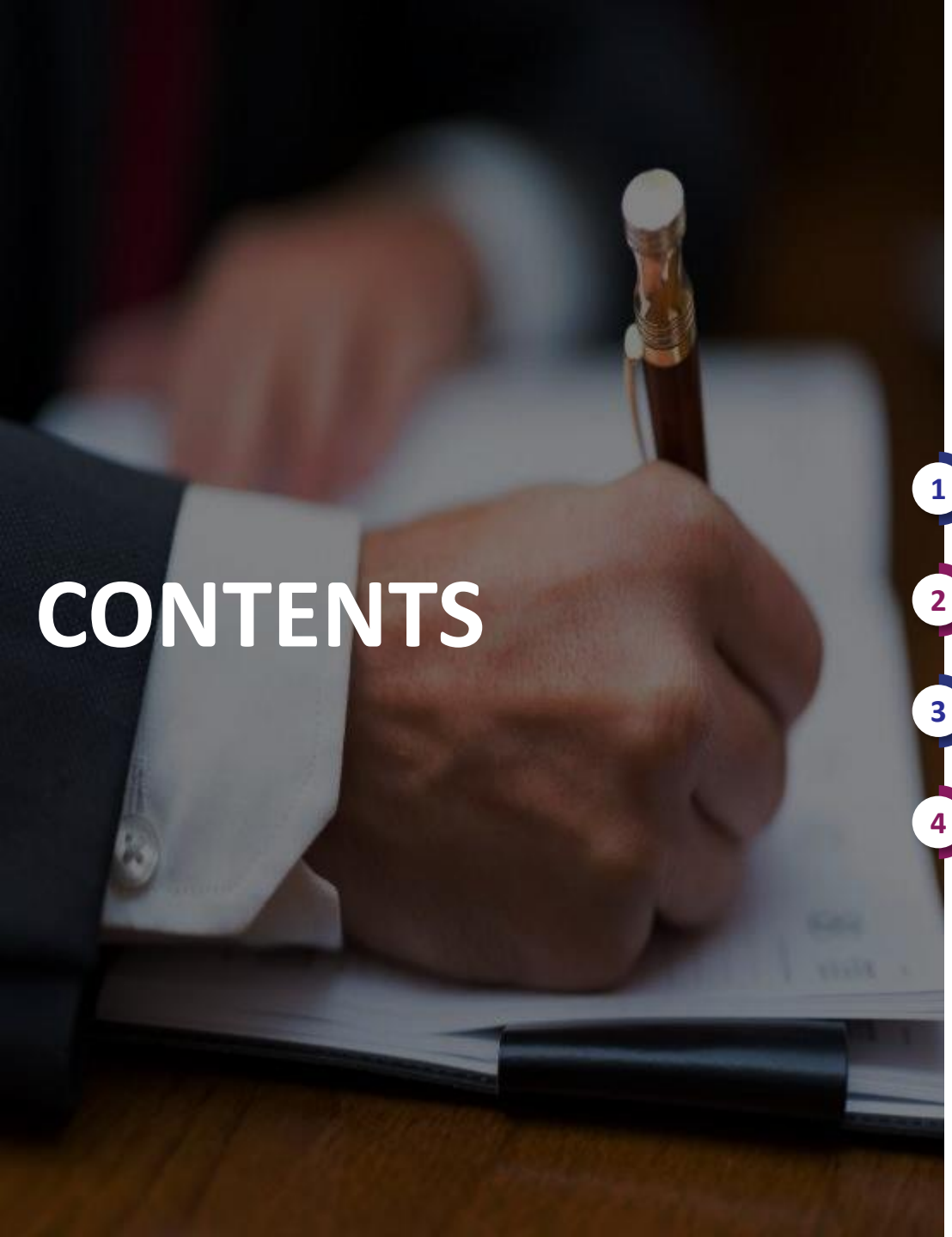
SBI CAPS
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STUDY ON BOND YIELDS

r* in US vs. India - Unnatural Rise And Real Consequences

November 2026



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2 Is the natural rate really on the rise? 05

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EXECUTIVE SUMMARY (1/2)

Elevated bond yields in advanced economies signal the end of the post-GFC era

US bond yields had been on a secular multi-decadal decline, and developed country yields entered a race to the bottom in the aftermath of the GFC. Major factors driving this included a savings glut fuelling global demand for Treasuries, structurally lower inflation, and risk-off events such as the GFC, and COVID-19. The same continued till the pandemic, post which there has been a sharp rise in bond yields, with US Treasuries near 2-decade highs, effectively closing the GFC era. *In this report we seek to answer if this rise is durable, whether it points to structural changes in the natural rate (r*), and what this means for India?*

Inflation driven rate increments explain most of the rise in yields

The major driver of the rising yields are inflation driven rate hikes. Inflation, which spiked due to physical restrictions in the pandemic period crystallised in the post-pandemic period owing to geopolitical, protectionist, and strategic machinations. It is widely acknowledged that prices will be higher going forward than seen hitherto, with a new baseline being set. Inflation expectations which are levels not seen since the early 1980s bear testament. *Our analysis shows that 75-85% of the rise in nominal Treasury yields in the US may be attributed to inflation since mid-CY20.*

The other 20%: decoding the real role of natural rates using HLW analysis

The nominal rate (which may be understood as the observed G-sec yield) may be split into the real rate and inflation. Deeming real rate as close to the r* in the steady state, we may further decompose the latter using the HLW model. The same attributes the key driver of r* as trend growth (g), with other slow-moving residuals also in the mix. Notably, in the US context, the relationship between r* and g weakened post-GFC, with convenience yield (cy) emerging as an explanatory factor. Cy represents the premium paid by investors for the safety and liquidity offered by Treasuries over similar corporate bonds. *Spiking cy depressed r* well below g right upto the pandemic. However, a reversal is underway as we speak*

A collusion of factors point the r* towards the North Star in the US

The r* is drifting upwards in the US in recent times. The proximate cause of the same is the high supply of Treasuries given record fiscal deficits, reducing creditworthiness of the US, and overseas investors diversifying to non-USD assets. These trends are expected to persist in the future. Alongside expanding potential growth due to the AI boom and higher cost of capital, this exerts *upward pressure on the r* in the USA*. Other developed economies such as Europe and Japan, are also expected to broadly follow the trend, subject to local dynamics.

EXECUTIVE SUMMARY (2/2)

Drivers of Indian r* appear more stable and CPI is an overwhelming driver

In the Indian context, stable and fair growth, and anchored inflation expectations in the FIT regime, form the base of stability in r*. Gradual fiscal consolidation and improving credit rating, backed by higher life expectancy and recovery of savings rate from a recent trough are expected to be counterbalanced by continued high GCF and global spillover of rising r* in advanced economies. Thus, *Indian r*, while subject to quarterly variations due to timing differences between the moving parts, need not necessarily rise like the US.*

A new differential regime may necessitate a different way of looking at the external front

Over the past decade or so, we have seen a consistent reduction in the inflation differential between US and India, with no major change in growth differential. This means the policy rate and G-sec yield spread between the two economies has shrunk. This differential is likely to remain at slim levels further motivated by larger gap in r* projected. Ergo, *the high dependence on capital account surplus to balance large current account deficit, which was in vogue during the first decade of the 2000s may not longer be feasi*ble. Infact, there has been a steady decline in the sustainable CAD for the Indian economy.

In such a situation, following strategies would be needed to keep the balance of payments in good shape:

