% | US HY -4.6% | Gold 7.7% | Balanced* 9.6% | S&P 500 -4.4% | Commo. 17.6% | EAFE 8.3% | EM 7.6% |
| Balanced* 0.9% | Gold 6.1% | Can Bonds -1.2% | US HY 2.5% | S&P/TSX -8.3% | Balanced* 7.0% | S&P/TSX 9.1% | Can Pref. -7.9% | Balanced* 15.5% | US HY 6.2% | Balanced* 5.8% |
| Commo. -1.2% | Can Pref. 5.5% | Commo. -1.2% | Gold -1.7% | Gold -10.9% | Can Pref. 7.0% | US HY 7.5% | S&P/TSX -8.9% | US HY 14.4% | Can Pref. 6.2% | US HY 3.7% |
| S&P/TSX -8.7% | Can Bonds 3.6% | EM -2.3% | EM -1.8% | EM -14.6% | Can Bonds 1.7% | Commo. 5.8% | EAFE -13.4% | Can Bonds 6.9% | S&P/TSX 5.6% | C\$ per USD -2.8% |
| EAFE -11.7% | Commo. 0.1% | Can Pref. -2.6% | EAFE -4.5% | Can Pref. -14.9% | EAFE 1.5% | Can Bonds 2.5% | Commo. -13.8% | Can Pref. 3.5% | C\$ per USD -1.8% | Can Bonds -3.5% |
| EM -18.2% | C\$ per USD -2.2% | Gold -28.7% | Commo. -33.1% | Commo. -32.9% | C\$ per USD -3.5% | C\$ per USD -6.6% | EM -14.2% | C\$ per USD -5.1% | Commo. -23.7% | Gold -7.0% |

Global Equities



| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 YTD |
|-------------------------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|-------------------------------|-------------------------------|------------------------------|-------------------------------|
| U.S. 4.6% | EMEA (EM) 19.7% | U.S. 41.3% | U.S. 23.9% | Japan 34.0% | LatAm (EM) 26.9% | Asia (EM) 33.9% | U.S. 4.2% | U.S. 24.8% | Asia (EM) 26.5% | Canada 17.3% |
| World -4.6% | Asia (EM) 18.6% | Japan 35.6% | Asia (EM) 14.8% | U.S. 21.6% | Canada 21.1% | Emerg Mrkts 28.7% | LatAm (EM) 2.2% | Canada 22.9% | Emerg Mrkts 16.6% | EMEA (EM) 13.0% |
| Europe -8.3% | Europe 17.3% | Europe 34.4% | World 14.1% | EAFE 19.5% | EMEA (EM) 16.3% | Japan 18.2% | World -0.7% | World 20.9% | U.S. 16.3% | U.S. 12.0% |
| Canada -8.7% | Emerg Mrkts 16.0% | World 31.7% | Canada 10.6% | World 17.7% | U.S. 8.1% | Europe 17.9% | EAFE -5.6% | Europe 18.3% | World 14.8% | World 9.4% |
| EAFE -9.5% | EAFE 15.3% | EAFE 31.6% | Emerg Mrkts 7.0% | Europe 17.1% | Emerg Mrkts 7.7% | EAFE 17.4% | Japan -6.0% | EAFE 16.5% | Japan 11.1% | Europe 9.1% |
| Japan -10.4% | World 14.2% | Canada 13.0% | Japan 5.4% | Asia (EM) 8.6% | World 4.7% | EMEA (EM) 17.0% | Emerg Mrkts -6.5% | Asia (EM) 13.6% | EAFE 6.4% | EAFE 6.1% |
| Asia (EM) -15.1% | U.S. 13.4% | Asia (EM) 9.2% | EAFE 4.1% | Emerg Mrkts 2.4% | Asia (EM) 2.8% | World 16.4% | Europe -6.6% | Japan 13.2% | Canada 5.6% | LatAm (EM) 6.0% |
| Emerg Mrkts -16.1% | Canada 7.2% | Emerg Mrkts 4.3% | Europe 2.8% | EMEA (EM) -3.6% | Japan -0.1% | LatAm (EM) 16.0% | Asia (EM) -7.5% | Emerg Mrkts 12.9% | Europe 4.1% | Emerg Mrkts 4.6% |
| LatAm (EM) -17.1% | LatAm (EM) 6.5% | EMEA (EM) 1.8% | LatAm (EM) -4.1% | Canada -8.3% | EAFE -2.0% | U.S. 13.8% | EMEA (EM) -7.9% | LatAm (EM) 11.9% | EMEA (EM) -8.1% | Asia (EM) 3.2% |
| EMEA (EM) -18.2% | Japan 5.2% | LatAm (EM) -7.3% | EMEA (EM) -7.1% | LatAm (EM) -17.0% | Europe -3.2% | Canada 9.1% | Canada -8.9% | EMEA (EM) 10.4% | LatAm (EM) -15.0% | Japan -1.6% |

