Dollars and Sense: Chasing the (R-)Stars

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Highlights

- The strength of the U.S. economy is fueling the debate on whether the Federal Reserve needs to continue raising interest rates. This debate revolves around whether the current policy rate is sufficiently restrictive relative to estimates of the neutral rate of interest (R-Star).
- We believe the neutral rate is on the rise due to the surge in climate change investment, the rewriting of global supply chains, and widening government deficits. A higher neutral rate means that the current policy rate may not be as restrictive as the Fed thinks.
- While the conditions for a higher R-Star are also in place for Canada, a major difference is the highly indebted household. This factor will restrict growth, justifying a lower R-Star in Canada relative to the U.S.

The Federal Reserve indicated in September that one more rate hike this year was still in the cards. That means the end is now at hand for this rate hiking cycle…or is it?

Investors have watched the Fed repeatedly revise up expectations for how high they will need to raise interest rates over the past year and a half (Chart 1) in the face of stubborn inflation and surprising economic momentum. Although interest rates are finally high enough to be in "restrictive territory", the question of how restrictive is debatable. The answer depends on where the neutral rate is believed to rest, and that answer varies through history.

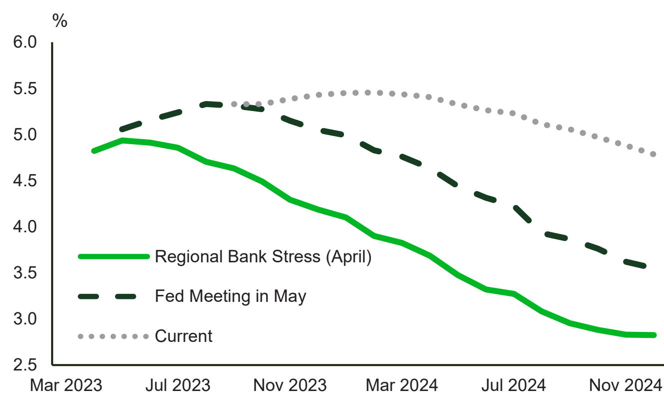
In this report, we tackle how an interest rate that's supposed to be rooted in long-term concepts of economic fundamentals and dynamics can change by such a large magnitude, and whether that thinking is about to migrate towards a higher neutral rate.

Even a slightly higher neutral rate would imply that the current fed funds rate at 5.50% is not sufficiently restrictive to re-anchor and sustain inflation at the 2% target.

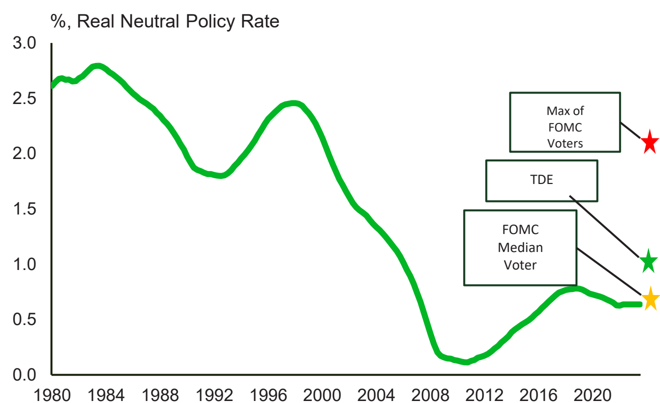
A paradigm shift in the (R-)stars

The evolution of the neutral rate of interest or, in economics jargon, R-star, is the federal funds policy rate (net of inflation) that neither stokes nor chokes off economic growth. It can also be thought of as the "clearing rate" that keeps savings and investment in equilibrium. It is in the depths of this concept where the debate on R-star estimates rage on.

Chart 1: Fed Policy Path is Rising



Source: Bloomberg, TD Economics.



Over the last 30 years, several large forces have caused analysts to mark down estimates of the neutral rate (Chart 2). Two key ones were when the tech bubble popped in 2001 and the real estate market collapse in 2008. Both caused lengthy deleveraging cycles by corporations (in the case of the tech bubble) and consumers (following the real estate bubble). The net effect of each was to restrain the willingness to spend and invest, weighing down the neutral rate.