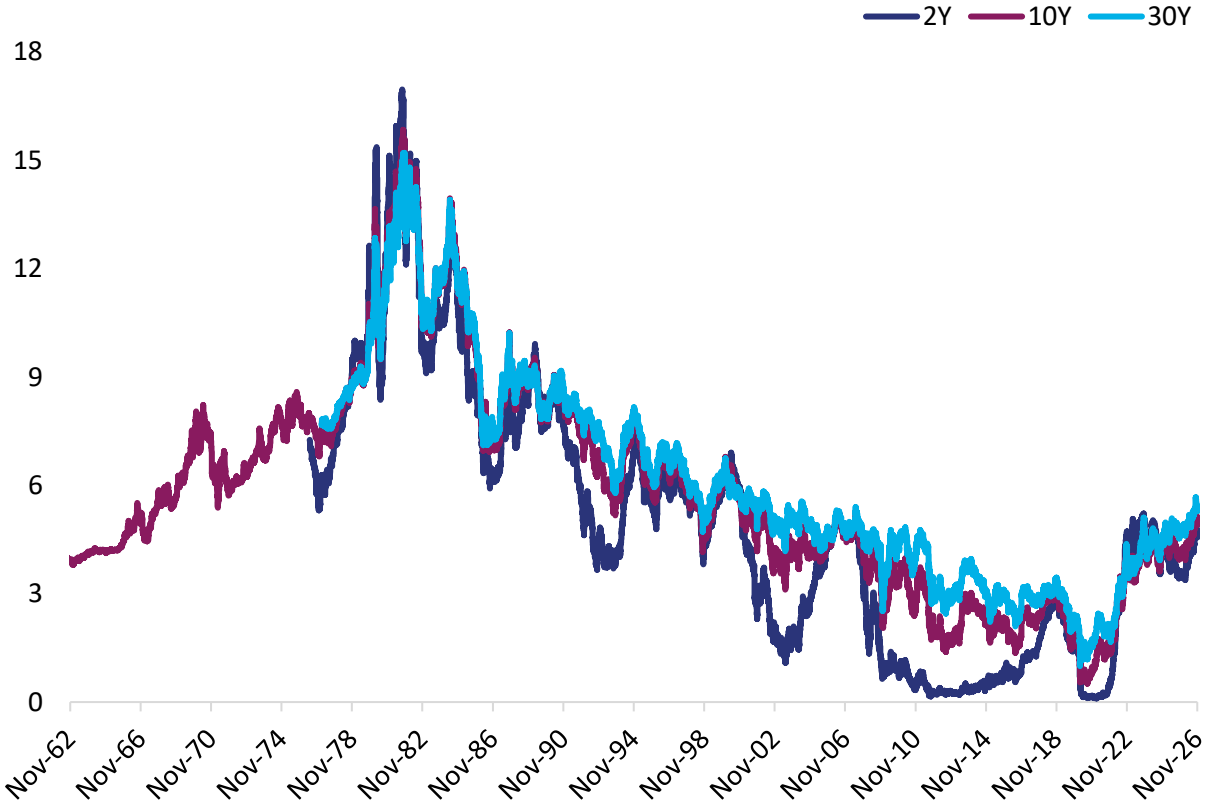
- *Impetus on export-led growth to improve merchandise trade balance and reduce current account deficit*
- *Incentives for equity market re-entry for foreign investors*
- *Maintaining large forex reserve for currency stability*

01

IS THE NATURAL RATE REALLY ON THE RISE?

YIELDS ARE REACHING SKYWARD ACROSS THE DEVELOPED WORLD

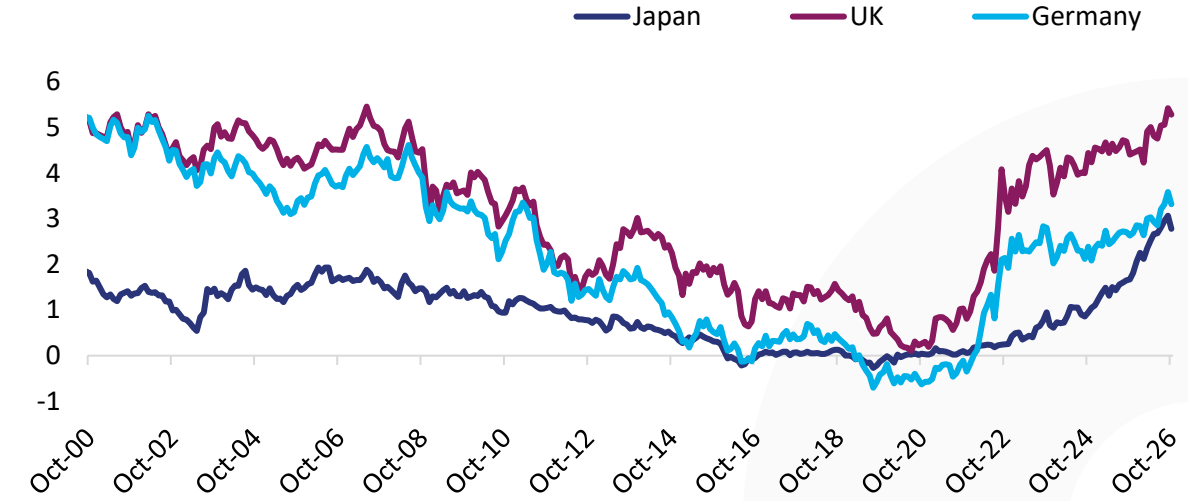
US TREASURY YIELD



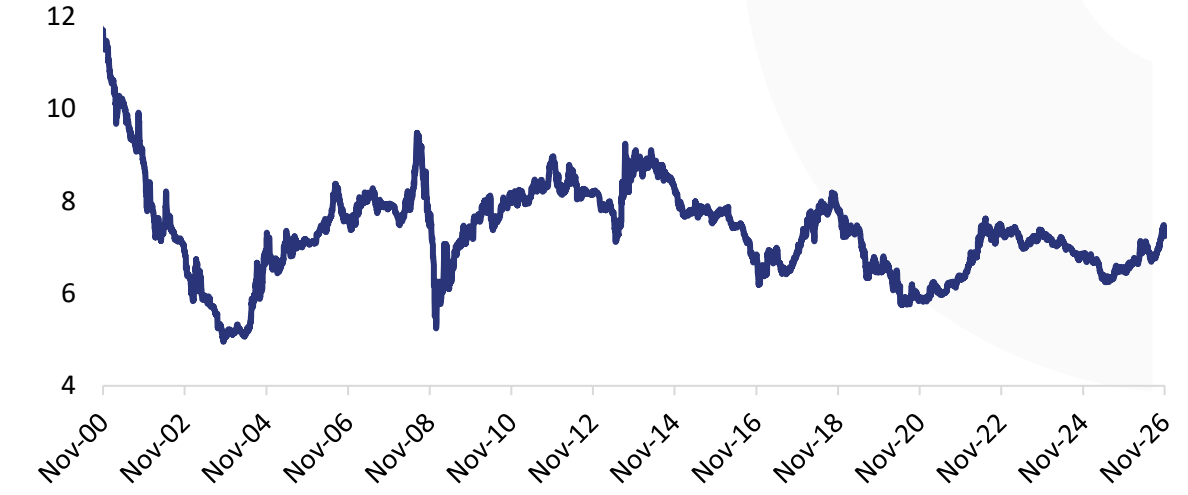
- There had been a multi-decadal decline in US yields up until late CY21. Major factors driving this included a savings glut fuelling global demand for Treasuries, structurally lower inflation, and risk-off events such as the Asian crisis, GFC, and COVID-19

- The trend seems to have reversed in the post pandemic period. In the most recent period, most advanced economies have seen soaring yields driven by a combination of factors. *Whether this rise is durable is discussed in the present Report*

