



# Navigating Rising Interest Rates & Inflation



Canadian Securities Institute  
A Moody's Analytics Company

# Presenters



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# Defining Economics

Economics:

Macro

Micro

# Overview of Economics

## Measuring Economic Growth

### GDP:

- The total market value of all the final goods and services produced in a country
- Two approaches to value:
  - Expenditure
  - Income
  - Production
- Nominal GDP is the change in the dollar value of goods and services
- Real GDP is based only on productivity

# Overview of Economics

## Expenditure Approach to Calculating Gross Domestic Product

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$$GDP = C + I + G + (X - M)$$

Where:

$C$  = consumers

$I$  = business spending and investment

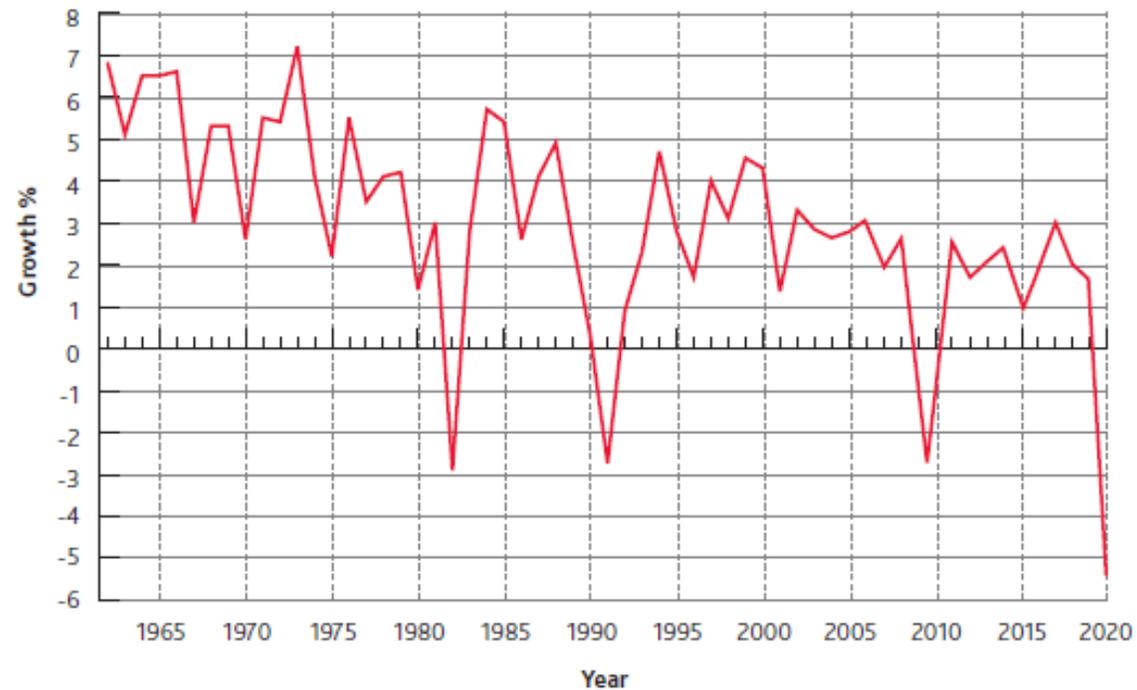
$G$  = government spending

$X - M$  = the amount of exports ( $X$ ) and imports ( $M$ ) that consumers and businesses buy during the period