Two other phenomena were thought to lead to a lower neutral rate: a global savings glut and secular stagnation. In 2005, former Fed Chair, Ben Bernanke, noted that the rise of developing nations with higher savings rates, led by China, in combination with oil producing countries in the Middle East and North Africa created a supply of available global savings that was not matched by investment. Simultaneously, secular stagnation pulled on many threads, including one view that the dearth of investment was accentuated by the rise of the digital economy that required less capital, leading to slower employment and output growth.

All these theories and observations pointed in the same direction: too much money chasing too few assets, leading to a fall in world interest rates. And this seemed to be true over the period of 2001 to 2020, where inflation remained anchored near the 2% mark despite an average policy rate of only 1.5%.

Now the question is how much of these conditions still hold today?

The first catalyst of change is that the digital economy (and soon-to-be A.I. economy) is intersecting with government policies on clean energy and supply chain security. This has lit a fire under traditional investment in U.S. manufacturing facilities despite high interest rates.

The second catalyst is that the pandemic caused government debt (globally) to skyrocket, and many countries are keeping debt loads higher. This is causing greater competition by sovereign debt for global savings. This has the potential to crowd out private sector debt. In the case of the U.S., the Congressional Budget Office (CBO) projects that the (gross) federal debt-to-GDP ratio is slated to rise over eight percentage points by 2027 and by 22 percentage points (to 119%) by 2033. Deficits ranging between five and six percent of GDP are expected to persist – and ultimately widen. This would occur under a continual economic expansion, let alone a cycle that encompasses a downturn.

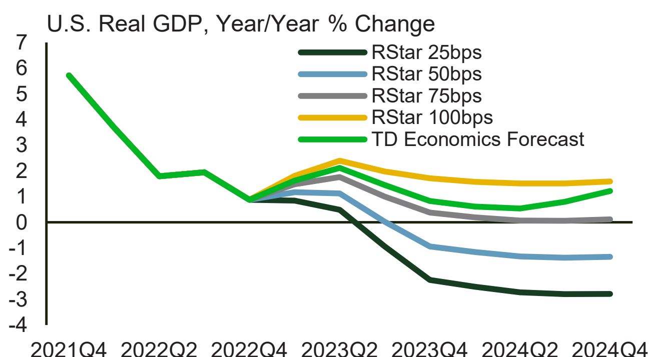
The third catalyst is that China's contribution to the global savings glut is diminishing. Advanced countries are actively limiting supply chain exposure to China, while the country is slowing materially under the weight of aging demographics and strong structural economic forces related to their financial and property sectors. Long gone are the days of double-digit economic growth when China's entry into the World Trade Organization propelled a rapid expansion of globalization. Economic growth is expected to trend towards 3.5% by 2028. By extension, this will slow the pace of global savings creation as the pendulum starts swinging to the other side. ¬

Diversifying supply chains away from China should help to bring down the risk of future large economic disruptions, but it could come at the expense of productivity. Lower global productivity reduces global income and available savings in turn. Even absent productivity losses, the shift of production to countries with lower savings rates could work to thin out the global savings pool.

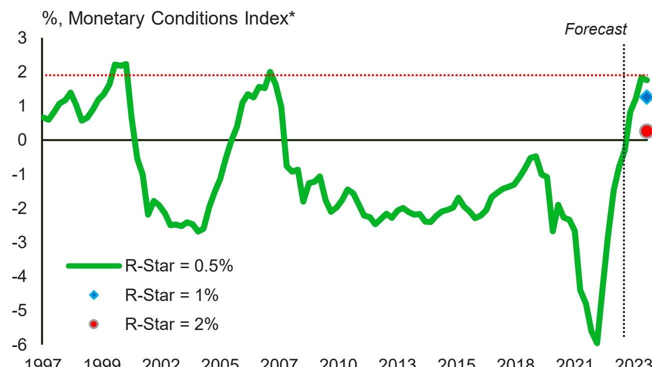
Ultimately the coming years could see a normalization in the flow of savings, and this can raise the marginal cost of capital…i.e. the equilibrium interest rate.