10Y G-SEC YIELDS OF SELECT ADVANCED ECONOMIES



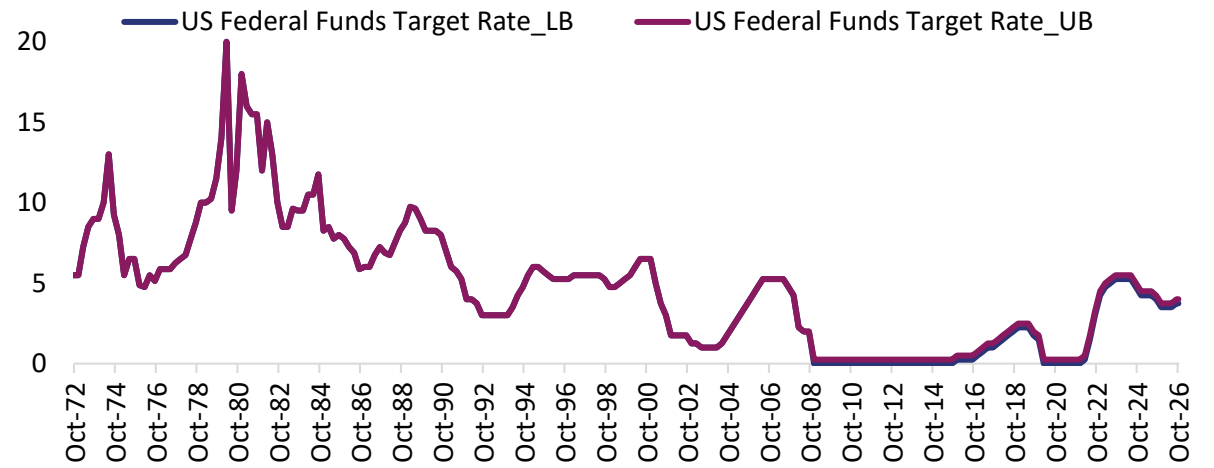
INDIA UNION G-SEC YIELD – 10Y



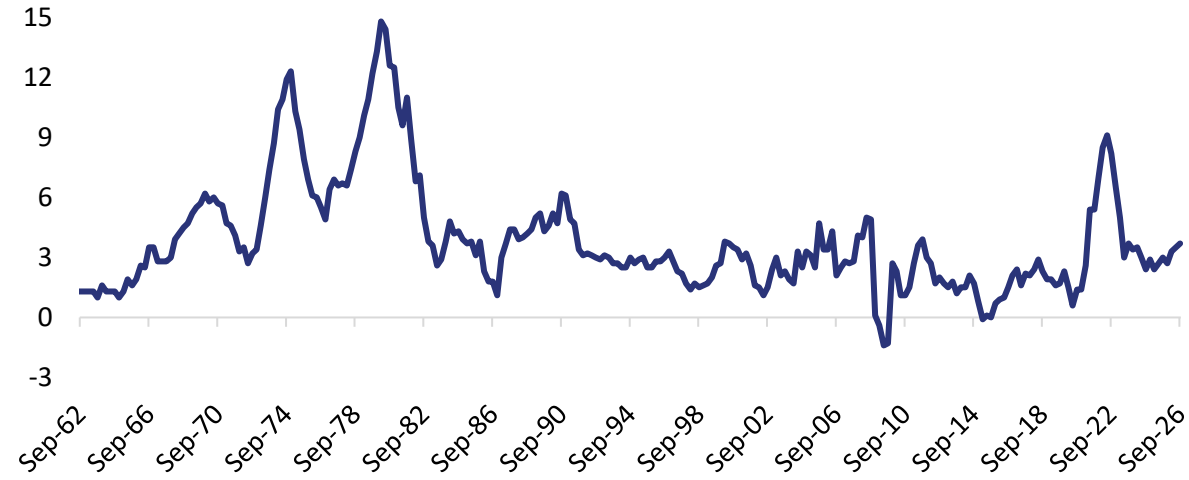
Source: Bloomberg, SBICAPS

INFLATION-DRIVEN RATE HIKES EXPLAIN MOST OF THE STORY

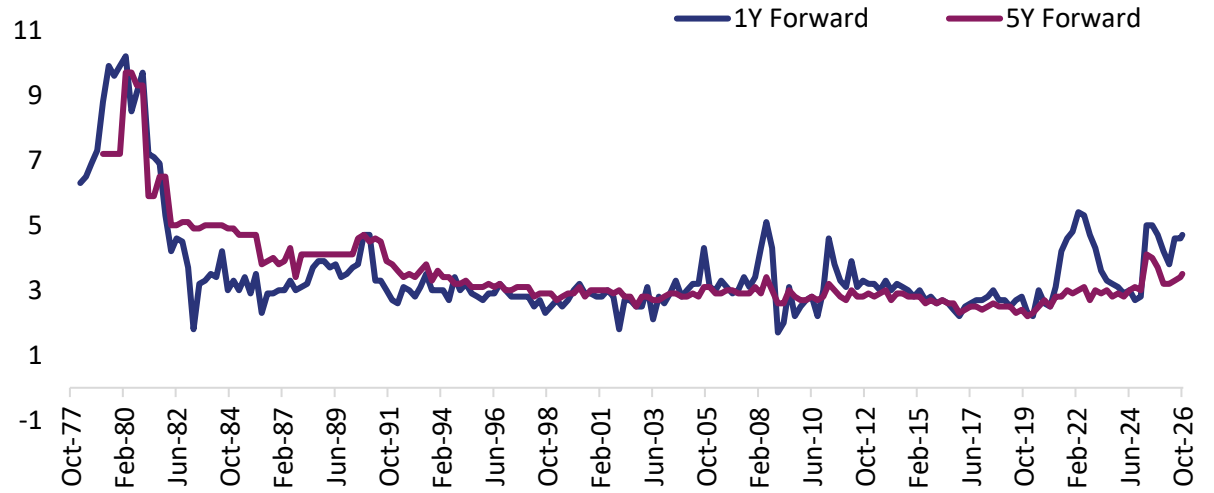
US FED RATE



US CPI (% y/y)



US INFLATION EXPECTATIONS (% y/y)

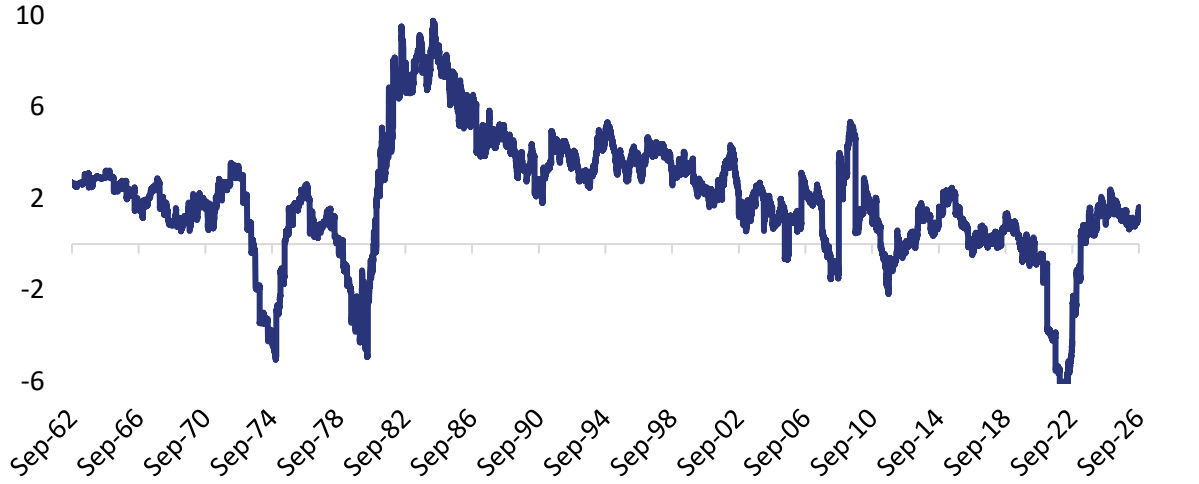


- Yields show a strong dependence on policy rate, which in turn, in the US context, is driven by inflation (and employment). Thus, a recent rise in CPI and its expectations explains some of the rise in yields
- CPI inflation bottomed out at 0.6% y/y in mid-CY20 at the height of the pandemic and since then has expanded to 3.7% by Sep'26. This explains ~75-85% (depending on tenor) of the rise in yield during this period
- However, inflation expectations play as important a role in policy and yields. In recent times, they ave spiked to levels not seen since the early-1980s. There is a growing camp which believes that de-globalisation induced fracture in supply chains is a new reality

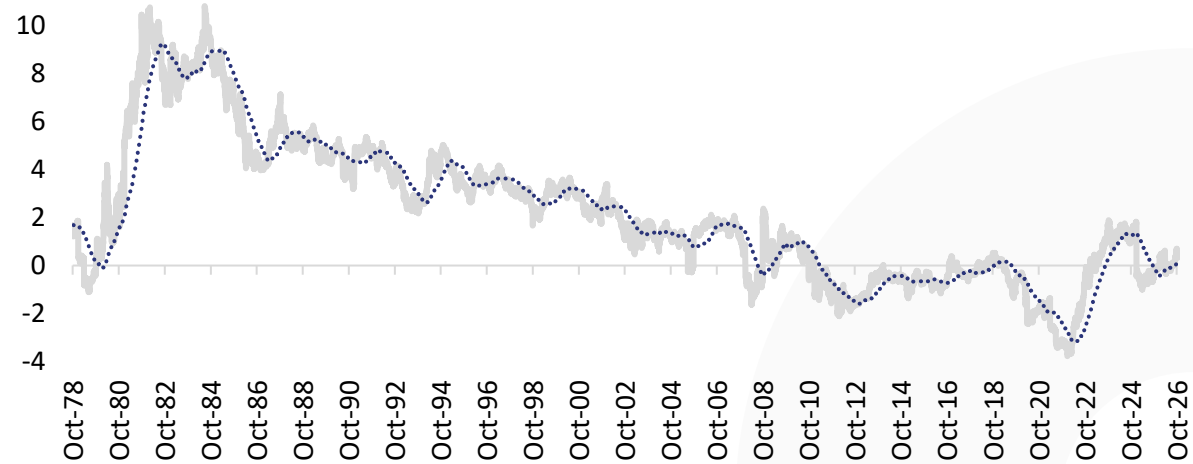
Source: Bloomberg, University of Michigan, SBICAPS