S&P 500 Sectors



| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 YTD |
|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Utilities 19.9% | Financials 28.8% | Disc. 43.1% | Real Estate 30.2% | Disc. 10.1% | Energy 27.4% | Techno 38.8% | Health Care 6.5% | Techno 50.3% | Techno 43.9% | Energy 45.6% |
| Staples 14.0% | Disc. 23.9% | Health Care 41.5% | Utilities 29.0% | Health Care 6.9% | Comm. serv. 23.5% | Materials 23.8% | Utilities 4.1% | Comm. serv. 32.7% | Disc. 33.3% | Financials 25.7% |
| Health Care 12.7% | Real Estate 19.7% | Industrials 40.7% | Health Care 25.3% | Staples 6.6% | Financials 22.8% | Disc. 23.0% | Disc. 0.8% | Financials 32.1% | Comm. serv. 23.6% | Real Estate 23.3% |
| Real Estate 11.4% | Comm. serv. 18.3% | Financials 35.6% | Techno 20.1% | Techno 5.9% | Industrials 18.9% | Financials 22.2% | Techno -0.3% | S&P 500 31.5% | Materials 20.7% | Comm. serv. 19.7% |
| Comm. serv. 6.3% | Health Care 17.9% | S&P 500 32.4% | Staples 16.0% | Real Estate 4.7% | Materials 16.7% | Health Care 22.1% | Real Estate -2.2% | Industrials 29.4% | S&P 500 18.4% | Industrials 16.4% |
| Disc. 6.1% | S&P 500 16.0% | Techno 28.4% | Financials 15.2% | Comm. serv. 3.4% | Utilities 16.3% | S&P 500 21.8% | S&P 500 -4.4% | Real Estate 29.0% | Health Care 13.4% | S&P 500 15.3% |
| Energy 4.7% | Industrials 15.3% | Staples 26.1% | S&P 500 13.7% | S&P 500 1.4% | Techno 13.8% | Industrials 21.0% | Staples -8.4% | Disc. 27.9% | Industrials 11.1% | Materials 14.5% |
| Techno 2.4% | Materials 15.0% | Materials 25.6% | Industrials 9.8% | Financials -1.5% | S&P 500 12.0% | Staples 13.5% | Comm. serv. -12.5% | Staples 27.6% | Staples 10.7% | Techno 13.8% |
| S&P 500 2.1% | Techno 14.8% | Energy 25.1% | Disc. 9.7% | Industrials -2.5% | Disc. 6.0% | Utilities 12.1% | Financials -13.0% | Utilities 26.3% | Utilities 0.5% | Health Care 11.9% |
| Industrials -0.6% | Staples 10.8% | Utilities 13.2% | Materials 6.9% | Utilities -4.8% | Staples 5.4% | Real Estate 10.8% | Industrials -13.3% | Materials 24.6% | Financials -1.7% | Disc. 10.3% |
| Materials -9.8% | Energy 4.6% | Comm. serv. 11.5% | Comm. serv. 3.0% | Materials -8.4% | Real Estate 3.4% | Energy -1.0% | Materials -14.7% | Health Care 20.8% | Real Estate -2.2% | Staples 5.0% |
| Financials -17.1% | Utilities 1.3% | Real Estate 1.6% | Energy -7.8% | Energy -21.1% | Health Care -2.7% | Comm. serv. -1.3% | Energy -18.1% | Energy 11.8% | Energy -33.7% | Utilities 2.4% |