Stellar collision

This collision of forces is causing a rethink of R-star. Unfortunately, the answer is only ever known in hindsight. Even so, we think the odds lean toward it being slightly higher than the past decade. The resilience of the U.S. economy is giving some signals on this front, as laid out



Source: TD Economics. Note: Actual to 2023Q2.



*Fed funds rate adjusted for inflation and the real neutral rate.
Source: HLW (Adjusted), TD Economics.

in Table 1. Of course, this doesn't answer the crucial question of how high that R-star has risen. It is early days, but we think roughly a 25bps (and perhaps even as much as a 50bps) nudge is a reasonable possibility.

To help ground this perspective, we conducted a thought experiment. Applying different assumptions for R-star, we can test with our models what GDP growth would have been over the first three quarters of 2023 and through 2024 (Chart 3). If the post-Global Financial Crisis (GFC) level of R-star was maintained, the U.S. economy would have already been on a path towards recession. Instead, GDP growth over the first three quarters of 2023 reveals that R-star is tracking between 0.75% and 1.0% (compared to the Fed's view of 0.5%). This is consistent with our recently published economic forecast.

Now is this enough to slow the economy down and bring inflation back to 2%? Our monetary conditions index that takes the Fed's policy rate and adjusts it for inflation and R-star helps to answer this (Chart 4). It shows that if the Fed is right and R-star hasn't changed since the post-GFC time period, the monetary conditions index is set to reach the same level of restrictiveness that preceded the 2001 and 2008 recessions. But if R-star has migrated higher, the current level of policy is less restrictive than the Fed thinks. Our view of R-star between 0.75% to 1.0% (nominal neutral rate of 2.75% to 3.00%) validates

Table 1: Drivers of R-Star

	Prior Cycle	Current Cycle
Productivity Growth	Falling productivity and low investment (-)	Supply chain investment and potential of generative AI (+)
Demographic Trends	Falling birth rate, lower immigration, low labor force participation (-)	Same as prior but notable increases in labor force participation (+)
Fiscal Policy/Investment	High government borrowing offsetting consumer deleveraging (+)	Still high government borrowing plus climate change investment (+)
International Flow	Emergence of China led to significant investment (+)	A changing world trade order may spark new investment (+)
Scarcity of Safe Assets	Rising Emerging Market growth and commodity demand caused increased demand for USD and scarce USD assets (+)	Continuation of prior trend with no alternative to the USD (+)

Source: TD Economics.

our view that the U.S. economy is mostly likely headed for a soft landing.

Canadian economy slowing, but inflation remains stubborn

The same forces impacting R-star in the U.S. are at work in Canada, but there is one key distinction on the domestic front. Canada's elevated household debt levels place the country at risk for a drawn-out deleveraging cycle, and this typically pushes down the resting place on interest rates.

Already, signs are coming through on this front. Even though the Bank of Canada (BoC) has hiked its policy rate by 50 bps less than the Fed, economic momentum is already downshifting – a sign that R-star in Canada may be lower than in the U.S. Just look at real estate. Existing home sales had a peak-to-trough decline of over 50% since the BoC first started hiking in 2022, with the average home sale price falling 20% over that time. And even though the market started to heat up in the spring following the BoC's January pause, back-to-back hikes in June and July once again sent home sales plummeting.

While it is clear the BoC's actions have teeth when it comes to real estate, the impact on the consumer has been less immediate. In fact, consumer spending was the main driver of growth for the economy through the first quarter of 2023. But since then, there has been a notable shift. Retail sales have gradually turned lower, with the three-month figure showing a decisively negative trend since March. This is happening alongside a cooling in the job market. We have seen the number of job postings drop by 25% from the peak, while the number of unemployed workers has risen to a high of 138k, alongside a drop in the job switching rate to 0.4% - lower than in the pre-pandemic period. Workers are feeling less confident, and with more Canadians facing mortgage renewals, consumers have been adjusting their spending behaviour. This helps guide our view of R-star for Canada. With the economy having responded to past rate hikes so clearly, this has been a signal that the neutral rate is likely lower in Canada than in the U.S.