# Overview of Economics

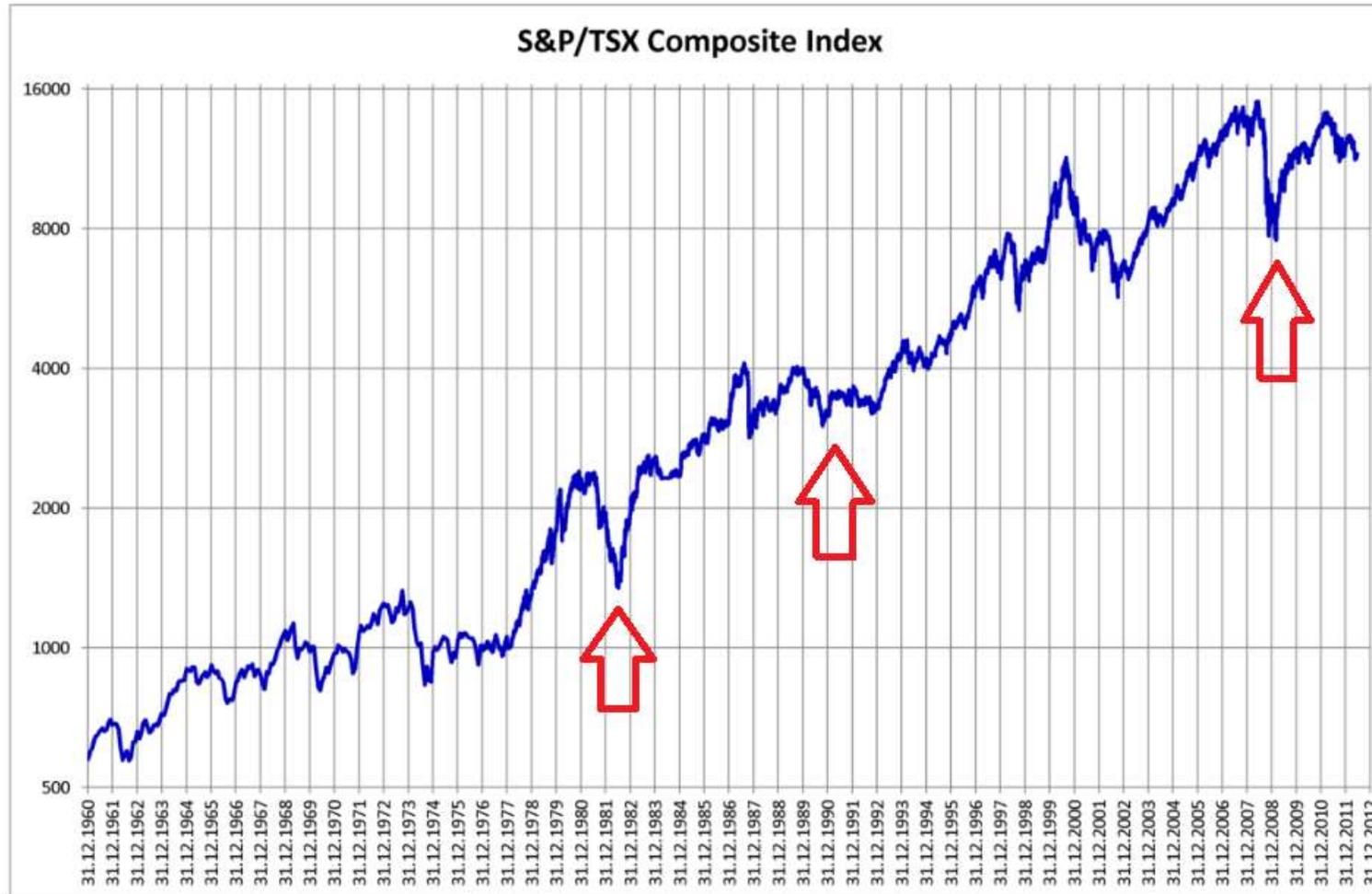
Growth rate in Canada's real GDP

Annual Growth Rate in Canada's Real Gross Domestic Product



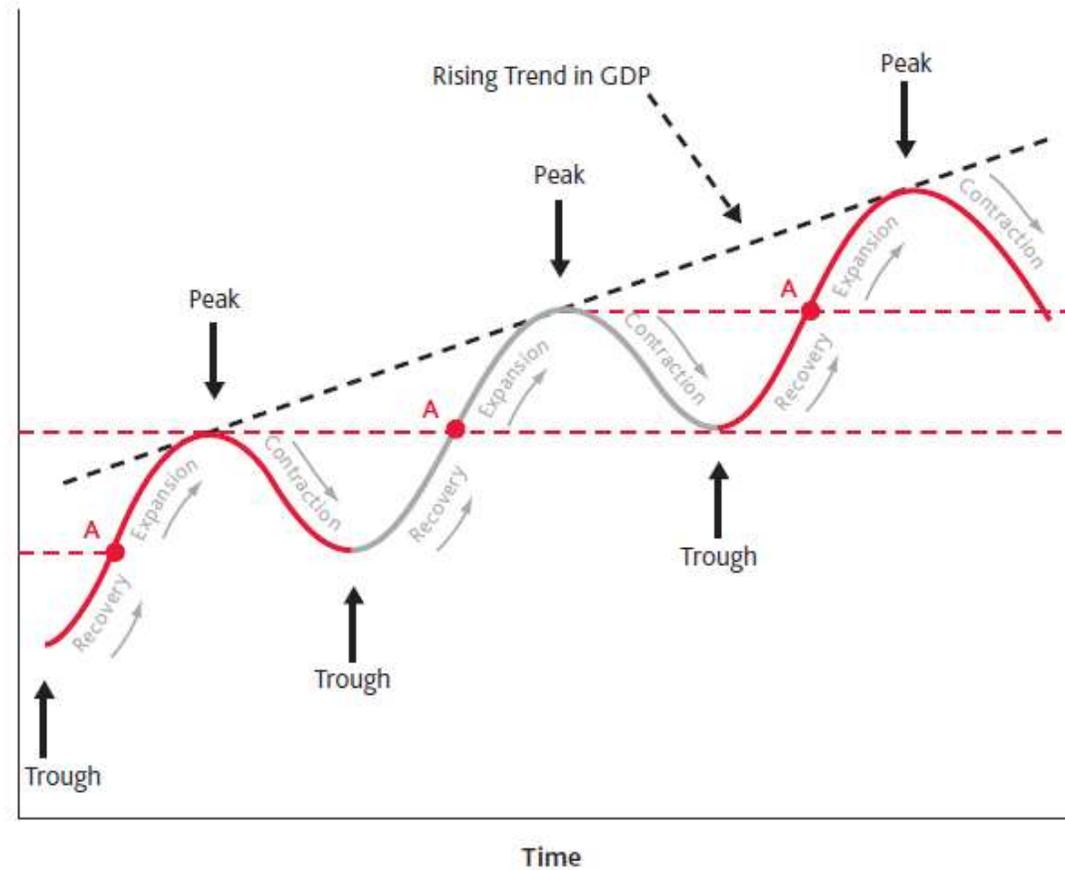
Source: Statistics Canada

# Overview of Economics



# Overview of Economics

## Growth rate in Canada's real GDP



# Overview of Economics

The Role of Interest Rates:

Impacts of Interest Rates

Factors

# Overview of Economics

The Role of Interest Rates:

Impacts of Interest Rates

Factors

- Interest rates are the price of credit, for businesses and consumers.
- Changes in interest rates are felt throughout the entire economy.

# Overview of Economics

The Role of Interest Rates:

Impacts of Interest Rates

Factors

- Demand and Supply of Capital
- Default Risk
- Foreign Interest Rates/Exchange Rate
- Central Bank Credibility
- Inflation

# Overview of Economics

## Negative Interest Rates

- Interest rate less than zero
- Banks may charge you to hold deposits
- No interim interest payments on loans (pay back less than you borrowed)
- Purpose: stimulate lending and spending
- Negative rates in the U.S. in March 2020
- Not as likely in Canada

# Overview of Economics

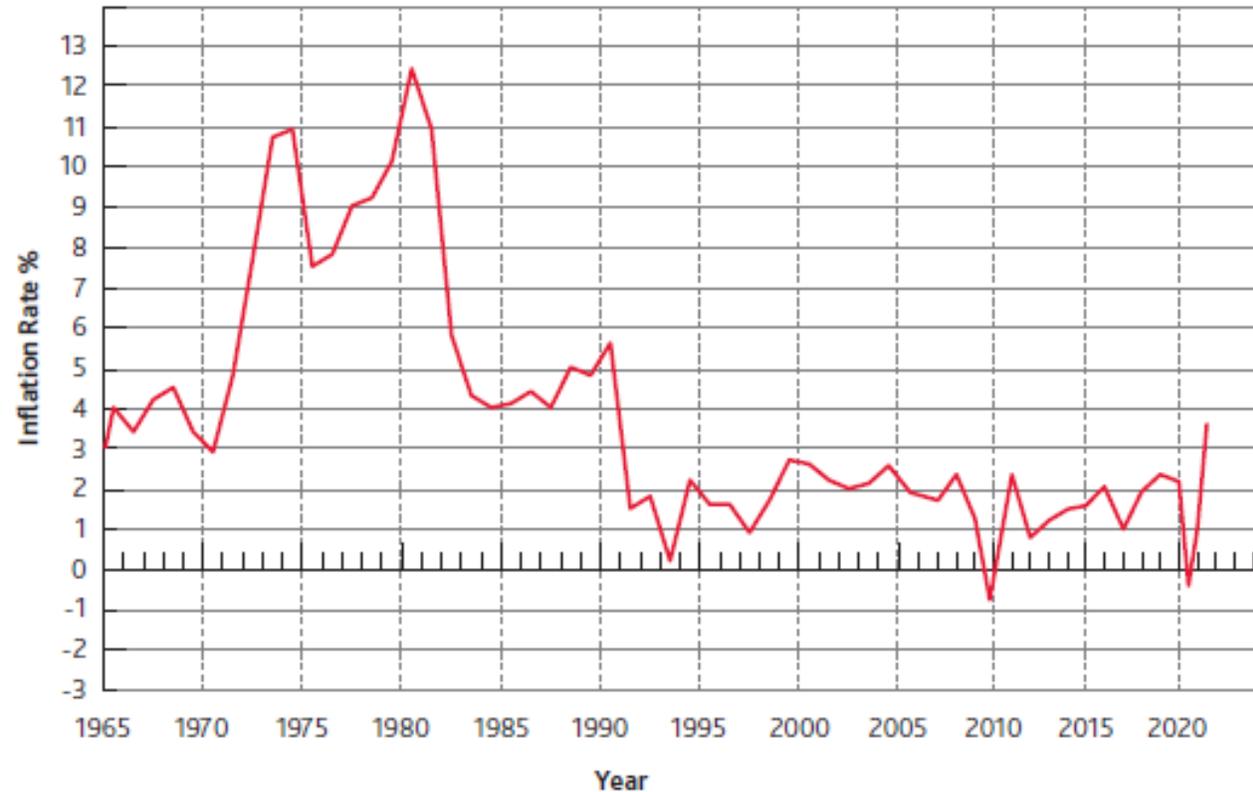
## The Impact of Inflation

- A one-time jump in prices is not true inflation.
- Inflation occurs when prices follow a sustained rising pattern.

$$\text{Inflation Rate} = \frac{\text{CPI Current Period} - \text{CPI Previous Period}}{\text{CPI Previous Period}} \times 100$$