S&P/TSX Sectors



| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 YTD |
|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|------------------------------------|------------------------------------|-----------------------------------|------------------------------------|
| Health Care 50.4% | Health Care 24.7% | Health Care 72.1% | Staples 49.1% | Techno 15.6% | Materials 41.2% | Health Care 34.2% | Techno 13.0% | Techno 64.9% | Techno 80.7% | Energy 37.0% |
| Comm. serv. 24.9% | Staples 22.6% | Disc. 43.0% | Techno 35.1% | Staples 12.4% | Energy 35.5% | Disc. 22.8% | Real Estate 2.0% | Utilities 37.5% | Materials 21.2% | Financials 23.4% |
| Staples 6.8% | Disc. 22.1% | Industrials 37.5% | Health Care 30.3% | Real Estate 7.0% | Financials 24.1% | Industrials 19.7% | Staples 2.0% | Industrials 25.5% | Disc. 17.1% | Health Care 22.0% |
| Utilities 6.5% | Real Estate 20.9% | Techno 37.3% | Disc. 29.1% | Comm. serv. 3.6% | Industrials 22.8% | Techno 16.8% | Comm. serv. -0.8% | Materials 23.8% | Industrials 17.0% | Real Estate 21.7% |
| Real Estate 5.3% | Financials 17.6% | Financials 23.7% | Real Estate 22.8% | Disc. -1.5% | S&P/TSX 21.1% | Comm. serv. 14.8% | Industrials -2.4% | S&P/TSX 22.9% | Utilities 15.3% | Techno 21.7% |
| Industrials 4.2% | Industrials 15.3% | Staples 23.6% | Industrials 21.9% | Financials -1.7% | Utilities 17.7% | Financials 13.3% | S&P/TSX -8.9% | Real Estate 22.6% | S&P/TSX 5.6% | Comm. serv. 18.2% |
| Financials -2.9% | Comm. serv. 11.5% | Energy 13.6% | Utilities 16.1% | Utilities -3.5% | Comm. serv. 14.7% | Real Estate 11.2% | Utilities -8.9% | Energy 21.7% | Staples 4.3% | Disc. 17.6% |
| S&P/TSX -8.7% | S&P/TSX 7.2% | Comm. serv. 13.1% | Comm. serv. 15.5% | S&P/TSX -8.3% | Disc. 10.7% | Utilities 10.8% | Materials -9.3% | Financials 21.4% | Financials 1.6% | S&P/TSX 17.3% |
| Energy -9.9% | Utilities 4.0% | S&P/TSX 13.0% | Financials 13.8% | Industrials -11.1% | Real Estate 9.1% | S&P/TSX 9.1% | Financials -9.3% | Disc. 15.3% | Comm. serv. -3.7% | Staples 8.5% |
| Disc. -15.5% | Energy -0.6% | Real Estate 4.7% | S&P/TSX 10.6% | Health Care -15.6% | Staples 7.5% | Staples 7.8% | Health Care -15.9% | Staples 14.4% | Real Estate -8.7% | Industrials 6.8% |
| Materials -21.2% | Techno -2.9% | Utilities -4.1% | Materials -2.6% | Materials -21.0% | Techno 5.2% | Materials 7.7% | Disc. -16.0% | Comm. serv. 13.0% | Health Care -23.0% | Utilities 4.9% |
| Techno -52.5% | Materials -5.7% | Materials -29.1% | Energy -4.8% | Energy -22.9% | Health Care -78.4% | Energy -7.0% | Energy -18.3% | Health Care -10.9% | Energy -26.6% | Materials -0.4% |