While this implies that the BoC can maintain a lower policy rate compared to the Fed, it doesn't mean the inflation fight is over. Lags, combined with the impulse of prior economic strength, has Canadian inflation remaining elevated. The CPI reading for August showed a reacceleration to 4.0% year-on-year (y/y). Worse, core readings of inflation have accelerated, also reaching 4.0% y/y in August (up from 3.8% the month prior). The BoC will find none of this encouraging as more time is needed for the very recent downshift in economic momentum to feed through to end-user prices. As shown in our recent economic forecast, evidence of easing inflationary pressures is expected to materialize in the first half of 2024. In the meantime, the Bank of Canada has little choice but to ensure communication remains firmly in the hawkish camp.

Interest Rate Outlook

Interest Rates	Spot Rate	2023				2024				2025			
	Oct-04	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
CANADA													
Overnight Target Rate	5.00	4.50	4.75	5.00	5.00	5.00	4.50	4.00	3.50	3.00	2.50	2.25	2.25
3-mth T-Bill Rate	5.13	4.34	4.90	5.07	5.00	4.75	4.25	3.75	3.25	2.75	2.38	2.25	2.25
2-yr Govt. Bond Yield	4.91	3.74	4.58	4.87	4.90	4.60	4.30	4.00	3.70	3.40	3.10	2.80	2.50
5-yr Govt. Bond Yield	4.35	3.02	3.68	4.25	4.30	4.05	3.75	3.50	3.30	3.10	2.90	2.75	2.60
10-yr Govt. Bond Yield	4.17	2.90	3.26	4.03	4.10	3.85	3.65	3.45	3.25	3.05	2.90	2.85	2.85
30-yr Govt. Bond Yield	3.94	3.00	3.08	3.81	3.85	3.75	3.65	3.55	3.45	3.35	3.20	3.15	3.15
10-yr-2-yr Govt Spread	-0.74	-0.84	-1.32	-0.84	-0.80	-0.75	-0.65	-0.55	-0.45	-0.35	-0.20	0.05	0.35
U.S.													
Fed Funds Target Rate	5.50	5.00	5.25	5.50	5.75	5.75	5.50	5.00	4.50	4.00	3.50	3.00	2.75
3-mth T-Bill Rate	5.34	4.68	5.17	5.32	5.65	5.55	5.15	4.65	4.15	3.65	3.15	2.75	2.65
2-yr Govt. Bond Yield	5.05	4.06	4.87	5.03	5.00	4.70	4.40	4.10	3.80	3.50	3.20	2.90	2.75
5-yr Govt. Bond Yield	4.72	3.60	4.13	4.60	4.65	4.35	4.10	3.80	3.55	3.35	3.15	2.95	2.95
10-yr Govt. Bond Yield	4.74	3.48	3.81	4.59	4.70	4.45	4.20	4.00	3.80	3.60	3.40	3.25	3.20
30-yr Govt. Bond Yield	4.88	3.67	3.85	4.73	4.90	4.75	4.50	4.30	4.10	3.90	3.70	3.55	3.50
10-yr-2-yr Govt Spread	-0.31	-0.58	-1.06	-0.44	-0.30	-0.25	-0.20	-0.10	0.00	0.10	0.20	0.35	0.45
CANADA - U.S SPREADS													
Can - U.S. T-Bill Spread	-0.21	-0.34	-0.27	-0.25	-0.65	-0.80	-0.90	-0.90	-0.90	-0.90	-0.77	-0.50	-0.40
Can - U.S. 10-Year Bond Spread	-0.57	-0.58	-0.55	-0.56	-0.60	-0.60	-0.55	-0.55	-0.55	-0.55	-0.50	-0.40	-0.35

F: Forecast by TD Economics, October 2023; Forecasts are end-of-period.
Source: Bloomberg, Bank of Canada, Federal Reserve.

