Inflation, the bond market, and pensions

Adapting strategy for a new environment

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Today's session

Inflation and the Federal Reserve

- The Fed made a bad mistake
- Regaining credibility is key
- Current policy is logical
- Patience is necessary

Impact on financial markets

- Rising rates and an inverted curve
- Volatility around the Fed's path
- Limited signs of a credit cycle
- Levered balance sheets are vulnerable

Adapting pension strategy

- Fixed liabilities have gotten cheaper
- Real liabilities have gotten more expensive
- Better to hedge, or out-earn, liabilities?

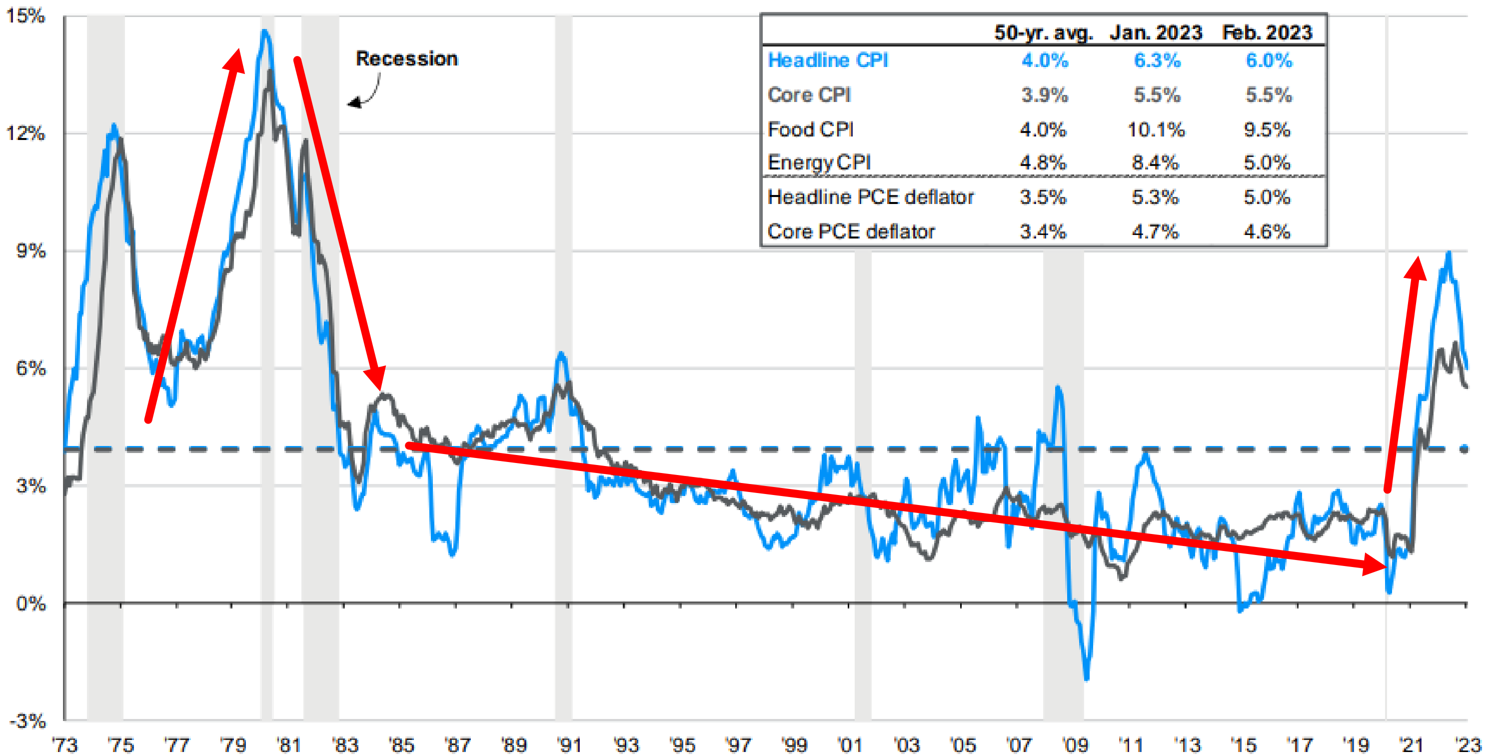
Panel Discussion

- Global considerations
- Investment opportunities
- Actuarial risks

U.S. inflation since the 1970s

CPI and core CPI

% change vs. prior year, seasonally adjusted



	50-yr. avg.	Jan. 2023	Feb. 2023
Headline CPI	4.0%	6.3%	6.0%
Core CPI	3.9%	5.5%	5.5%
Food CPI	4.0%	10.1%	9.5%
Energy CPI	4.8%	8.4%	5.0%
Headline PCE deflator	3.5%	5.3%	5.0%
Core PCE deflator	3.4%	4.7%	4.6%

Source: BLS, FactSet, J.P. Morgan Asset Management.
CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations.
Guide to the Markets – U.S. Data are as of March 31, 2023.