US Factors



| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 YTD |
|--------------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| High Div. 14.3% | Small 18.2% | Small 38.3% | Low Vol. 16.8% | Momentum 9.3% | Small 19.8% | Momentum 37.8% | Low Vol. 1.0% | Quality 39.1% | Growth 43.1% | Small 18.7% |
| Low Vol. 13.1% | Growth 17.3% | Momentum 34.8% | High Div. 14.9% | Quality 7.0% | Value 16.9% | Growth 28.7% | Momentum -1.6% | Growth 37.7% | Momentum 29.6% | Value 16.3% |
| Quality 8.4% | MSCI USA 16.1% | Quality 33.5% | Momentum 14.7% | Low Vol. 5.3% | High Div. 16.3% | Quality 26.0% | Growth -2.0% | Low Vol. 35.0% | Quality 22.9% | Quality 15.0% |
| Momentum 6.1% | Large 16.0% | Growth 32.8% | Growth 14.4% | Growth 4.6% | Low Vol. 14.3% | Large 22.3% | High Div. -2.3% | Large 31.8% | Large 21.4% | MSCI USA 14.9% |
| Large 2.6% | Momentum 15.1% | MSCI USA 32.6% | Large 13.6% | Large 1.9% | MSCI USA 11.6% | Low Vol. 22.3% | Quality -2.6% | MSCI USA 31.6% | MSCI USA 21.4% | Large 14.6% |
| Growth 2.4% | Value 15.0% | Value 32.3% | MSCI USA 13.4% | MSCI USA 1.3% | Large 11.5% | MSCI USA 21.9% | Large -3.7% | Momentum 28.1% | Small 18.9% | Growth 13.2% |
| MSCI USA 2.0% | Low Vol. 15.0% | Large 32.1% | Value 12.3% | High Div. 0.7% | Quality 8.0% | High Div. 19.5% | MSCI USA -4.5% | Small 27.4% | Low Vol. 2.6% | High Div. 12.1% |
| Value 1.5% | Quality 14.0% | High Div. 28.9% | Quality 11.8% | Value -1.9% | Growth 6.5% | Small 17.3% | Value -7.2% | Value 25.7% | High Div. 1.7% | Low Vol. 9.1% |
| Small -3.0% | High Div. 10.6% | Low Vol. 27.1% | Small 7.6% | Small -3.6% | Momentum 5.1% | Value 15.4% | Small -10.0% | High Div. 22.5% | Value 0.9% | Momentum 7.2% |

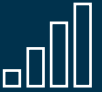
Canadian Factors



| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 YTD |
|-----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|
| High Div. 4.8% | Quality 9.7% | Momentum 17.8% | Growth 19.4% | Momentum 3.1% | Value 30.3% | Quality 12.9% | Quality -3.1% | Momentum 29.1% | Growth 17.9% | High Div. 25.6% |
| Low Vol. 4.2% | Value 9.5% | Quality 16.6% | Quality 18.7% | Quality -3.5% | High Div. 28.5% | Value 10.6% | Low Vol. -6.8% | High Div. 25.8% | Momentum 14.6% | Value 21.8% |
| Quality -4.4% | Momentum 8.9% | High Div. 16.0% | Low Vol. 17.2% | Low Vol. -3.6% | Small 27.9% | Momentum 10.2% | Large -7.6% | Quality 24.9% | Small 12.8% | Large 18.6% |
| Momentum -4.6% | Large 8.1% | Value 13.9% | Momentum 15.6% | Growth -5.7% | Large 21.4% | Large 9.8% | Growth -8.3% | Low Vol. 24.1% | S&P/TSX 5.6% | S&P/TSX 17.3% |
| S&P/TSX -8.7% | High Div. 7.6% | Large 13.3% | Large 12.3% | Large -7.8% | S&P/TSX 21.1% | S&P/TSX 9.1% | Value -8.5% | Small 23.6% | Large 5.6% | Small 16.8% |
| Large -9.1% | S&P/TSX 7.2% | S&P/TSX 13.0% | S&P/TSX 10.6% | S&P/TSX -8.3% | Low Vol. 17.6% | Small 8.3% | S&P/TSX -8.9% | S&P/TSX 22.9% | Quality 0.7% | Low Vol. 15.3% |
| Value -9.9% | Low Vol. 6.9% | Low Vol. 12.2% | Value 8.3% | Value -8.7% | Quality 12.8% | Low Vol. 7.8% | Momentum -9.3% | Growth 22.3% | Value -1.0% | Quality 9.6% |
| Small -13.4% | Growth 2.8% | Small 12.0% | High Div. 5.2% | Small -11.6% | Growth 9.6% | Growth 7.7% | High Div. -10.8% | Large 21.9% | Low Vol. -1.4% | Growth 8.9% |
| Growth -15.1% | Small 1.8% | Growth 9.9% | Small 1.4% | High Div. -14.6% | Momentum 9.2% | High Div. 7.6% | Small -13.4% | Value 19.1% | High Div. -7.4% | Momentum 6.0% |