# Overview of Economics

## Annual Growth Rate in Canada's Real Gross Domestic Product

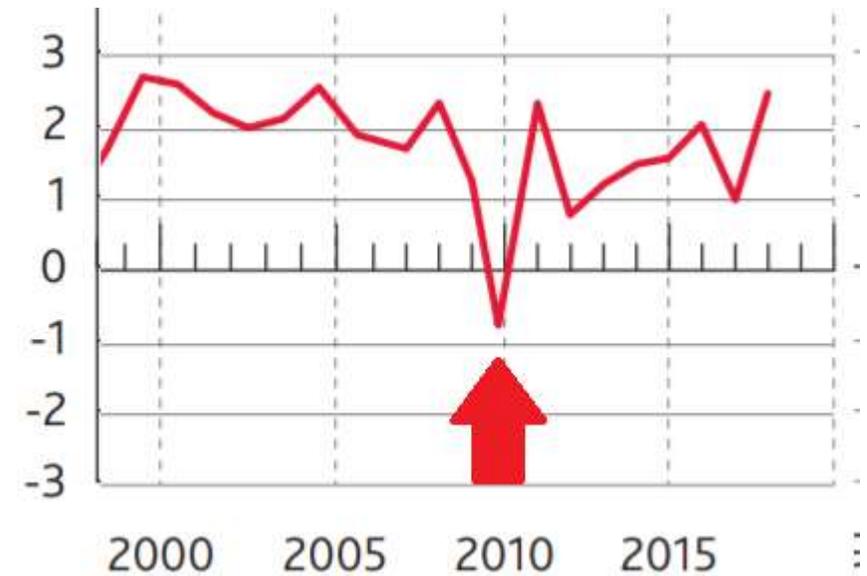


Source: Bank of Canada

# Overview of Economics

## The Impact of Inflation

- Deflation occurs when the annual change in CPI is negative year over year
- Falling prices can have a negative effect



# Economy Policy

## Fiscal Policy

- To stimulate the economy the government can lower individual and business taxes.
- If it increases taxes it is more difficult for consumers and businesses to spend, thereby lowering inflation.

# Economy Policy

The Bank of Canada

Four areas of responsibility:

- Monetary Policy
- An Efficient Financial System
- Printing and Distributing Physical Currency
- Funds Management

# Economy Policy

## Monetary Policy

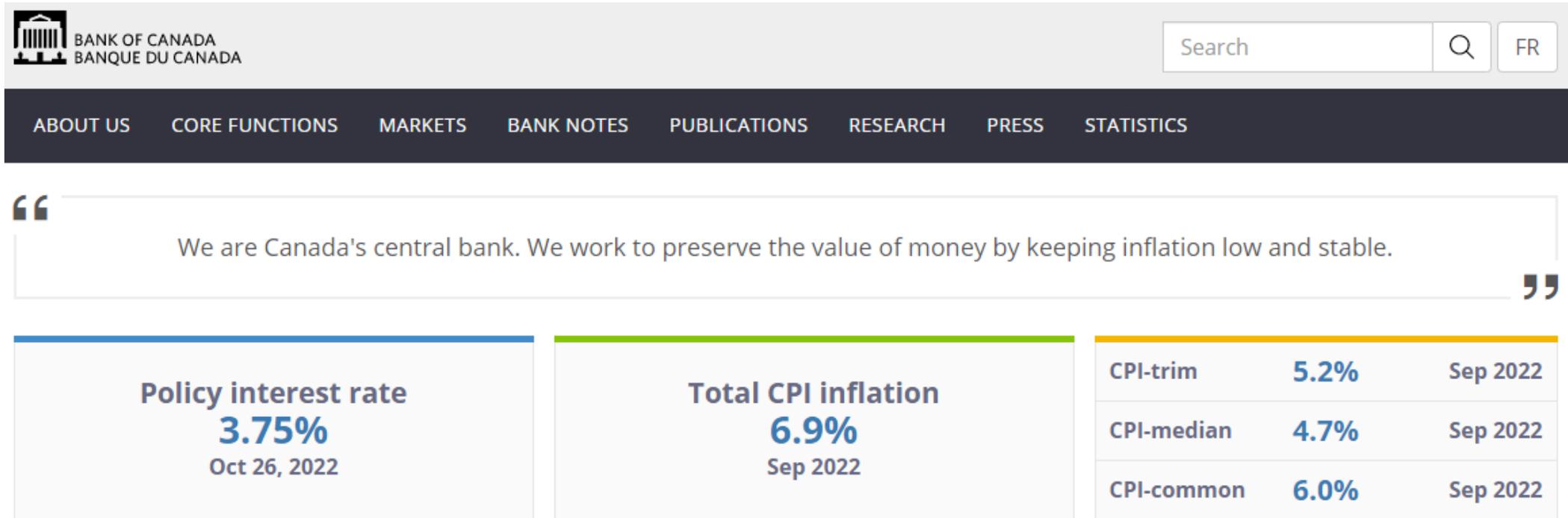
The Bank's primary monetary tool:

Interest Rates

The screenshot shows the Bank of Canada website. At the top left is the Bank of Canada logo with the text "BANK OF CANADA" and "BANQUE DU CANADA". To the right is a search bar with a magnifying glass icon and a "FR" language selector. Below the logo is a dark navigation bar with the following menu items: ABOUT US, CORE FUNCTIONS, MARKETS, BANK NOTES, PUBLICATIONS, RESEARCH, PRESS, and STATISTICS. Below the navigation bar is a quote box with the text: "We are Canada's central bank. We work to preserve the value of money by keeping inflation low and stable." Below the quote box are three data boxes. The first box, titled "Policy interest rate", shows a rate of 3.75% as of Oct 26, 2022. The second box, titled "Total CPI inflation", shows a rate of 6.9% as of Sep 2022. The third box is a table showing three types of CPI inflation: CPI-trim at 5.2%, CPI-median at 4.7%, and CPI-common at 6.0%, all as of Sep 2022.

|   |   |   |          |             |          |            |             |          |            |             |          |
|---|---|---|----------|-------------|----------|------------|-------------|----------|------------|-------------|----------|
| <b>Policy interest rate</b><br><b>3.75%</b><br>Oct 26, 2022 | <b>Total CPI inflation</b><br><b>6.9%</b><br>Sep 2022 | <table border="1"><tr><td>CPI-trim</td><td><b>5.2%</b></td><td>Sep 2022</td></tr><tr><td>CPI-median</td><td><b>4.7%</b></td><td>Sep 2022</td></tr><tr><td>CPI-common</td><td><b>6.0%</b></td><td>Sep 2022</td></tr></table> | CPI-trim | <b>5.2%</b> | Sep 2022 | CPI-median | <b>4.7%</b> | Sep 2022 | CPI-common | <b>6.0%</b> | Sep 2022 |
| CPI-trim  | <b>5.2%</b>   | Sep 2022  |          |             |          |            |             |          |            |             |          |
| CPI-median  | <b>4.7%</b>   | Sep 2022  |          |             |          |            |             |          |            |             |          |
| CPI-common  | <b>6.0%</b>   | Sep 2022  |          |             |          |            |             |          |            |             |          |

# Economy Policy



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**Policy interest rate**  
**3.75%**  
Oct 26, 2022