What went wrong this time?

1
Pre-COVID Complacency

- 40 years of disinflation
- Fear of Japan
- Absence of fiscal stimulus
- Flat Phillips curve
- “Permanent” QE

Result: easy monetary policy became embedded

2
Slow policy mechanics

- F.A.I.T. delayed response
- Pace of forward guidance
- Fear of a Taper Tantrum
- Sequencing with QE
- COVID response

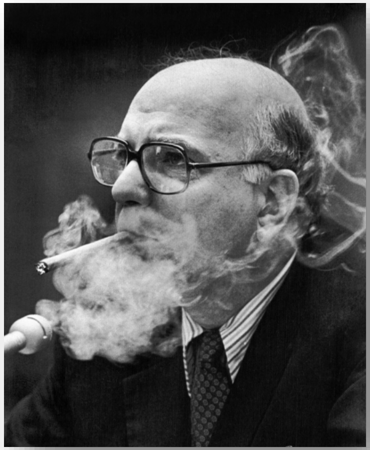
Result: The Fed was unprepared to act

3
Missed signals

- Early CPI supply driven
- Fiscal surge worked
- Demand remained strong
- Unemployment fake-out
- Forecasters failed

Result: Inflation hit more quickly than expected

Different approaches to inflation fighting



Paul Volker: The “brute force” method

HIKE RAPIDLY TO A VERY HIGH REAL RATE…	CRUSH THE ECONOMY, AND INFLATION…	CUT RATES RAPIDLY BACK TO NEUTRAL.

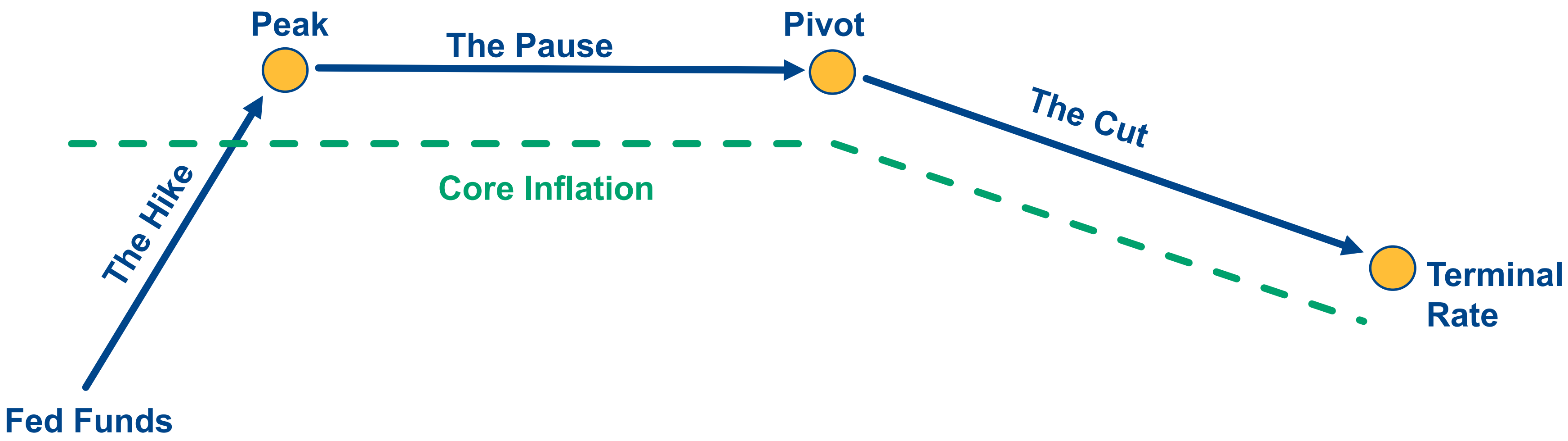
The verdict: effective, but with a lot of economic pain

Jerome Powell: The “finesse” approach

HIKE UNTIL REAL RATES ARE POSITIVE…	HOLD STEADY AS INFLATION COMES DOWN…	CUT RATES SLOWLY BACK TO NEUTRAL.