REAL RATES COMPLETE THE JIGSAW

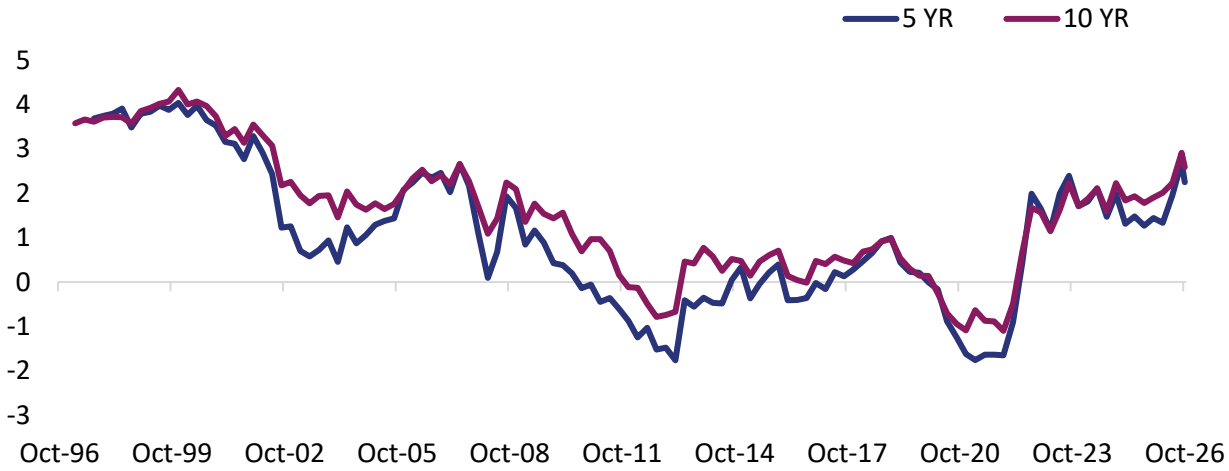
US 10Y – CPI (pp)



US 10Y – CPI 1 YEAR AHEAD EXPECTATION (pp)



US TIPS (%)



- Real rates, are on a secular decline since decades, barring brief periods. The past few months have seen a tentative rise in real rate. It remains to be seen whether this rise is durable
- US TIPS yield, which is a high-frequency indicator of real rate expectation, is at a level last seen in the early 2000s. This represents a significant change from the GFC induced low levels which were seen for much of the last 2 decades
- The natural rate of interest (r*) is the theoretical real interest rate which keeps the economy growing at its full potential while inflation remains stable. *R* has a key bearing on real rate and yields, and thus the same is discussed in detail subsequently*

Source: Bloomberg, University of Michigan, SBICAPS

WHO MOVED MY NATURAL INTEREST RATE?

MODIFIED HLW MODEL

$$r^* = kg + z - cy$$

Natural rate of interest
Corresponds to the short-term real interest rate that is consistent with full employment and price stability, after all temporary shocks have abated

Trend growth
An unobservable component modelled as a stochastic persistent process following a random walk. Uses a Kalman filter based on iterative IS Curve and Phillips Curve to arrive at a value. Constant $k \approx 1$

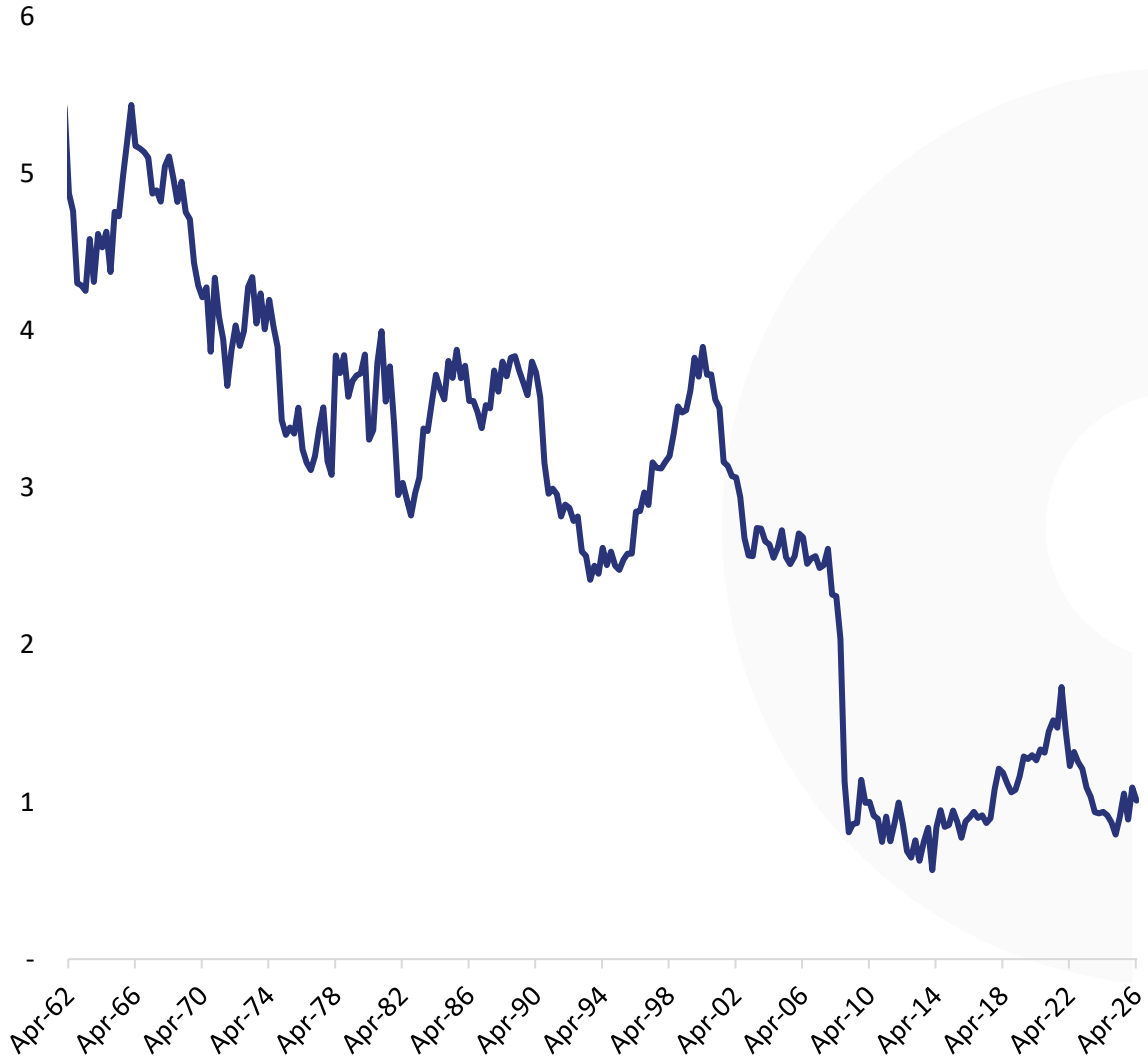
Residual
Designed to capture long-term economic trends such as demographics, ageing, wealth inequality, risk aversion etc.

Convenience yield
Premium paid to Government for safety and liquidity associated with Treasuries. Usually, the spread between AAA Corporate Bonds and 10Y Treasury yield

OBSERVABLE DRIVERS

- **Total Factor Productivity**
  - **Working-Age Population Growth**
  - **Moving Average Real GDP**
- **Pure Time Preference**
  - **Dependency Ratios**
  - **Income & Wealth Inequality**
- **Personal Savings**
  - **Global Capital Integration**