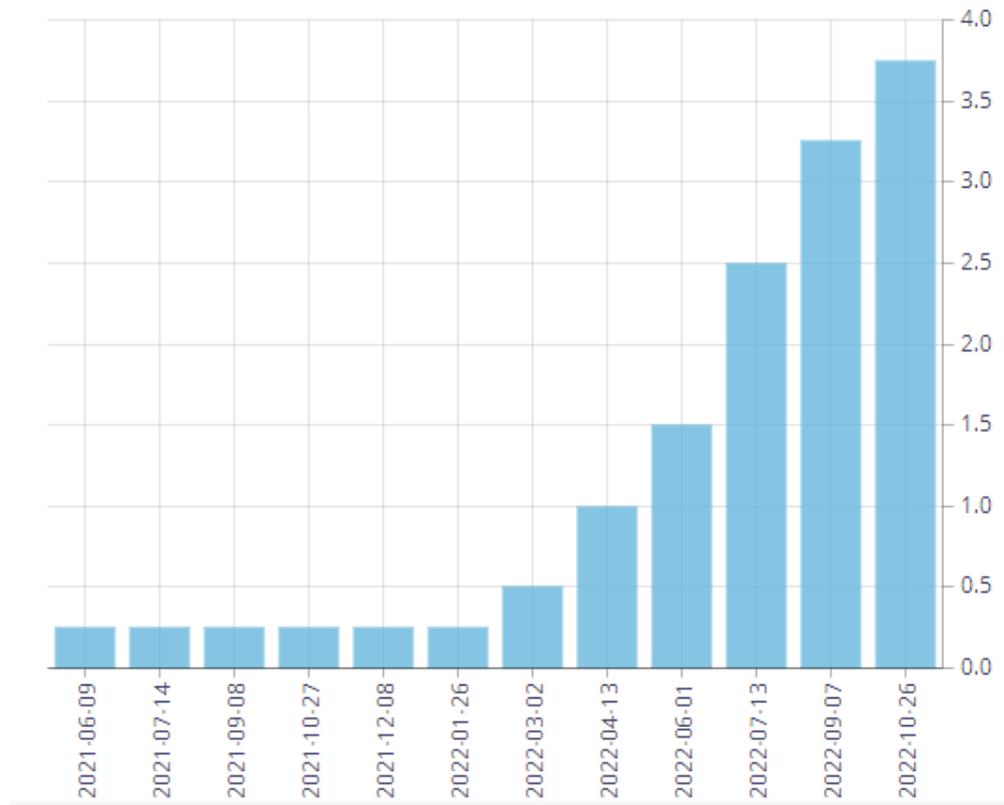
**Total CPI inflation**  
**6.9%**  
Sep 2022

|            |             |          |
|------------|-------------|----------|
| CPI-trim   | <b>5.2%</b> | Sep 2022 |
| CPI-median | <b>4.7%</b> | Sep 2022 |
| CPI-common | <b>6.0%</b> | Sep 2022 |



# Economy Policy

## Recent data



## Schedule for 2022

| Dates       | Publications   |
|-------------|--|
| January 26  | Interest rate announcement and <i>Monetary Policy Report</i> |
| March 2     | Interest rate announcement                                   |
| April 13    | Interest rate announcement and <i>Monetary Policy Report</i> |
| June 1      | Interest rate announcement                                   |
| July 13     | Interest rate announcement and <i>Monetary Policy Report</i> |
| September 7 | Interest rate announcement                                   |
| October 26  | Interest rate announcement and <i>Monetary Policy Report</i> |
| December 7  | Interest rate announcement                                   |

# Economy Policy

Monetary Policy:

The Bank's monetary tools are:

Open Market Operations

Drawdowns and Redeposits

These keep the overnight market trading within the operating band:

- SPRAs (also known as overnight repos) lend money at a lower rate to push interest rates down
- SRAs (also known as overnight reverse repos) are an offer by the Bank to borrow at a higher rate to push interest rates up

# Economy Policy

Monetary Policy:

The Bank's monetary tools are:

Open Market Operations

Drawdowns and Redeposits

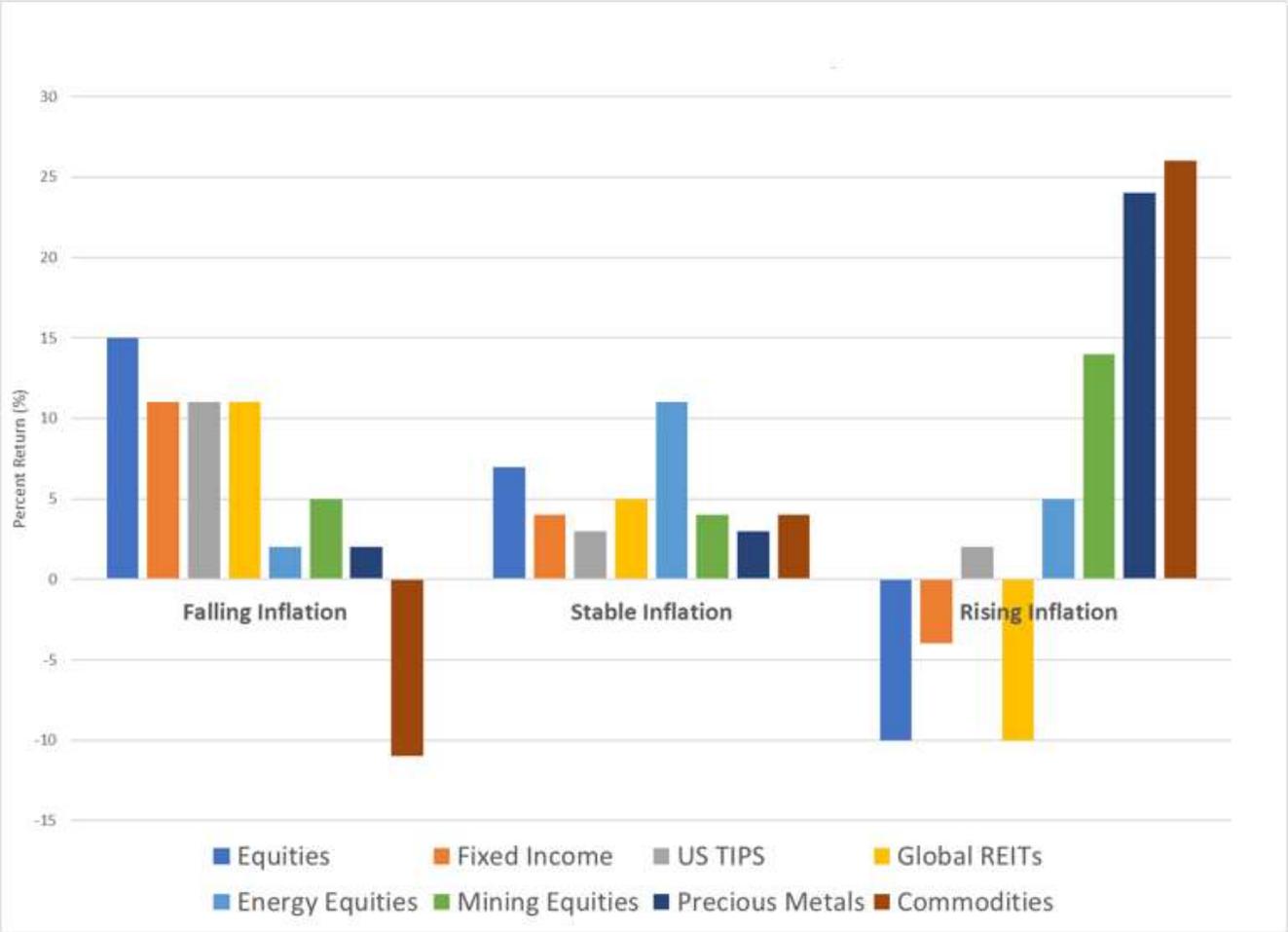
- Drawdowns are transfers to the Bank of Canada from the chartered banks, limiting the supply of cash balances in the banking system.
- Redeposits are transfers from the Bank of Canada to the chartered banks, increasing the supply of cash and decreasing interest rates.