The verdict: TBD…

The "Powell Method" in practice



KEY QUESTIONS	BEST GUESS	CRITICAL DATA
How high is the peak?	Currently 5.25%, but data dependent	▪ ISM PMI Data sets ▪ Rolling measures of core inflation ▪ Trends in job openings and quits
How long is the pause?	Fed says 2024, markets think sooner	▪ The "dot plot" ▪ Fed funds futures ▪ 2-year note rate
How low is the terminal rate?	Fed says 2.0%, markets think a bit higher	▪ Fed rhetoric ▪ Longer term bond yields ▪ Estimates of potential growth rate

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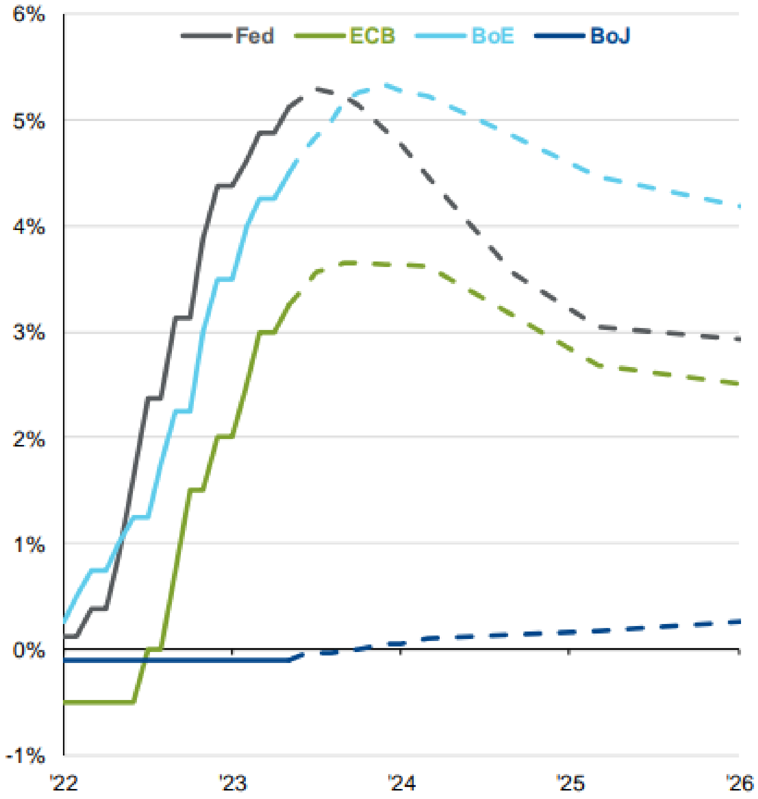
Why inflation will eventually be brought under control

Cost of capital is much higher

Historical policy rates and forward curves

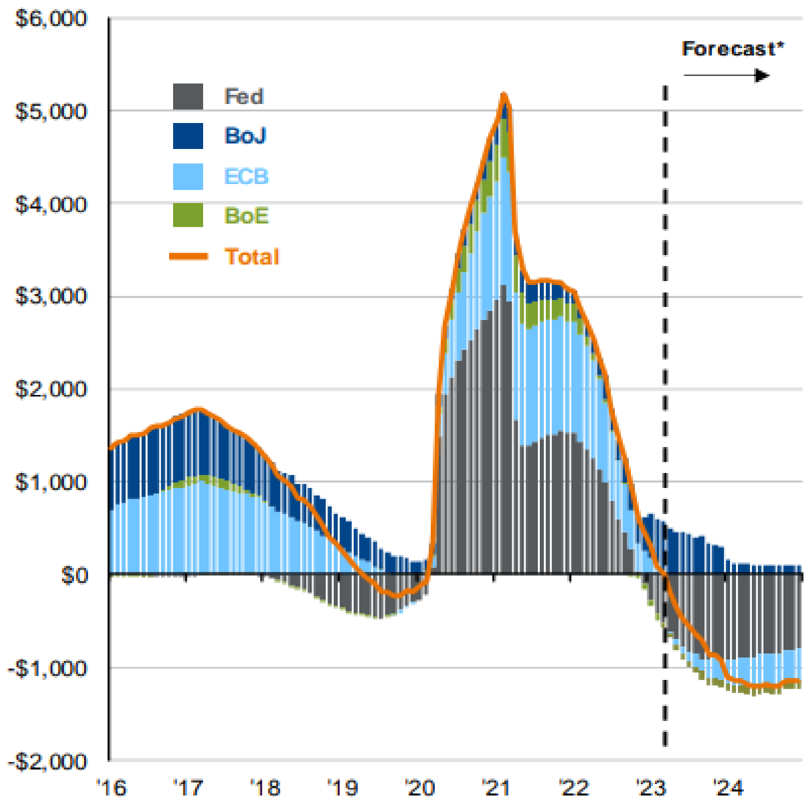
Target policy rates and Global Overnight Index Swaps (OIS) curves