Fixed Income



| 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 YTD |
|------------------------------|------------------------------|-------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------------|
| Real (Can) 18.3% | HY (US) 15.6% | HY (US) 7.4% | Long (Can) 17.5% | Prov. (Can) 4.1% | HY (US) 17.5% | Prefs (Can) 13.6% | Fed. (Can) 2.4% | HY (US) 14.4% | Real (Can) 12.9% | Prefs (Can) 14.3% |
| Long (Can) 18.1% | IG (US) 10.4% | Short (Can) 1.7% | Real (Can) 13.6% | Long (Can) 3.8% | Prefs (Can) 7.0% | HY (US) 7.5% | Short (Can) 1.9% | IG (US) 14.2% | Long (Can) 11.9% | HY (US) 3.7% |
| Prov. (Can) 13.2% | Corp (Can) 6.2% | Corp (Can) 0.8% | Prov. (Can) 12.2% | Fed. (Can) 3.7% | IG (US) 6.0% | Long (Can) 7.0% | Overall (Can) 1.4% | Long (Can) 12.7% | Muni. (Can) 10.1% | Short (Can) -0.5% |
| Muni. (Can) 11.6% | Prefs (Can) 5.5% | Muni. (Can) -0.8% | Muni. (Can) 11.4% | Overall (Can) 3.5% | Corp (Can) 3.7% | IG (US) 6.5% | Corp (Can) 1.1% | Prov. (Can) 9.1% | Prov. (Can) 9.9% | IG (US) -1.1% |
| Overall (Can) 9.7% | Long (Can) 5.2% | Overall (Can) -1.2% | Overall (Can) 8.8% | Muni. (Can) 3.2% | Real (Can) 2.7% | Muni. (Can) 4.7% | Muni. (Can) 0.9% | Muni. (Can) 8.8% | IG (US) 9.8% | Corp (Can) -2.3% |
| Fed. (Can) 8.4% | Overall (Can) 3.6% | IG (US) -1.5% | Corp (Can) 7.6% | Corp (Can) 2.7% | Long (Can) 2.5% | Prov. (Can) 4.3% | Prov. (Can) 0.7% | Real (Can) 8.3% | Corp (Can) 8.7% | Fed. (Can) -2.9% |
| Corp (Can) 8.2% | Muni. (Can) 3.5% | Fed. (Can) -1.5% | IG (US) 7.5% | Short (Can) 2.6% | Muni. (Can) 2.0% | Corp (Can) 3.4% | Long (Can) 0.3% | Corp (Can) 8.1% | Overall (Can) 8.7% | Overall (Can) -3.5% |
| IG (US) 7.5% | Prov. (Can) 3.4% | Prefs (Can) -2.6% | Fed. (Can) 6.9% | Real (Can) 2.6% | Prov. (Can) 1.8% | Overall (Can) 2.5% | Real (Can) -0.2% | Overall (Can) 6.9% | Fed. (Can) 7.3% | Real (Can) -3.8% |
| Prefs (Can) 5.8% | Real (Can) 2.9% | Prov. (Can) -2.7% | Prefs (Can) 6.8% | IG (US) -0.6% | Overall (Can) 1.7% | Real (Can) 0.4% | IG (US) -2.2% | Fed. (Can) 3.7% | HY (US) 6.2% | Muni. (Can) -4.0% |
| Short (Can) 4.7% | Fed. (Can) 2.1% | Long (Can) -6.2% | Short (Can) 3.1% | HY (US) -4.6% | Short (Can) 1.0% | Fed. (Can) 0.1% | HY (US) -2.3% | Prefs (Can) 3.5% | Prefs (Can) 6.2% | Prov. (Can) -4.7% |
| HY (US) 4.4% | Short (Can) 2.0% | Real (Can) -12.6% | HY (US) 2.5% | Prefs (Can) -14.9% | Fed. (Can) 0.0% | Short (Can) 0.1% | Prefs (Can) -7.9% | Short (Can) 3.1% | Short (Can) 5.3% | Long (Can) -7.4% |

Credits

& Legal Disclaimers

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