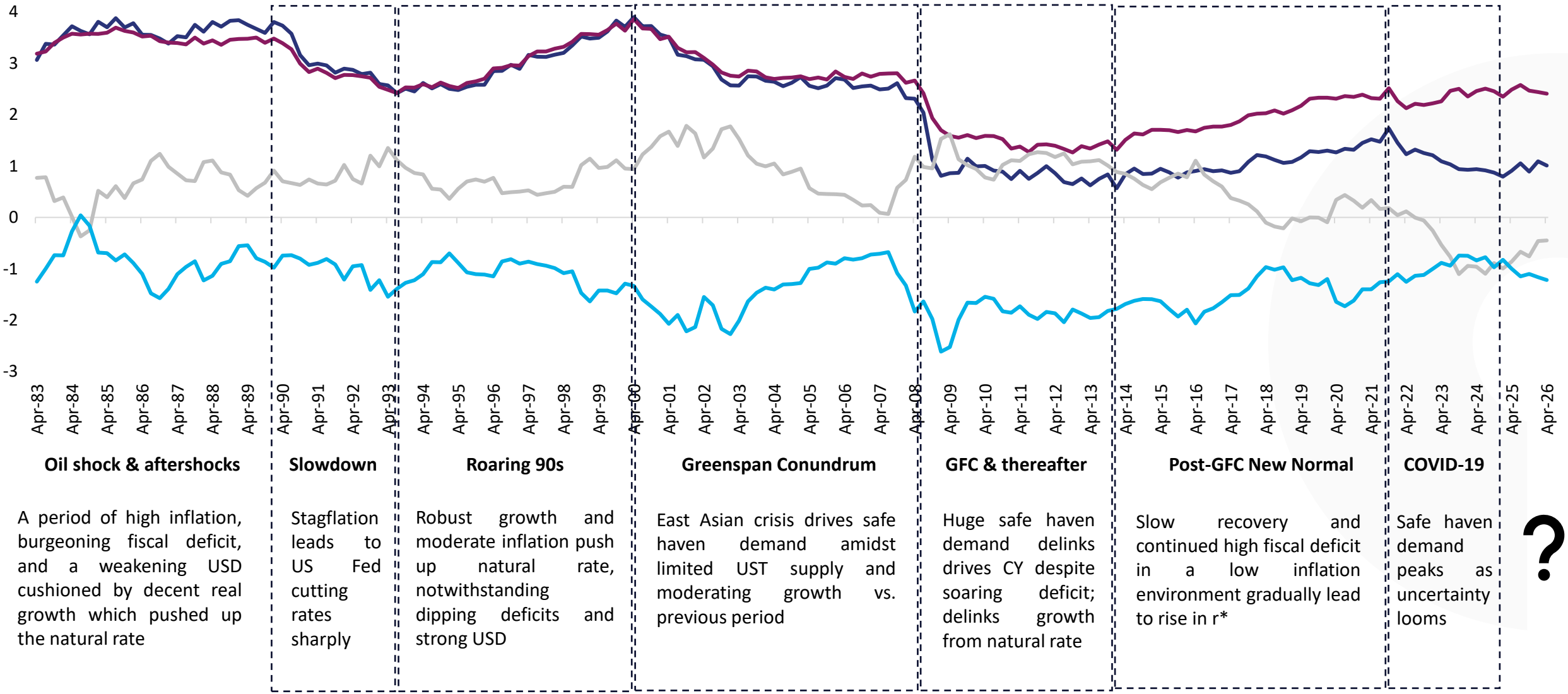
r* FOR USA AS PER MODIFIED HLW MODEL



Source: Holston, Laubach, & Williams 2023, Federal Reserve Bank of New York, US Federal Reserve, Brookings Institute, SBICAPS

THE US ECONOMY AND R*: A HISTORICAL ANALYSIS

$$r^* = kg + z - cy$$



Oil shock & aftershocks

A period of high inflation, burgeoning fiscal deficit, and a weakening USD cushioned by decent real growth which pushed up the natural rate

Slowdown

Stagflation leads to US Fed cutting rates sharply

Roaring 90s

Robust growth and moderate inflation push up natural rate, notwithstanding dipping deficits and strong USD

Greenspan Conundrum

East Asian crisis drives safe haven demand amidst limited UST supply and moderating growth vs. previous period

GFC & thereafter

Huge safe haven demand delinks drives CY despite soaring deficit; delinks growth from natural rate

Post-GFC New Normal

Slow recovery and continued high fiscal deficit in a low inflation environment gradually lead to rise in r*

COVID-19

Safe haven demand peaks as uncertainty looms

?

Source: Holston, Laubach, & Williams 2023, Federal Reserve Bank of New York, US Federal Reserve, Bloomberg, SBICAPS

DRIVERS OF US R* FOR THE FUTURE POINT UP

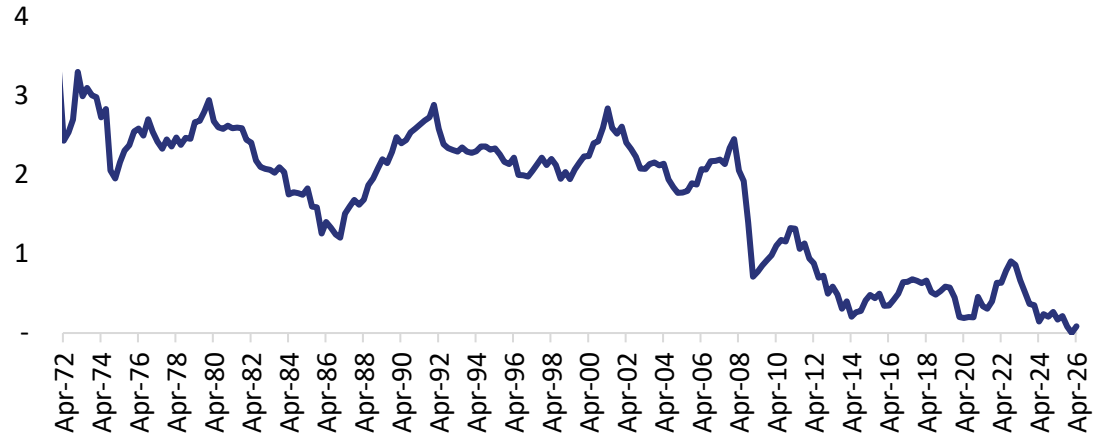
Component	Parameter	Likely Direction	Impact on r*
Trend Growth	Total Factor Productivity	Mild upward pressure due to AI related productivity gains	↑
	Population & Labour Force Growth	Stagnating population with weaning share of labour force in population	↓
	Human Capital & Education	Already at a high level, likely to be maintained	↔
	Rate of Technological Breakthroughs	Already at a high level, AI innovation could be balanced by increased competition globally	↔
Convenience Yield	Global Safe Asset Supply	Ample supply of US Treasuries due to high fiscal deficit	↑
	Quantitative Easing	US Fed is unlikely to embark on large-scale QE anytime soon	↑
	Liquidity Regulations	No major changes are expected	↔
	Global Financial Risk Aversion	Increasing geopolitical shocks could improve demand for safe-haven assets such as UST, but whether US will remain the pre-eminent safe haven remains to be seen	↔
Residual	Ageing	Population is ageing, albeit change in preference of elderly from saving to spend is also there	↔
	Income & Wealth Equality	Increasing inequality, Gini coefficient has increased from 0.46 to 0.49 (max=1). AI is expected to further privilege capital over labour, though impact can be partially offset by fiscal transfer	↓
	Price of Capital	Likely to increase given massive capital outlay for data centres, AI, and duplication of factories due to deglobalisation	↑
	Global Savings Glut	Limited by increased productive use for capital and de-dollarisation	↑

Upward drivers of r* are dominant, thus the natural rate is likely to drift north in the US