Central banks are withdrawing liquidity

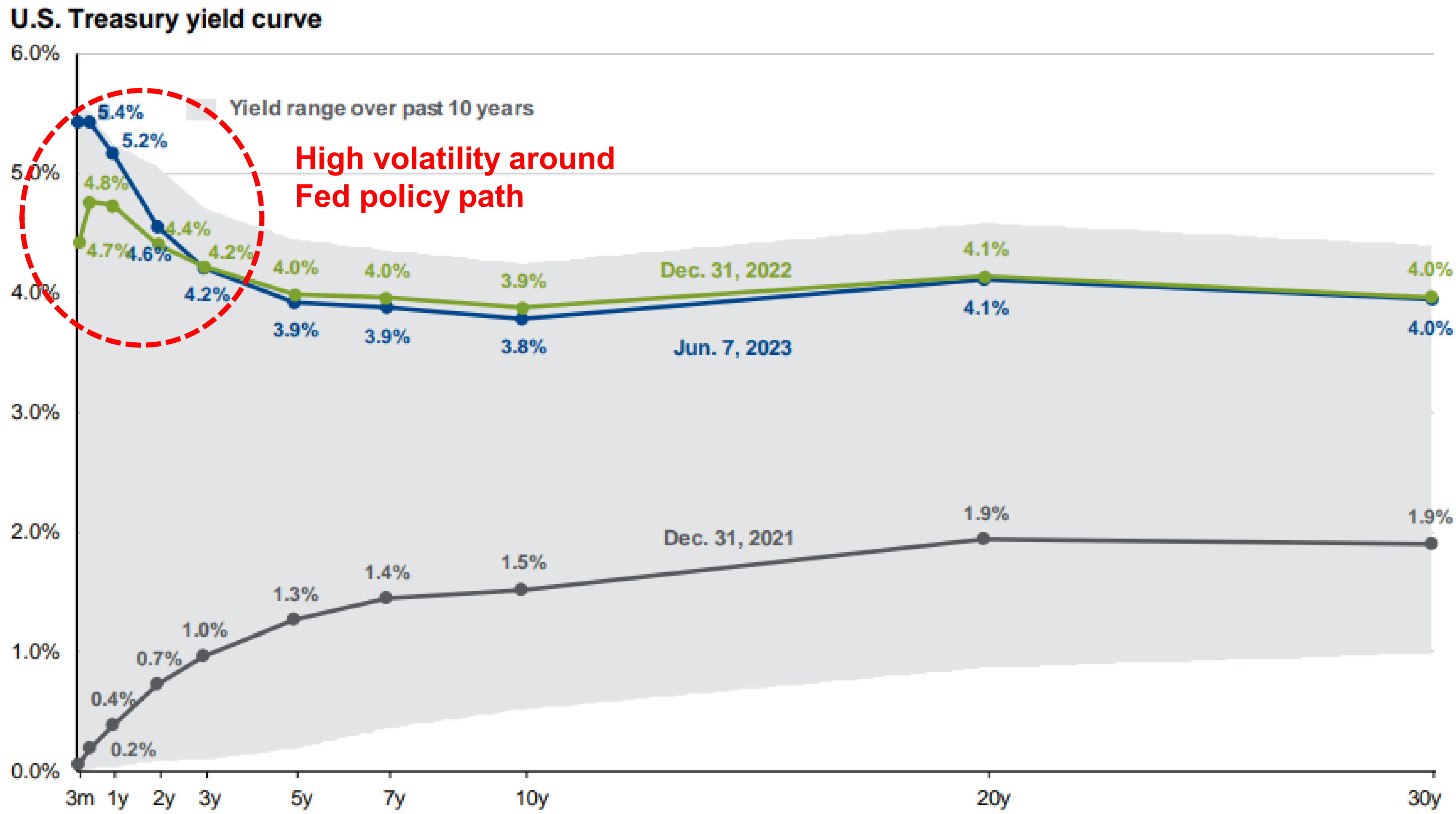
Developed market central bank bond purchases

USD billions, 12-month rolling flow



Source: BIS, Bloomberg, FactSet, J.P. Morgan Asset Management. As of June 7, 2023

The first-order effect of monetary policy is on interest rates



Source: FactSet, Federal Reserve, J.P. Morgan Asset management. Data are as of June 7, 2023