# Economy Policy

## The Challenges of Government Policy

- Time lags
- Politics
- Future expectations
- Co-ordination of Government Policies
- High Debt
- Impact of International Economies

# Asset Class Returns over Various Inflationary Time Periods



Note: (\*) poor performance of broad-based equity indices during periods of rising inflation

# Fixed income securities and increasing inflation expectations do not mix well ...

The 'connection' between the two is as follows:

Increasing inflation expectations

→ tighter monetary policy

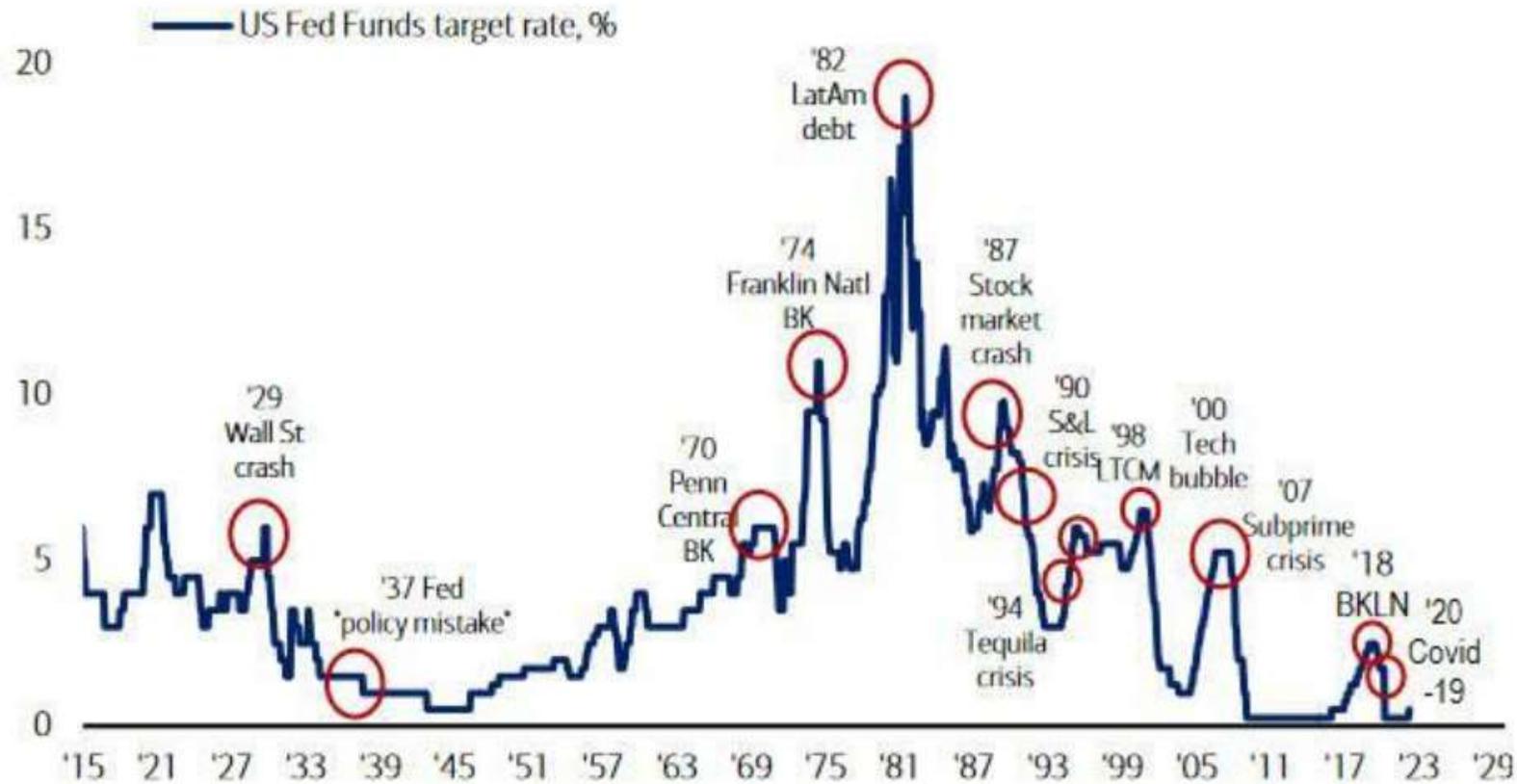
→ tighter credit market conditions

→ higher interest rates

→ higher discount rates for fixed income securities

→ lower fixed income security prices.

# Fed hiking cycles with deflationary events ...



Source: BofA Global Investment Strategy, Bloomberg

# Bond portfolio: Defensive action (duration reduction)

Action: Reduce bond portfolio's average term to maturity (duration) in order to be less sensitive to interest rate increases (and falling bond market prices)

- Pros:
  - Quick and easy to implement
  - Fully customizable
  - Low cost (small bid/ask spreads, especially if done with GoC bonds)
- Cons:
  - Can accelerate capital gains-related cash income tax payments (if done in a non-tax advantaged portfolio)

# Inflation-linked bonds: Treasury Inflation-Protected Securities (TIPS)

- Issued and guaranteed by U.S. federal government
- Issued quarterly: 5-, 10-, and 30-year maturities
- Pay semi-annual interest based on 'real' coupon rate (currently 2.5-3.0%) applied to principal amount (that is semi-annually adjusted by CPI)

| Pros   | Cons  |
|--|---|
| Improved total portfolio diversification (low correlation with other asset classes)    | Cash income tax exposure if principal increases during the tax year |
| Less volatile than fixed-term UST bonds  |   |
| Deflation floor (par value floor ... even if in a cumulative deflationary time period) |   |
| Highly liquid (turnover > US\$5 billion/day)   |   |

# Inflation-linked bonds: Real Return Bonds (RRBs)

- Issued and guaranteed by Canadian federal government
- Issued quarterly: 5-, 10-, and 30-year maturities
- Pay semi-annual interest based on 'real' coupon rate applied to principal amount (that is adjusted semi-annually by Canadian CPI)

| Pros  | Cons  |
|---|---|
| Improved total portfolio diversification (low correlation with other asset classes) | Cash income tax exposure if principal increases during the tax year |
| Less volatile than fixed-term GoC bonds   |   |
| Returns are highly correlated with inflation index (CPI)                            |   |
| Highly liquid   |   |