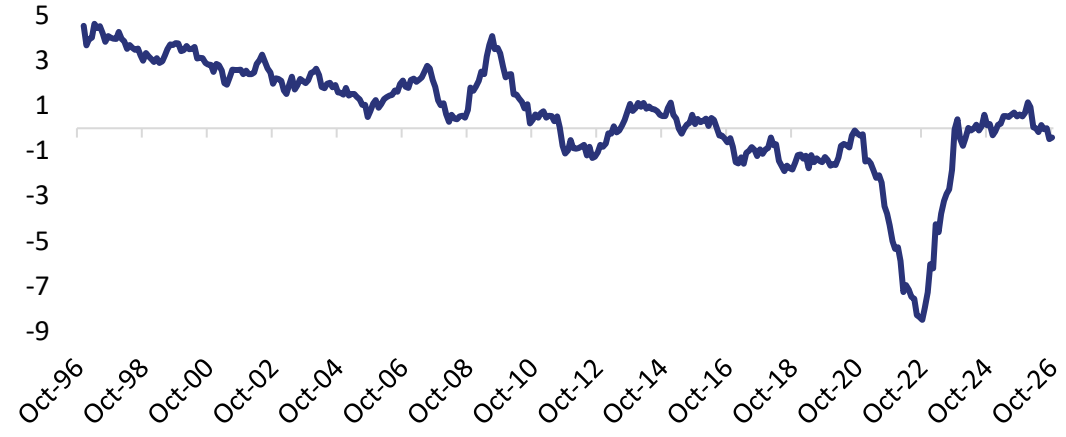
SOME EVIDENCE FOR A SIMILAR TREND IN OTHER ADVANCED ECONOMIES

EUROPE

R* AS PER HLW MODEL



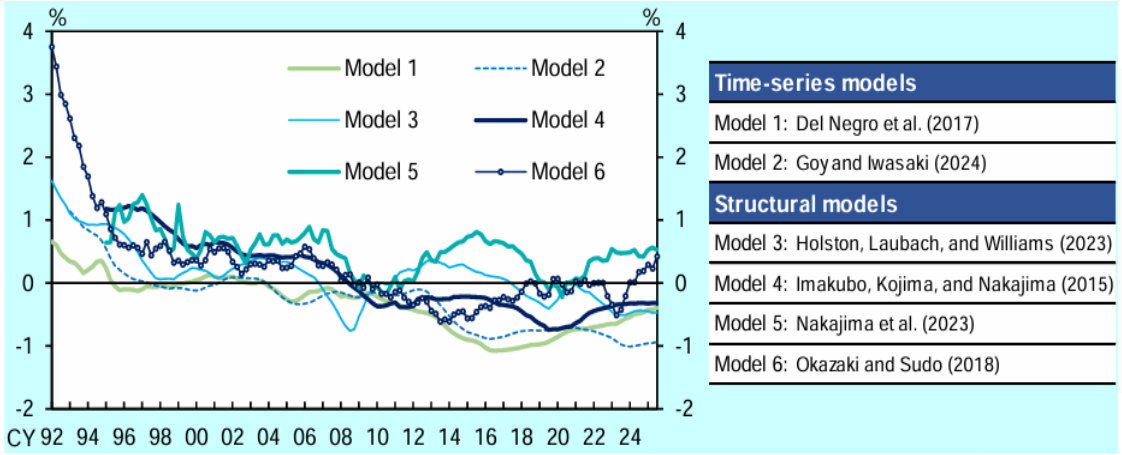
10Y G-SEC - CPI



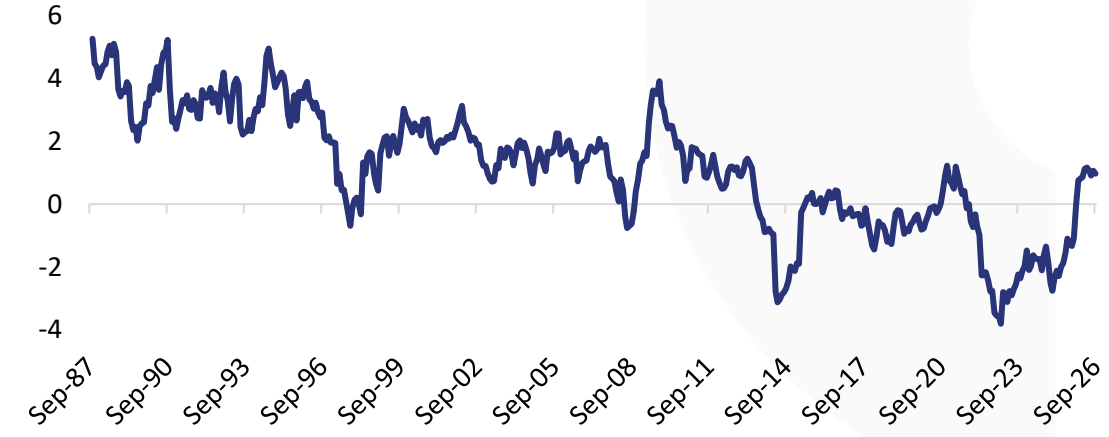
- R* shows high correlation between Europe and USA in the long term. One can see a significant increase in real rate since the pandemic troughs
- Over the decades, US natural rate is a lead indicator of European r*. Data from Jan'20 onwards indicates significant correlation with a 15month lead

JAPAN

R*



10Y G-SEC - CPI



- A BoJ study compiling r* estimates as per various models shows that most hazard a general upward trend, though there is a significant range of values
- Driven by proactive BoJ rate hikes, real rate has risen to levels last seen before the pandemic in Japan

Source: Holston, Laubach, & Williams 2023, Federal Reserve Bank of New York , Bloomberg, BoJ, SBICAPS

02

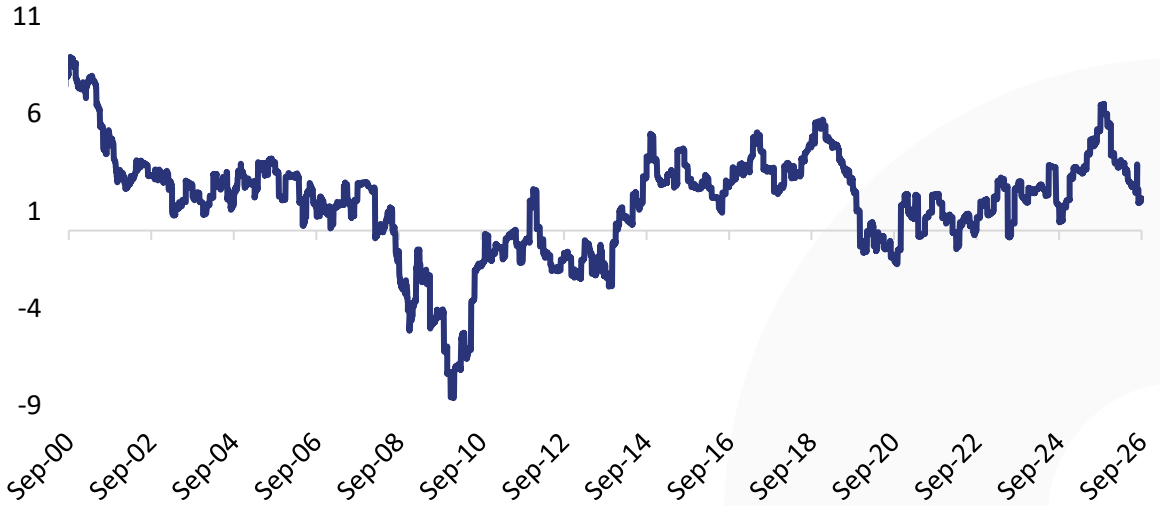
NATURAL AND REAL IMPACTS: THE INDIAN CONTEXT

INDIAN RATE STORY SHOWS A DIFFERENT PICTURE

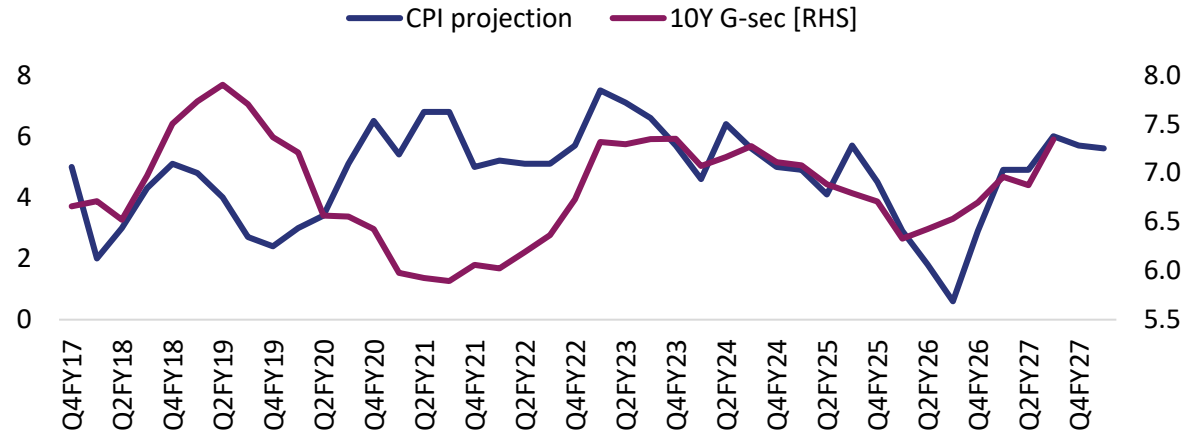
INDIA: 10Y G-SEC VS. REPO RATE (%)



INDIA: 10Y G-SEC – CPI [REAL RATE] (%)



INDIA: 10Y G-SEC VS. INFLATION EXPECTATION* (%)



