Economics

ECONOMIC INSIGHTS

April 5, 2024

The neutral rate: Why one size doesn't fit all

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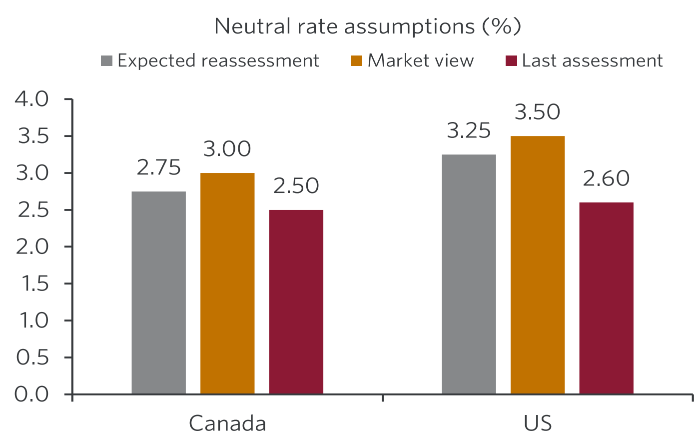
American Justice Potter Stuart opined that while he couldn't define pornography that could legally be barred, "I know it when I see it". That quote might just as easily apply to what economists call the neutral rate of interest, the policy rate that will keep the economy at potential output and stable inflation in the absence any shocks.

The Bank of Canada is due to update its estimate for the neutral rate in its April policy report, and we expect them to raise their point estimate by 25bps to 2.75%, which would still be a bit below what markets are now assuming (Chart 1). The Fed only just nudged up its estimate for the US neutral rate by 10 bps to 2.6%, even though we see it as eventually bringing their long run "dot" to a little over 3%, which is where the 2026 dot sits. But for either the Fed or the Bank, there's really no pressing urgency to know where it is right now. Despite the surprise uptick in January GDP, 5% is clearly restrictive in Canada. The labour market is weak and the consumer has almost tapped out, so the uptick in Q1 growth is being driven by one-time factors.If inflation looks headed for 2% and the economy remains soft, there's little danger that the first 100 basis points or so of cuts would take us through neutral and result in an overheating.

Chart 1: BoC to raise neutral by 25bps and the Fed eventually to bring their view higher by 75bps



Source: Bank of Canada, Federal Reserve, Bloomberg, CIBC

A very long-term neutral rate, which could be thought of as the average rate over the coming decade, would be of some use to bond investors thinking about the long end of the curve. But what the Bank could use, and what markets will also be trying to assess, is where the neutral rate might be in 2026, since that could end up being the end point for the next easing cycle if we achieve a soft landing. As we showed in earlier research, past easing cycles that didn't come amidst bruising recessions typically ended near where the neutral rate was at that time.

But measuring where neutral lies a couple of years out is fraught with difficulties, and we'll only really know it when we see how the economy does as we get near to it. That has implications for how much weight market participants should put on the BoC's updated estimate, and particularly on the likelihood that it could be a bit above the Fed's current 2.6% estimate for the US neutral rate.

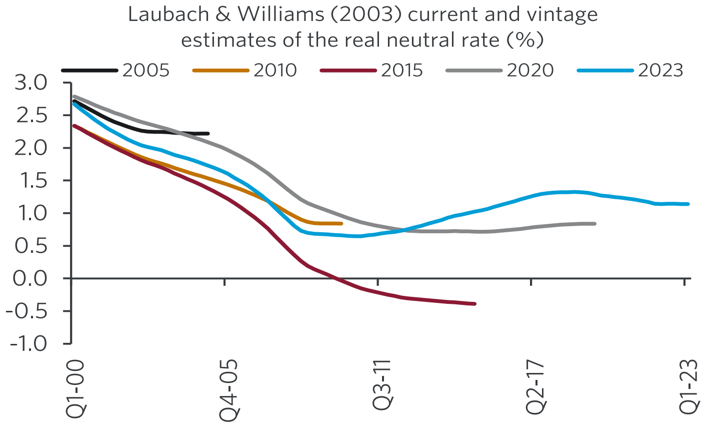
Economists' track record: no heroic forecasts

If we're going to place a lot of confidence in any estimate of where the neutral rate is headed, it would help if economists had a good track record on that task in the past. There's no such luck.