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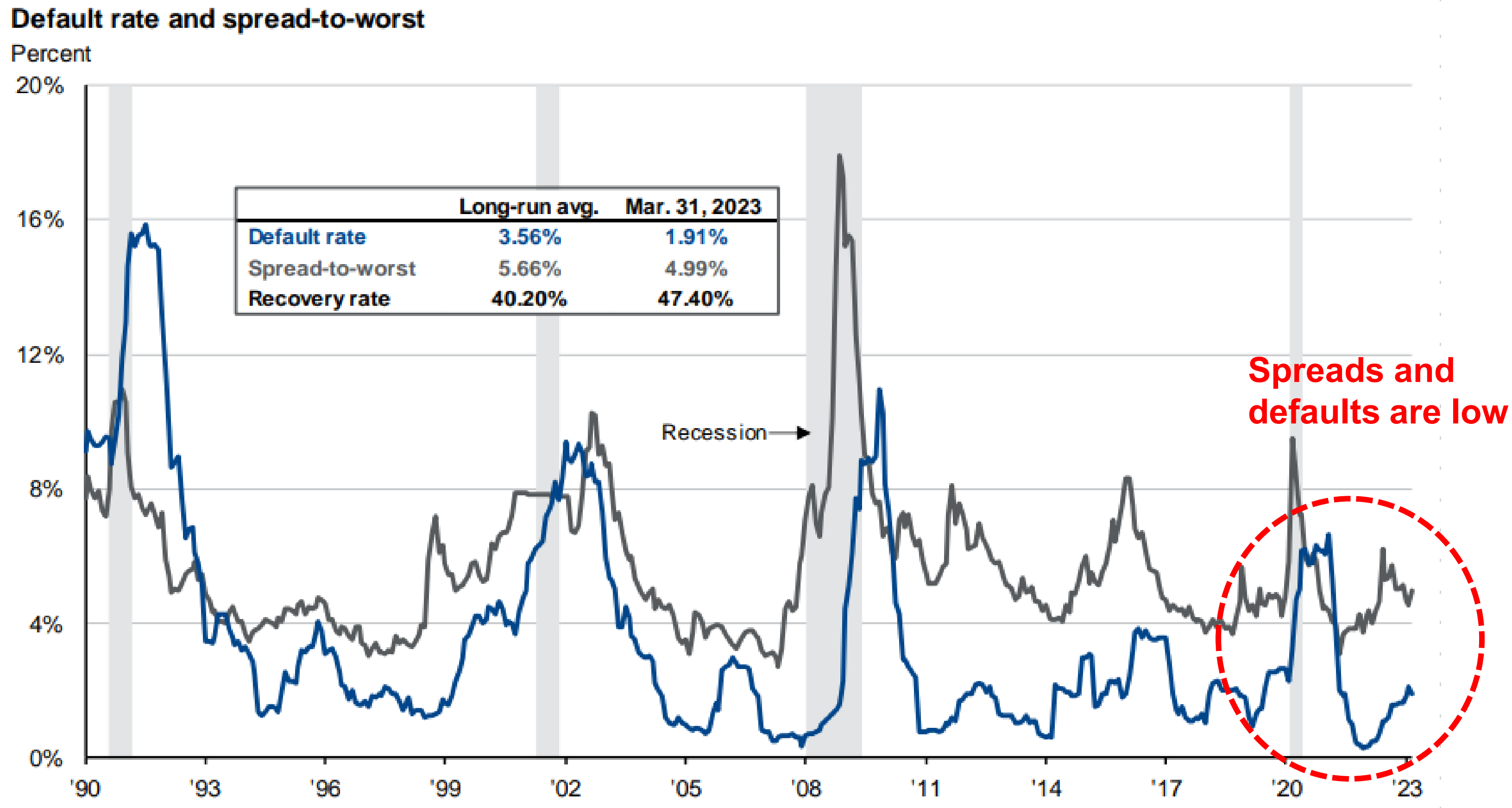
Corporate credit markets have not felt much impact

The high yield bond market is a useful "canary in the coal mine" for broader trends in credit risk