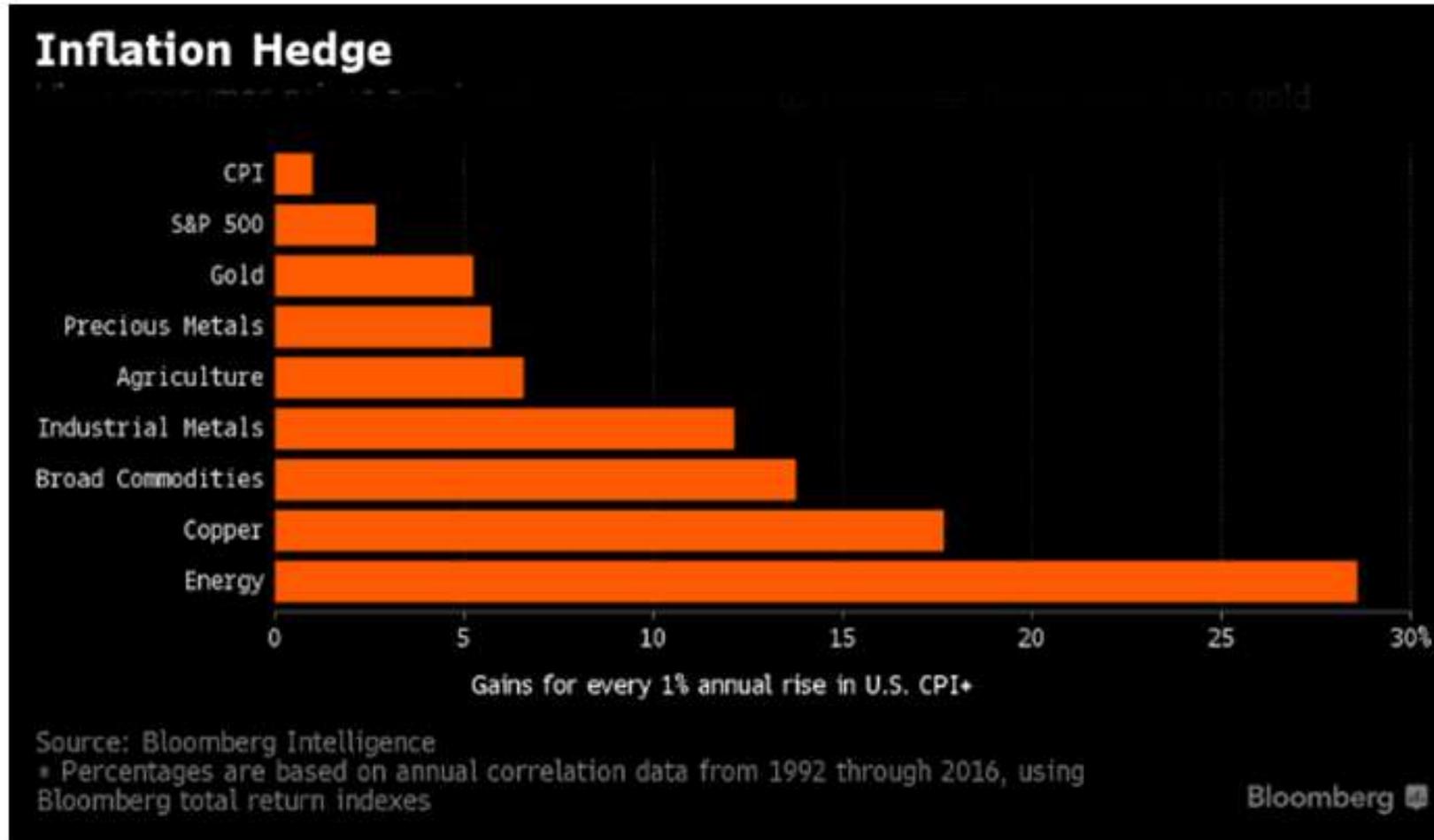
# Floating Rate Notes (FRNs)

- Commonly referred to as 'floaters'
- Issuers: Corporations, banks, other financial institutions, as well as governments
- Variable coupon rate
  - Coupon set as defined (fixed) spread to benchmark rate ... Fed Funds, 3-,6-month, and 1-year T-Bill rate, 2-, 5-, 10-, 20-, and 30-year US treasury rates)
- Term to maturity: Typically, the 2-year to 5-year range (although some are as long as 20-years)
- Spread is a function of:
  - Credit rating of issuer,
  - Term to maturity

# Inverse Bond ETFs

- Commonly referred to as 'bear bond' ETFs
- Designed to move in the opposite direction as bond market prices
- ETF is essentially a 'short' position on the bond market
  - Fund is either: short the underlying bonds, and/or through (OTC) interest rate swaps
  - Expected to increase in value in an inflationary environment ... as interest rate increase ... and bond market prices fall
- Involves KYP and KYC DD standards related to inverse (and leveraged) ETFs
  - Tactical application (short-term hedge) ... rather than strategic commitment for long term

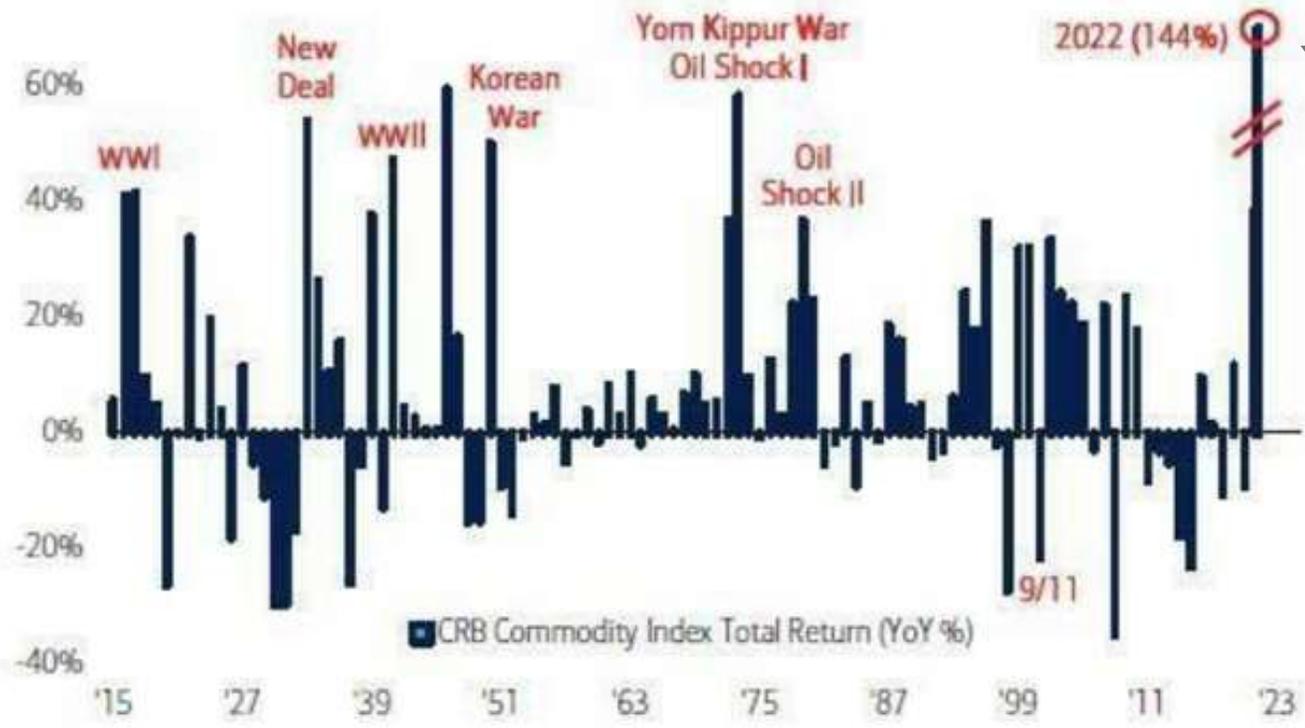
# Commodity correlation with inflation



Commodities generally correlate positively with inflation

# Strongest start to any year since 1915 for commodity prices ...

CRB Commodity Index Total Return (annual)