Historically, in the 1980s and 1990s, economists typically assumed that the neutral rate was essentially fixed, at a real rate of 2%. But it was many years later, around 2000, before economists made a convincing case that the actual neutral rate had been moving materially over those decades

One of the first and most popular approaches that uncovered that miss was set out by Laubach and Williams. Their methodology essentially linked a short-run measure of the real neutral rate, "r-star", with the trend rate of growth. But estimating the trend rate of growth itself is no easy feat, and it's even more challenging to know where it's headed. Looking at vintage estimates from this model over the past decade and

Chart 2: Vintage forecasts of the neutral rate have continually missed the mark

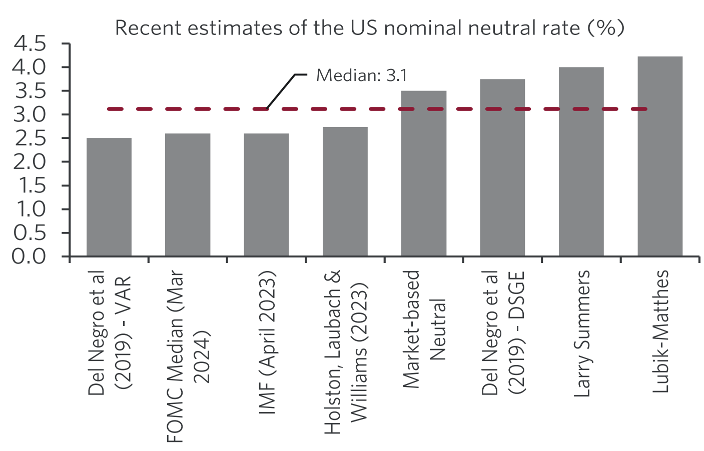


Source: NY Federal Reserve, CIBC

half shows that neutral rate estimates were all over the map (Chart 2). The current estimate brushes aside the era of negative rates of the previous decade and pre-2009 predictions provided no heroic warnings of the subsequent plunge in neutral rates. Laubach and Williams, as well more recent incarnations, struggle to split what is trend and what is cyclical in real-time.

There's been a similar lack of foresight with methods that draw on fixed income markets to infer where investors think short rates will sit several years out, on the idea that they will be assuming that rates will over time average around neutral. In 2007, just before a deep financial crisis that wasn't foreseen, such models were still consistent with neutral being a real rate of roughly 1.5%, roughly a full percentage point above where they were destined to head. Moreover, the neutral rate was persistently well below a 1% real rate for the subsequent decade.

Chart 3: Recent US nominal neutral rate estimates are all over the map



Source: Federal Reserve Board of Governors, NY Federal Reserve, Richmond Federal Reserve, Bloomberg, IMF, CIBC

We may be at similar point of uncertainty right now. Comparing eight different measures of the nominal US neutral rate, from structural models, market-based measures and just plain old opinion, show there's no clear consensus on where neutral is today (Chart 3). These estimates point to a nominal neutral rate range of 2.5% to slightly over 4%. That's not very helpful in fine tuning policy decisions.

Forecastable in theory, but not in practice

Economists think of the neutral rate as determined by the broader balance of saving and investment. Forces that encourage more saving depress the neutral rate, while sustained shifts in investment demand can push the neutral rate higher.

So the start of any neutral rate analysis starts with a list of the variables that impact savings and investment. For small-open economies like Canada, that would include are the US neutral rate, potential output, demographics, fiscal policy, and demand for long-term bonds, amongst others. But the US neutral rate is in turn impacted by various underpinnings of global savings and investment. Central banks often have a patchwork of models emphasizing a few of these forces, and usually don't provide a complete picture of how all of them work together.

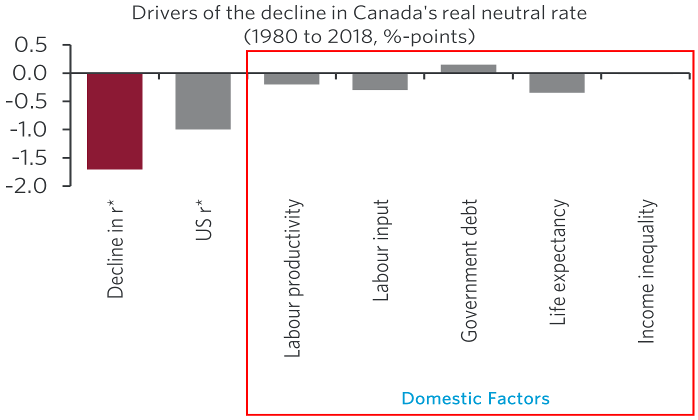
Prognosticators like to go down the list of variables and argue how each is going to nudge neutral this way or that way. But that approach has not worked out well in practice. As a case in point, McKinsey asserted in 2010 that neutral rates would climb materially over the decade ahead, and cited a surge in investment. Instead, investment and interest rates plunged. Today many are making the same argument based on rising investment demand propelled by the climate transition and AI as well as higher government spending. Good luck forecasting these variables, much less identifying their independent impact on the neutral rate.

What the BoC is likely to say

The Bank of Canada has its own patchwork of four separate models to derive Canada's neutral rate. Most of those models depend on the US neutral rate as an input, and the Bank has multiple approaches to estimating that rate. Little wonder, then, that they publish a 100 basis point band, rather than a point estimate, for the Canadian neutral rate. That band ought to now be even wider, since we don't have an up-to-date perspective from seeing how the economy performs with rates near neutral, and much of the data in the last three years was heavily distorted by the pandemic.

We can't fully replicate most of these models, but we don't need to, since as it turns out, we can still make a reasonable guestimate of where they will land. Almost certainly, it will be higher than the current 2.5%. The Bank has not been shy about that either, with the Governor and former Deputy Governor Paul Beaudry repeating a few times last year that there is a "risk" that neutral will be higher.