Source: J.P. Morgan Asset Management, Bloomberg. Data are as of March 31, 2023

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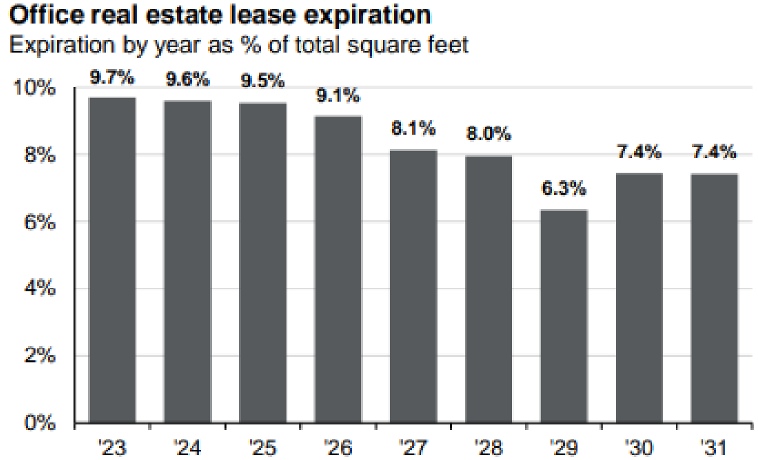
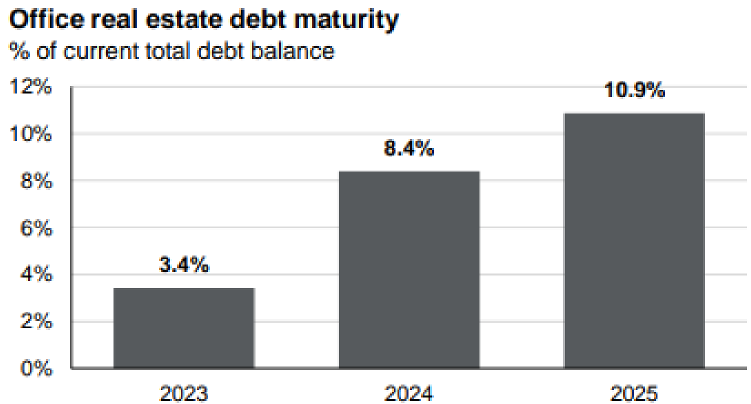
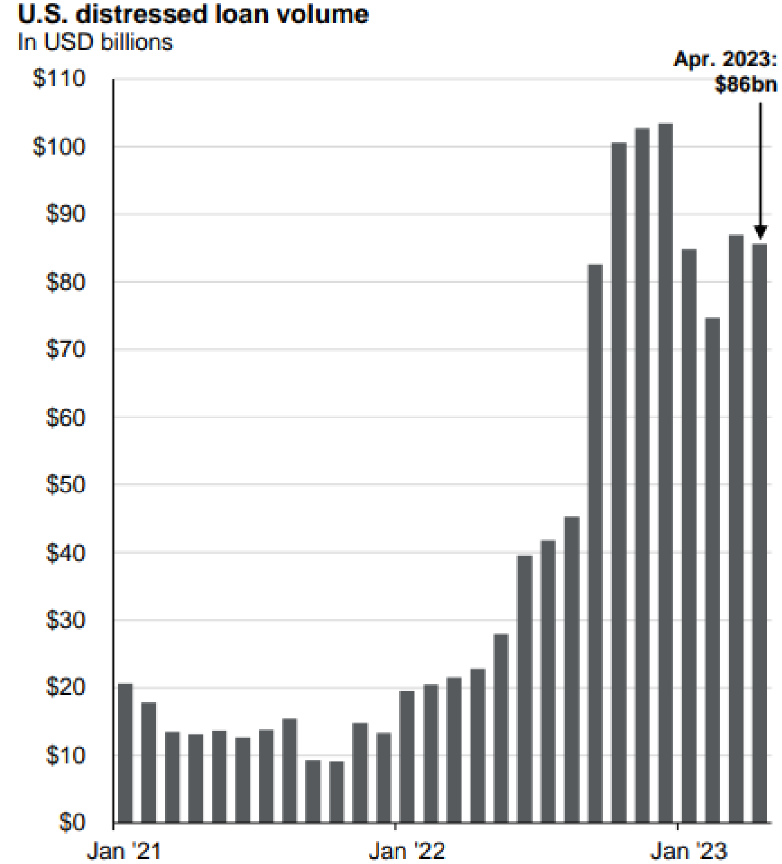
Weaker balance sheets will likely be hurt by higher rates

Office real estate refinancing risk





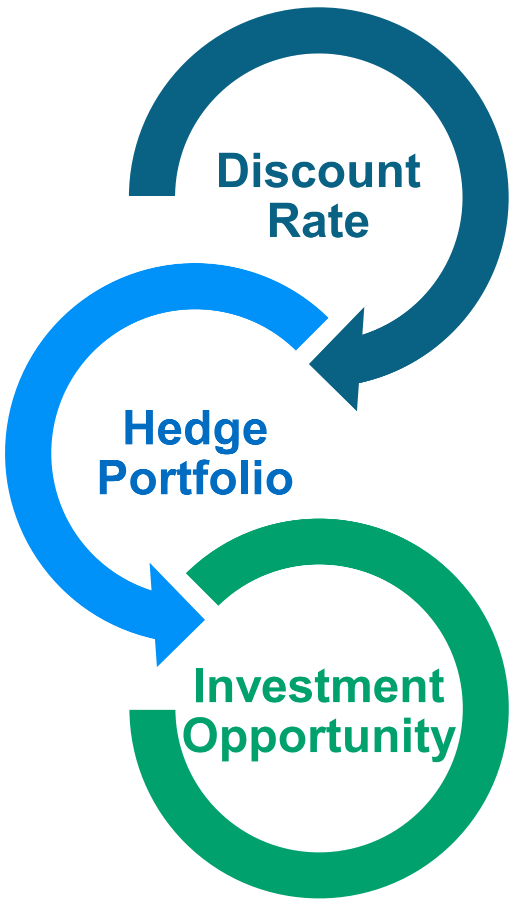
Loan markets are under stress



Source: Pitchbook, LCD, Morningstar, J.P. Morgan Asset Management

Pensions and the bond market

The bond market exerts a powerful influence on pension strategy



Liability valuation
- Accounting standards
- Funding rules
- Insurance premiums

Risk factor alignment
- Duration, curve, inflation
- Credit spread risk
- Cash flow matching

Vast global asset class
- Risk diversification
- Stability and income
- Alpha potential

Which risks should be hedged…

…and which should be out-earned? Understanding the difference is key.