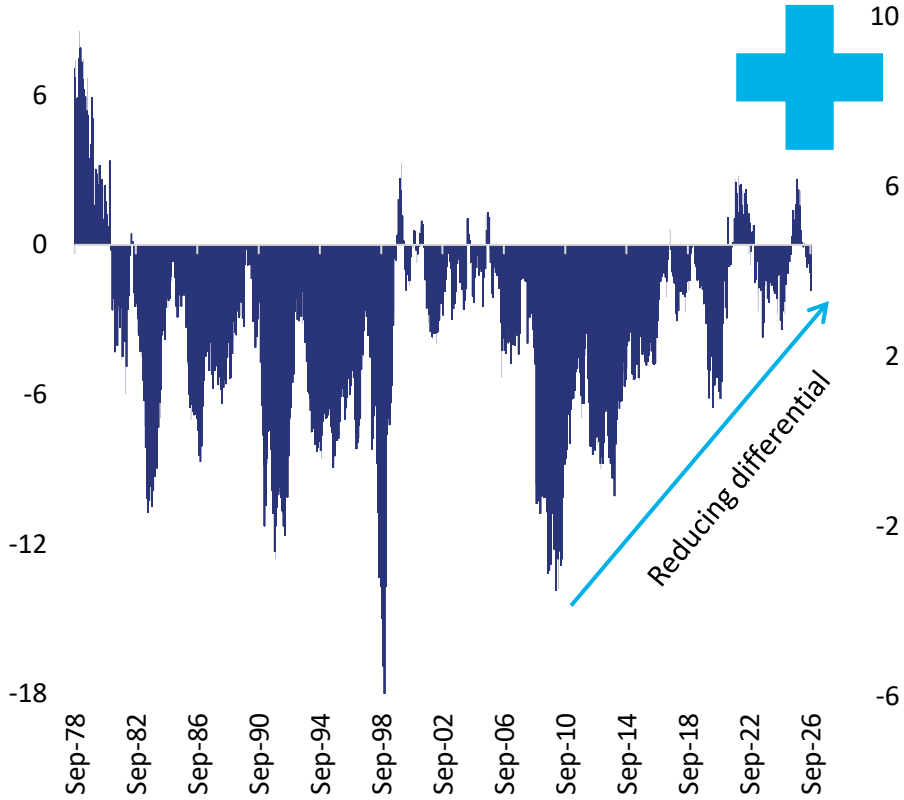
- Benchmark G–sec yields have largely followed inflation driven policy rate in India, with real rate being determined by timing differences of inflation and policy action
- A general downward drift is associated with periods of economic moderation such as in the aftermath of the GFC crisis and the pre-pandemic period
- Inflation expectations, as expressed by the RBI's projection, play a key role in yield movements, barring pandemic period due to catastrophic event

Source: Bloomberg, CEIC, RBI, SBICAPS; *CPI projection refers to the one made by RBI in the last policy meeting prior to commencement of quarter

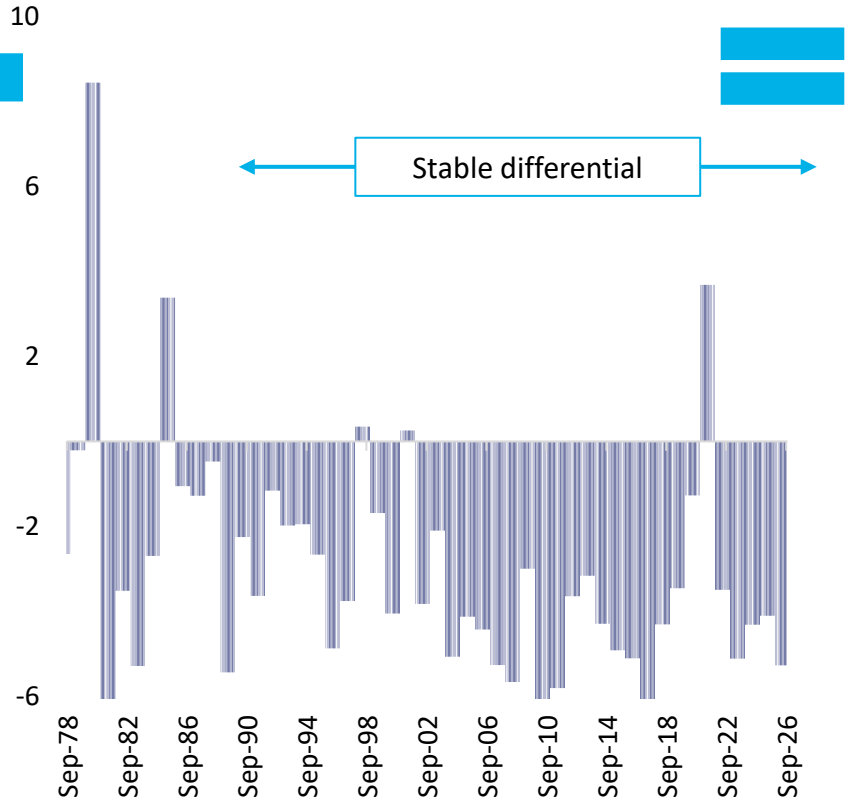
TOWARDS A DIFFERENT DIFFERENTIAL REGIME?

DIFFERENTIAL ON KEY PARAMETERS [US – INDIA] (pp)

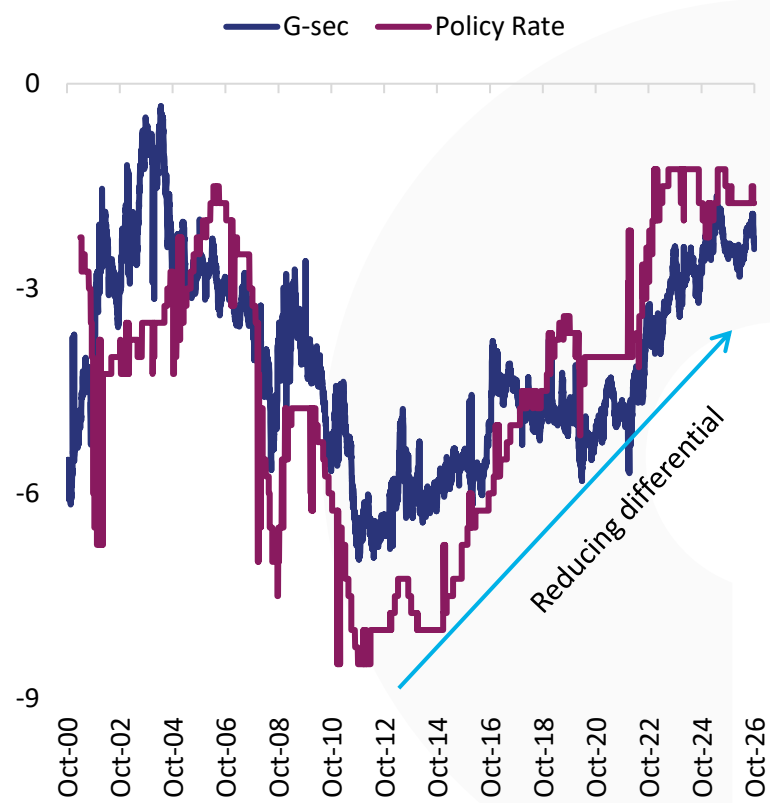
CPI Y/Y



REAL GDP Y/Y



G-SEC YIELDS & POLICY RATE



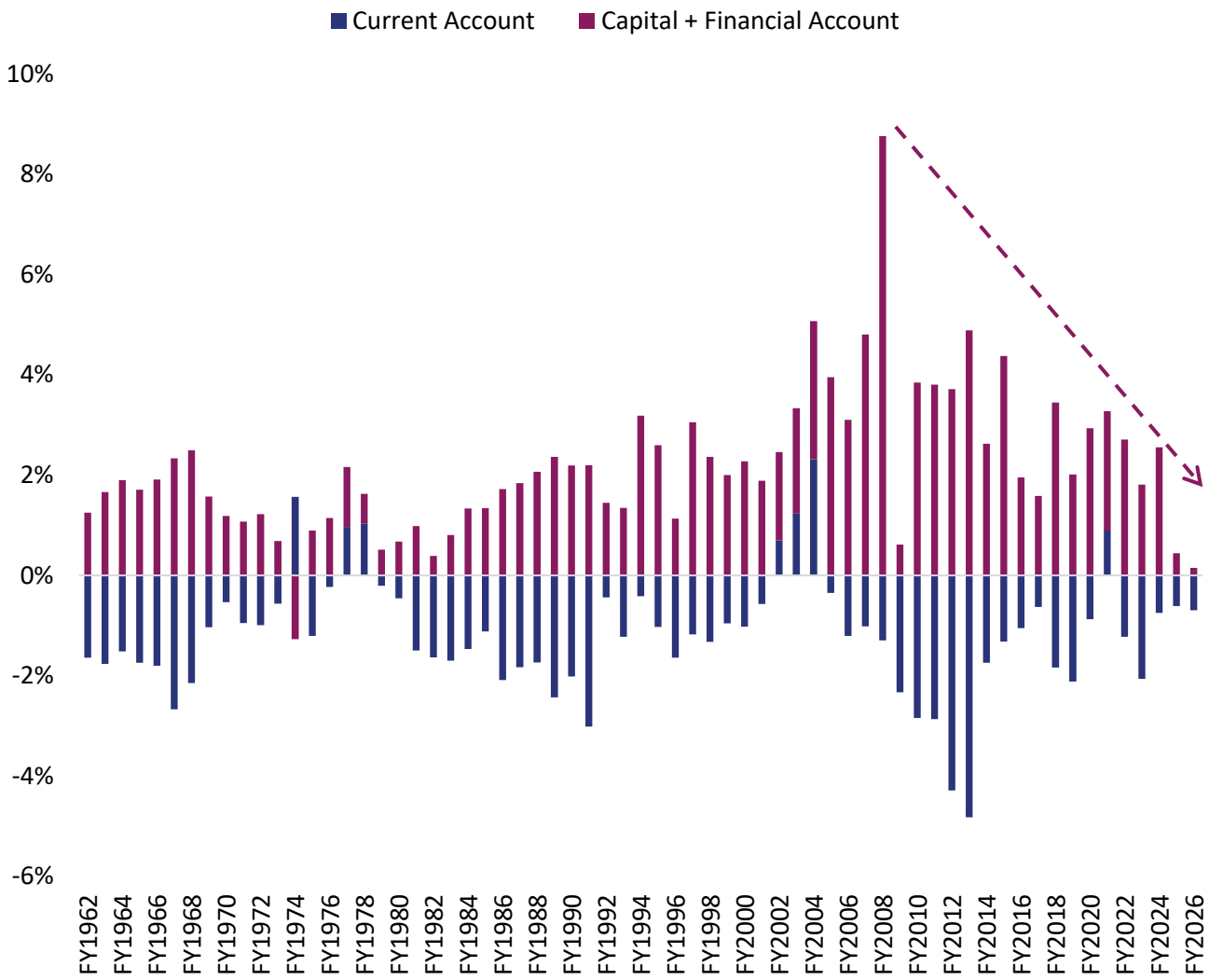
- Historically, India's inflation has been much higher than the US. This consistent gap meant that policy rates, and consequentially, yields, maintained a significant lead. In the post-GFC era, the CPI gap between the two economies has greatly reduced while India maintains its lead in real growth, prompting a narrowing of the policy rate and G-sec yield differential