Foreign Exchange Outlook

Currency	Exchange rate	Spot Price	2023				2024				2025			
		Oct-04	Q1	Q2	Q3	Q4F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
Exchange rate to U.S. dollar														
Chinese Yuan	CNY per USD	7.30	6.87	7.25	7.30	7.35	7.40	7.45	7.40	7.30	7.20	7.10	7.00	6.90
Japanese yen	JPY per USD	149	133	144	149	150	149	147	146	144	143	141	140	138
Euro	USD per EUR	1.05	1.09	1.09	1.06	1.05	1.04	1.03	1.05	1.07	1.09	1.12	1.14	1.16
U.K. pound	USD per GBP	1.21	1.24	1.27	1.22	1.22	1.21	1.20	1.22	1.25	1.27	1.30	1.30	1.30
Canadian dollar	CAD per USD	1.37	1.35	1.32	1.35	1.37	1.38	1.39	1.38	1.35	1.33	1.30	1.27	1.25
Australian dollar	USD per AUD	0.63	0.67	0.67	0.65	0.63	0.62	0.62	0.62	0.63	0.65	0.66	0.67	0.72
NZ dollar	USD per NZD	0.59	0.63	0.61	0.60	0.58	0.57	0.57	0.57	0.58	0.60	0.61	0.62	0.66
Exchange rate to Euro														
U.S. dollar	USD per EUR	1.05	1.09	1.09	1.06	1.05	1.04	1.03	1.05	1.07	1.09	1.12	1.14	1.16
Japanese yen	JPY per EUR	157	144	158	158	158	154	151	153	154	156	157	159	161
U.K. pound	GBP per EUR	0.87	0.88	0.86	0.87	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.88	0.89
Canadian dollar	CAD per EUR	1.44	1.47	1.45	1.43	1.44	1.44	1.43	1.45	1.45	1.45	1.45	1.45	1.45
Australian dollar	AUD per EUR	1.66	1.62	1.64	1.64	1.68	1.68	1.67	1.69	1.69	1.69	1.69	1.69	1.61
NZ dollar	NZD per EUR	1.78	1.73	1.78	1.76	1.82	1.82	1.82	1.84	1.84	1.84	1.84	1.84	1.75
Exchange rate to Japanese yen														
U.S. dollar	JPY per USD	149	133	144	149	150	149	147	146	144	143	141	140	138
Euro	JPY per EUR	157	144	158	158	158	154	151	153	154	156	157	159	161
U.K. pound	JPY per GBP	181	164	184	183	183	180	176	178	180	181	183	182	180
Canadian dollar	JPY per CAD	108.4	98.2	109.2	110.4	109.5	107.6	105.8	105.5	106.5	107.6	108.7	109.8	110.7
Australian dollar	JPY per AUD	94.2	89.0	96.3	96.4	93.8	92.2	90.6	90.4	91.3	92.2	93.2	94.1	99.7
NZ dollar	JPY per NZD	88.1	83.2	88.6	89.9	86.3	84.9	83.4	83.2	84.0	84.9	85.7	86.6	91.7
Exchange rate to Canadian dollar														
U.S. dollar	USD per CAD	0.73	0.74	0.76	0.74	0.73	0.73	0.72	0.73	0.74	0.76	0.77	0.79	0.80
Japanese yen	JPY per CAD	108.4	98.2	109.2	110.4	109.5	107.6	105.8	105.5	106.5	107.6	108.7	109.8	110.7
Euro	CAD per EUR	1.44	1.47	1.45	1.43	1.44	1.44	1.43	1.45	1.45	1.45	1.45	1.45	1.45
U.K. pound	CAD per GBP	1.67	1.67	1.68	1.65	1.67	1.67	1.67	1.69	1.69	1.69	1.69	1.66	1.63
Australian dollar	AUD per CAD	1.15	1.10	1.13	1.15	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.11
NZ dollar	NZD per CAD	1.23	1.18	1.23	1.23	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.21

F: Forecast by TD Economics, October 2023; Forecasts are end-of-period.
Source: Federal Reserve, Bloomberg.

Global Stock Markets					
Major Market Indexes	Price Oct-04	30-Day % Chg.	YTD % Chg.	52-Week High	52-Week Low
S&P 500	4,247	-6.0	10.6	4,589	3,577
S&P/TSX Composite	18,989	-7.6	-2.0	20,767	18,206
DAX	15,100	-4.7	8.4	16,470	12,172
FTSE 100	7,412	-0.7	-0.5	8,014	6,826
Nikkei	30,527	-6.7	17.0	33,753	25,717
MSCI AC World Index*	645	-6.2	6.5	707	550

*Weighted equity index including both developed and emerging markets.
Source: Bloomberg, TD Economics.

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