1

Inflation risk in liabilities

2

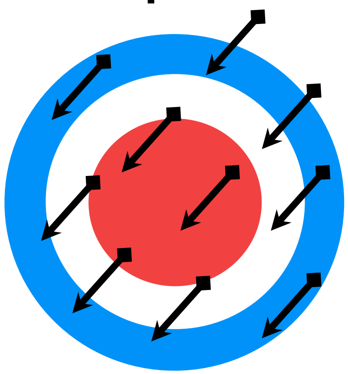
Payment and liquidity risk

3

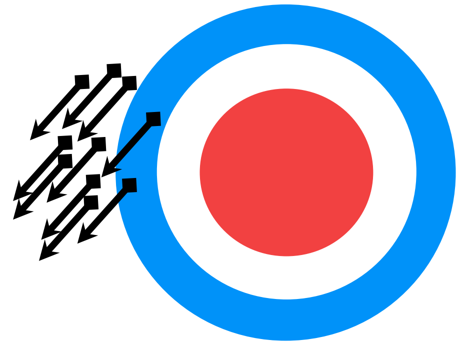
Liability mark-to-market risk

When it comes to hedging, accuracy and precision are not the same thing

Generally accurate, but imprecise…



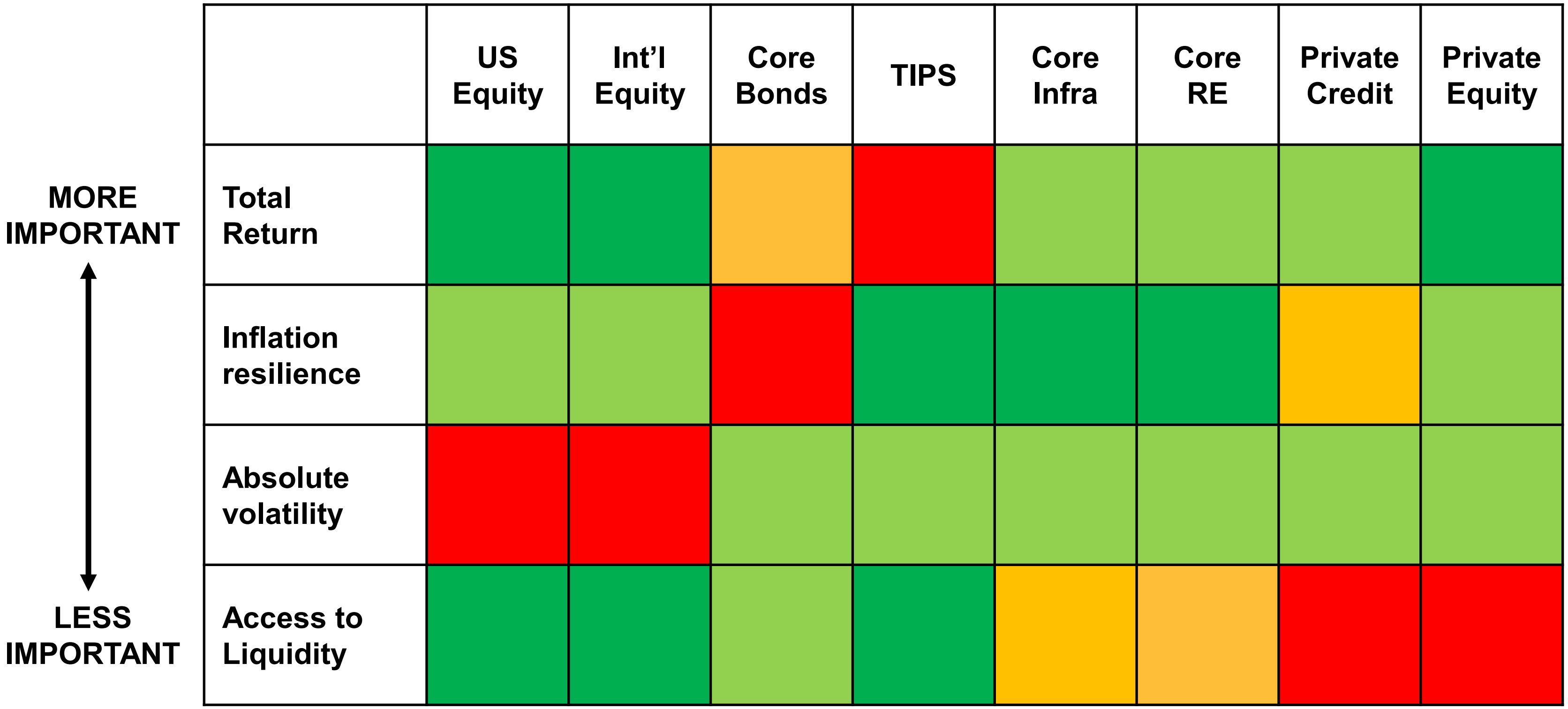
Highly precise, but inaccurate…



Why bring this up?