April 2022 YTD annualized total return = 144%

Source: BofA Global Investment Strategy, Bloomberg, Datastream  
\*2022 YTD annualized

# In addition to inflation hedging benefits ... commodities appear historically cheap relative to equities

Commodities have essentially been 'ignored' post the 2008 Great Financial Crisis



# Commodities: Investment vehicles

- Direct (physical) investment
- Derivatives (futures)
- Equity investments linked to commodities:
  - ETFs: Directly-linked to underlying commodities (single or basket)
  - Commodity sector funds (mutual fund and ETF)
  - Individual commodity-related equities

# Equity performance in an inflationary environment

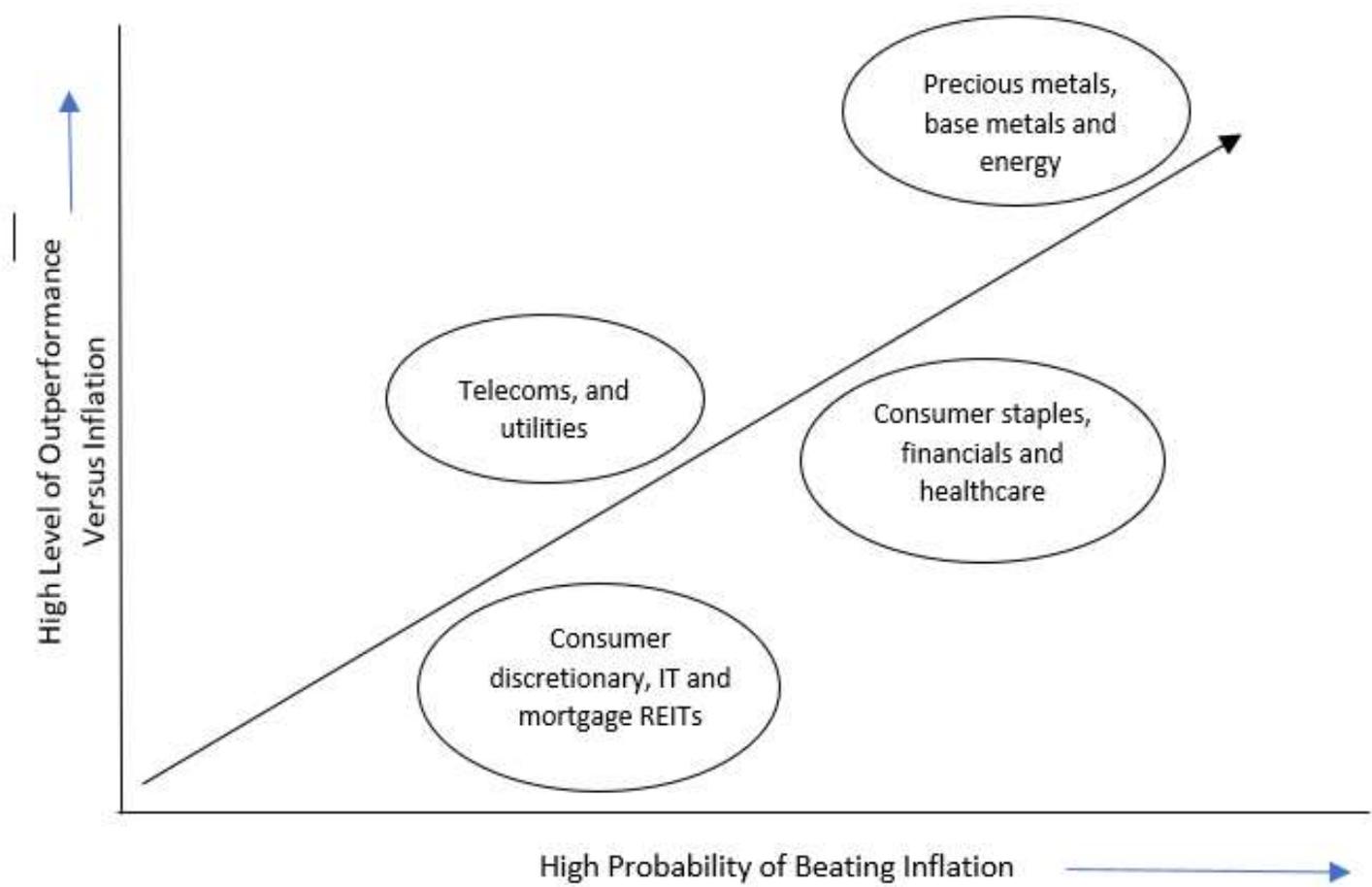
Two key issues (often not emphasized):

- Ability to pass through rising costs to customers (and therefore maintain operating margins)
  - Revenue growth source: Number of units versus sales \$/unit
- Multiple compression (both overall stock market and industry specific)

# Equity performance in an inflationary environment: Sector selection

- Sector selection is critical to provide greater inflation protection
  - Can offer returns sometimes far in excess of the rate of inflation – and providing superior (after inflation) returns to **the client's overall equity portfolio**
- Sector performance is heavily influenced by the ability to pass-through higher input costs to customers
  - Ability to do so varies by sector – and by company within a sector

# Equity market sector: relative performance in inflationary environments



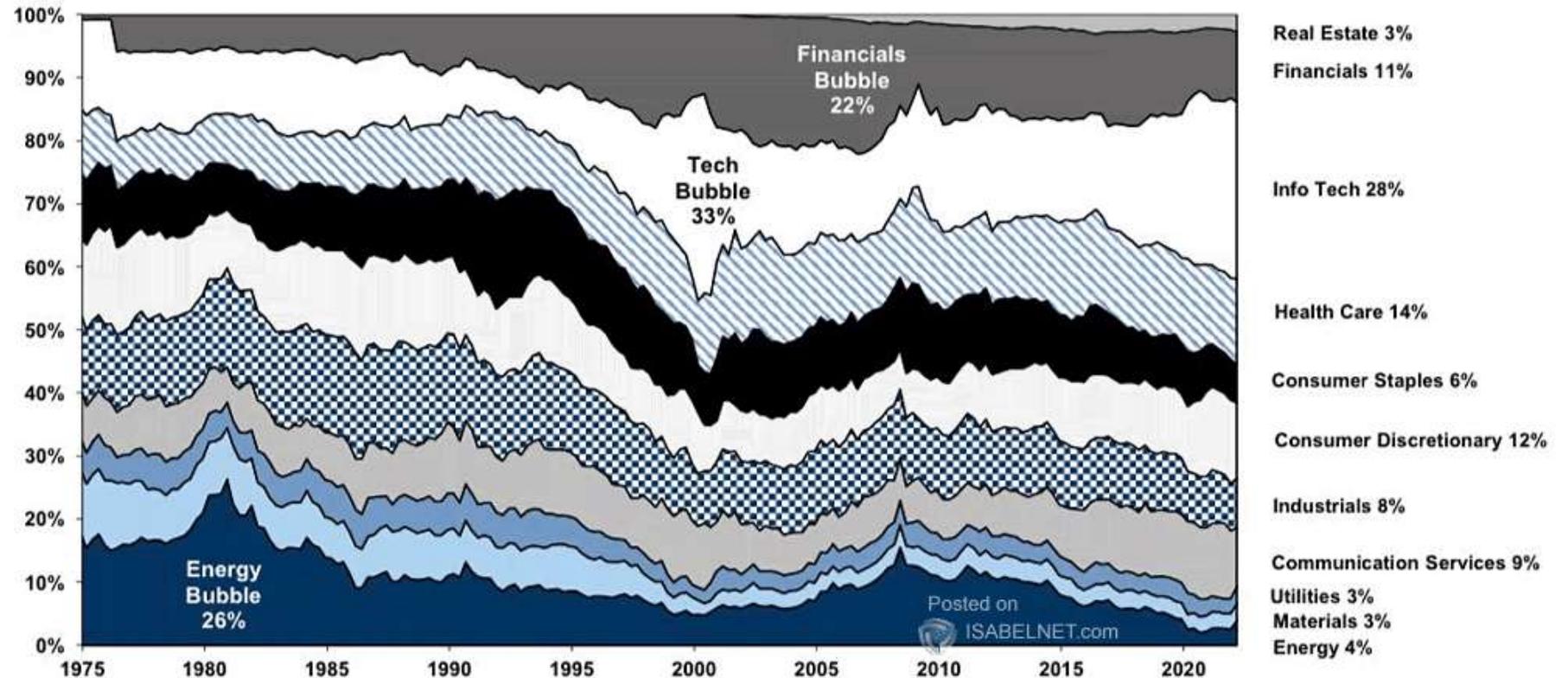
# Commodities tend to be top performers in inflationary environments: Two main contributing factors