- The change is due to a combination of a successful FIT regime in India and burgeoning fiscal deficit straining US's credit rating while India's is ascendant. It is in line with the 2pp differential in inflation target between the economies. *We expect that this differential will structurally remain at similar levels going ahead*

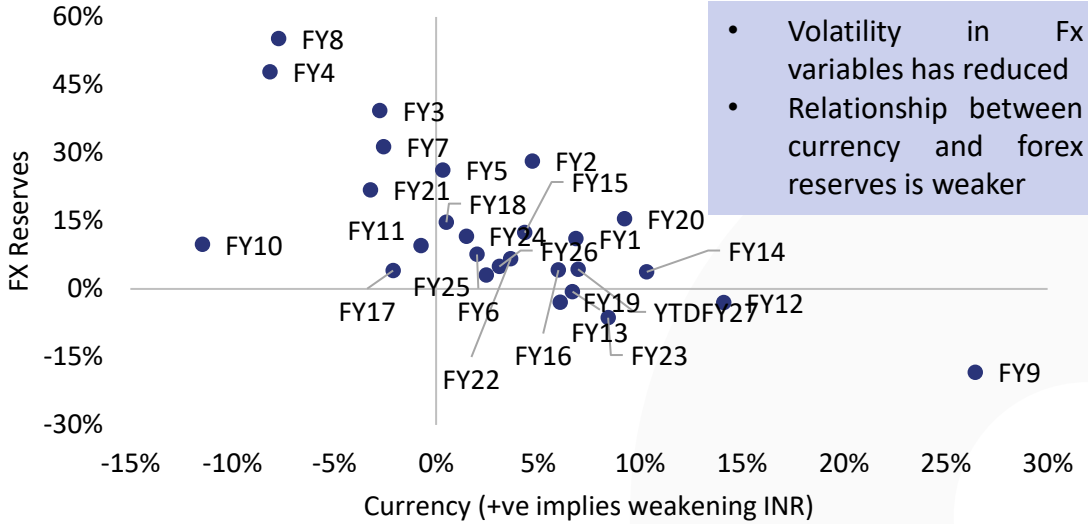
Source: Bloomberg, SBICAPS

WHAT DRIVES BALANCE OF PAYMENTS NOW?

BALANCE OF PAYMENTS (% OF NOMINAL GDP)



CURRENCY VS. FOREX RESERVES (CHANGE DURING FY)



- Volatility in Fx variables has reduced
- Relationship between currency and forex reserves is weaker

- Large inflows of foreign capital were able to sustain bloated current account deficits in yesteryear. There as been a general decline in this, and the fears of overvaluation/AI boom elsewhere have curbed capital & financial surpluses

- Going forward, there could be a structural change in the cushion which would be provided from capital and financial accounts. This is especially true on the debt side, given India's inflation (and hence yields) now maintain a thinner spread

- In such a situation, following strategies are possible:
  - Impetus on export-led growth to improve merchandise trade balance and reduce current account deficit
  - Incentives for equity market re-entry for foreign investors
  - Maintaining large forex reserve for currency stability

Source: CEIC, World Bank, Bloomberg, SBICAPS

DECOMPOSING INDIA'S INTEREST RATE

TOWARDS AN INDIAN R*



FACTOR ANALYSIS

Parameters	Analysis	Impact on r*
Potential Growth	Stable, with structural factors maintaining it at current high levels	↔
Inflation	Expected to peak and then dip sometime in early CY27. However, FIT regime has largely been successful in anchoring expectations	↔
Savings	Long-term factor, savings rate could show gradual increase. Financialisation also boosts demand	↓
GCF	Long-term factor, could show stability at current level	↑
Life Expectancy	Gradual increase	↓
Age Dependency	Bottoming out	↔
Fiscal Deficit	Gradual decrease	↓
Real RoCE	Could see a dip	↓
Global spillover	Will exert upward pressure	↑

- *Unlike advanced economies, India's real rate drivers point towards stability.* The upward pressure from rising natural rate globally is likely to be offset by other factors which are titled downwards
- *Nominal yields are likely to lead the inflation-driven rate path, though subject to significant variances due to geopolitical strife*

Source: Bloomberg, CEIC, CRISIL, SBICAPS

03

ANNEXURES

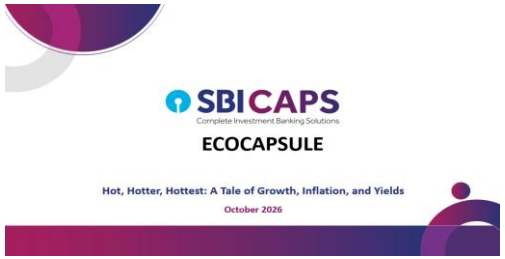
ANNEXURE 1: GLOSSARY

Abbreviation	Full Form
AI	Artificial Intelligence
BoJ	Bank of Japan
CPI	Consumer Price Index
FED	Federal
FIT	Flexible Inflation Targeting
FX	Foreign Exchange
GDP	Gross Domestic Product
GFC	Global Financial Crisis
G-sec	Government Securities
HLW	Holston, Laubach, & Williams
INR	Indian Rupee
PP	Percentage Points
QE	Quantitative Easing
r*	Natural Rate of Interest
RBI	Reserve Bank of India
RoCE	Return on Capital Employed
TIPS	Treasury Inflation-Protected Securities
USD	US Dollar
UST	US Treasury
Y	Year

ANNEXURE 2: REFERENCES

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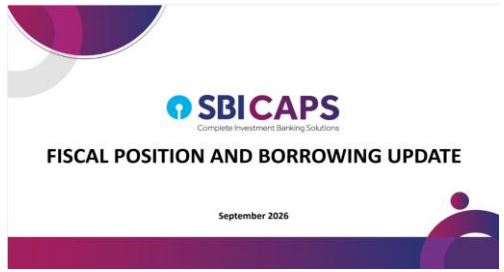
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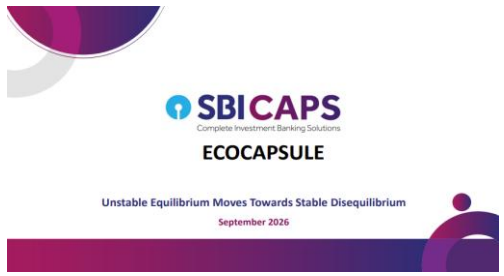
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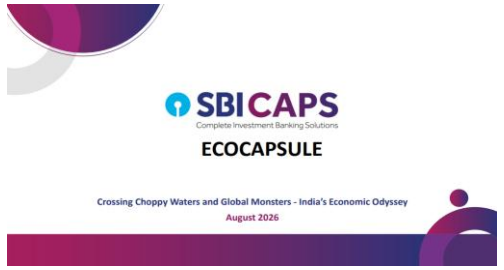
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