- Liabilities become less certain the longer their time horizon
- Adding inflation risk makes liabilities a moving target
- Assets that offer long term precision generally deliver low returns
- Assets that deliver high long-term returns offer limited precision

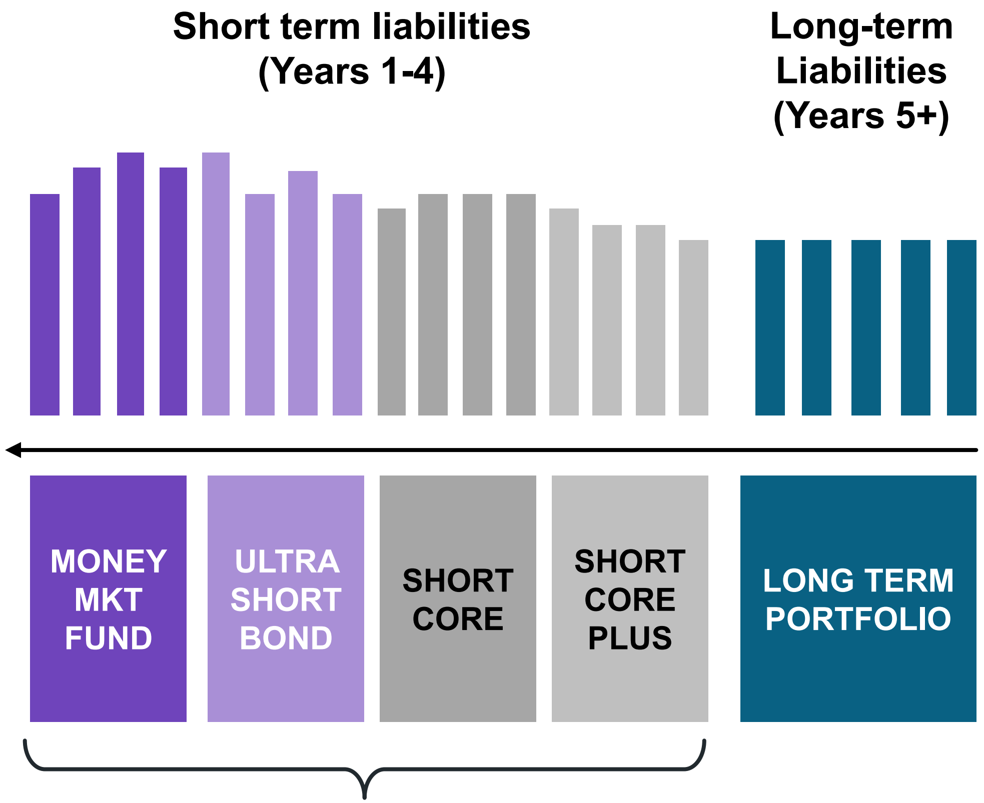
Out-earning a long term “CPI-plus” benchmark efficiently



Hedging short-term liabilities effectively with an active cash flow match

KEY CONSIDERATIONS

1. **TIME IS YOUR ENEMY**
   There is no longer time to make up losses
2. **PRICE STABILITY IS KEY**
   Low absolute volatility and downside tail risk
3. **LIQUIDITY AT THE FINISH**
   Zero or very low frictional cost to settle liabilities as they come due



Multi-layered Active Fixed Income
Risk *approaches* zero
as liabilities come due

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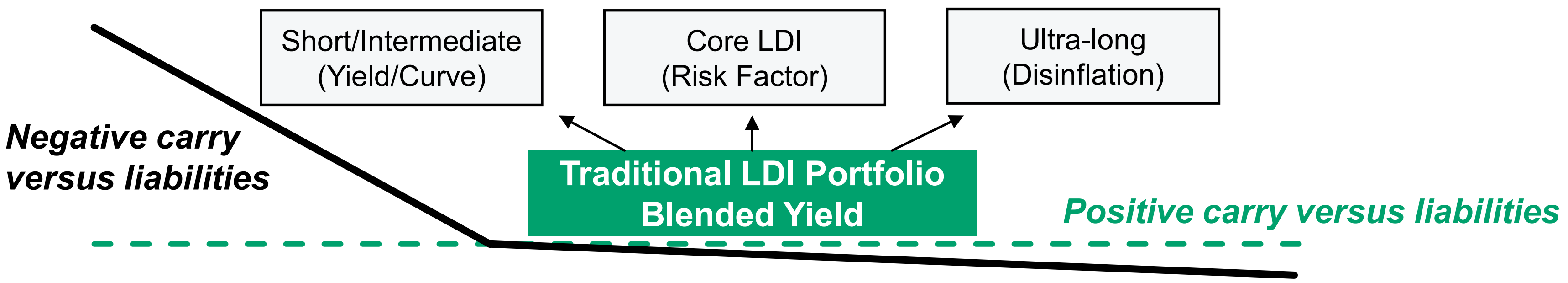
Managing hedge portfolios in different curve environments

Normal yield curve

Inverted yield curve



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