- Selling prices of current production increases with higher commodity prices
  - Leads (typically) to operating margin expansion (assuming operating/input costs do not increase proportionately)
- AND
- Net asset value (NAV) of their reserves increases due to their higher value

# Materials and Energy form only 7% of S&P 500 Index weighting: March 2022

Commodities were 27% of US equity index weighting in 1975.

In 2022, the 'role' of commodities in the US stock market is marginal



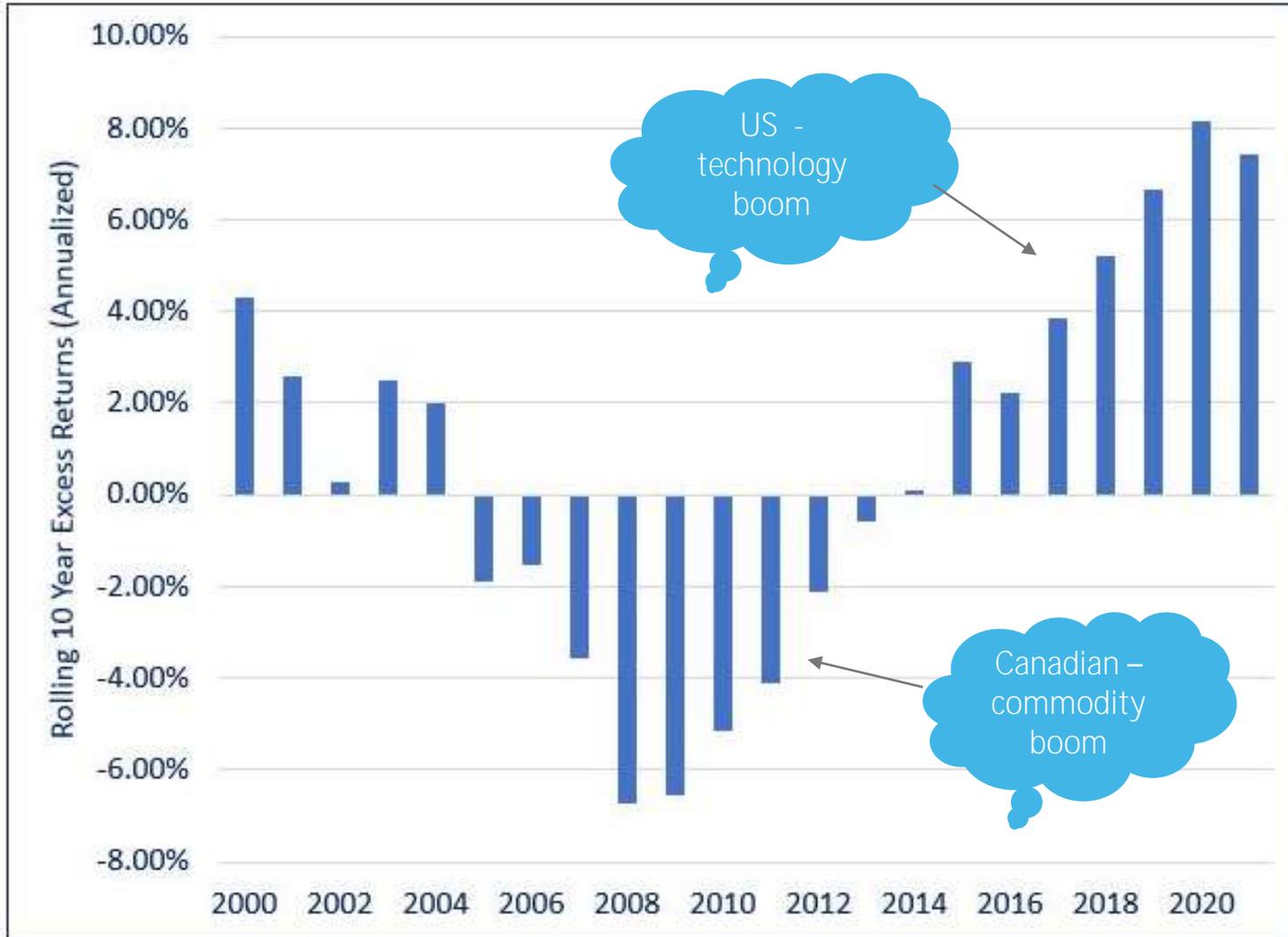
Source: Compustat, FactSet, Goldman Sachs Global Investment Research

# TSX Composite Index versus S&P 500 Index: Sector Weights (12/31/21)

| Sector                 | Weight in TSX Composite Index (%) | Weight in S&P 500 Index (%) | Difference (TSX – S&P 500) (%) |
|------------------------|-----------------------------------|-----------------------------|--------------------------------|
| Financials             | 32.2                              | 10.7                        | 21.5                           |
| Energy                 | 13.1                              | 2.7                         | 10.4                           |
| Materials              | 11.5                              | 2.6                         | 9.0                            |
| industrials            | 12.0                              | 7.8                         | 4.2                            |
| Utilities              | 4.6                               | 2.5                         | 2.1                            |
| Real Estate            | 3.1                               | 2.8                         | 0.3                            |
| Consumer staples       | 3.7                               | 5.9                         | -2.1                           |
| Communication Services | 4.7                               | 10.2                        | -5.4                           |
| Consumer Discretionary | 3.6                               | 12.5                        | -8.9                           |
| Health Care            | 0.8                               | 13.3                        | -12.5                          |
| Information technology | 10.7                              | 29.2                        | -18.5                          |

TSX offers superior commodity sector exposure versus the S&P 500 Index

# S&P 500 vs. TSX Composite: Rolling 10-year excess returns (2000-2021)



The underperformance of the TSX Composite vs. the S&P 500 over the past several years has been extreme from a historical perspective.

Canadian stocks have suffered one of their worst 10-year periods of underperformance since 2000.

# Equity investment products for commodity exposure

- Specialty (sector) equity mutual funds/ETFs
  - Can improve inflation-**efficiency of client's portfolios** – with a degree of diversification within the commodity sector
- Individual stocks
  - Offer superior returns to the managed funds – but requires superior analytical skills
  - OF course, commodity producers involve exposure to numerous risks (both common and unique) which can lead to losses/inferior returns should these risks arise

# Q & A