Chart 4: The BoC's latest neutral model continues to put a lot of weight on the US neutral rate



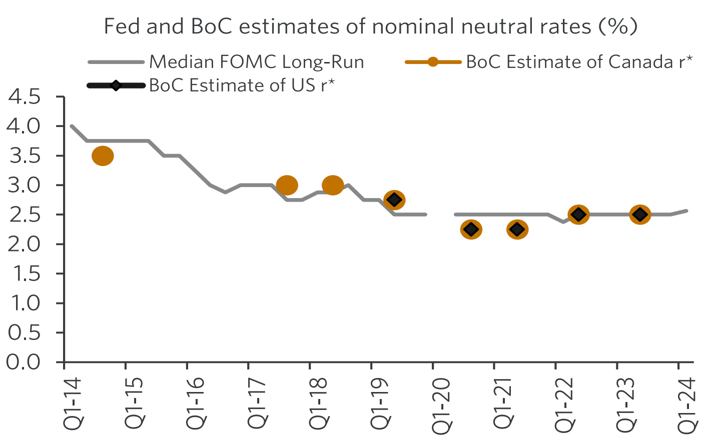
Source: Low elasticity of country-risk premium case presented in Kuncl & Matveev (2023), CIBC

In large part, the four approaches collectively give so much weight to the US figure that they rarely diverge much. Even the Bank's newest and richest model that they developed last year and incorporates a broad array domestic factors suggests that nearly 60% of the drop in Canada's neutral rate over the past 40 years could be due to the US neutral rate (Chart 4). So in practice, the BoC neutral rate nearly always coincides with the FOMC's "long run" dot plot forecast or its own estimate of where the US neutral rate is (Chart 5).

We expect the BoC to raise its own estimate of the US neutral rate in the April MPR, so our base case is that the midpoint of the BoC's neutral rate range will follow suit rising by 25bps to a mid-point of 2.75. A downward adjustment to trend Canadian productivity growth would lean against that, and the Bank will have to assess how the recent population surge, but new measures to contain it, will impact both the level and growth rate of potential GDP.

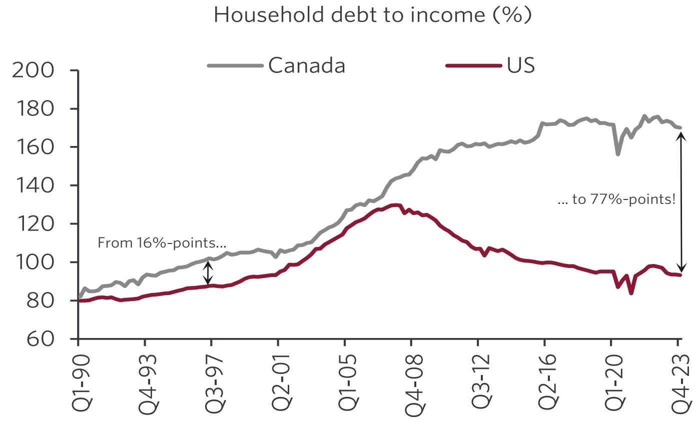
Sure, the Bank will couch that with references to considerable uncertainty, and might also mention that the neutral rate can diverge from this longer term concept. It will also note that the current policy rate is clearly restrictive even with a higher estimated neutral rate, leaving elbow room to ease as need be. But despite all of that verbiage, markets might end up putting a lot of weight, and perhaps too much weight, on the midpoint, and conclude that the Fed and the Bank of Canada will take rates to equivalent levels ahead, or even see Canada's rate higher in the long term until the Fed pushes up its neutral rate in upcoming quarters.

Chart 5: BoC neutral estimates move in lock and step with the US neutral



Source: Federal Reserve Board of Governors, Bank of Canada, CIBC

Chart 6: Household debt burdens should push Canada's r* lower than the US



Source: Statistics Canada, Bureau of Economic Analysis, CIBC

Vive la difference

One problem with this one-size-fits-all neutral rate is that there's considerable evidence, going back nearly a decade, that Canada's neutral rate has already been lower than the US rate. In the prior cycle, the Canadian economy was materially slowing in 2019 with an overnight rate of only 1.75%, while the US saw enough momentum to take the fed funds rate to 2½%.

In the current cycle, Canadian growth was visibly sagging after the overnight rate hit 4.5%, although a one-quarter bump in growth ultimately had the Bank of Canada tack on an extra 50 bps. But the stall in interest-sensitive sectors and domestic demand made it abundantly clear that the current 5% rate is quite restrictive. That's in sharp contrast to the resilience that US growth has shown with an overnight rate that's 37 bps higher. The gap reflects rising savings rates in Canada and falling savings rates in the US, indicative of a divergent response to similar levels of real interest rates.

There are also sound reasons to expect that this gap in neutral rates will persist in the next few years. Canadians, more indebted than their American neighbours, facing a debt-to-income burden almost 80%-points higher than seen stateside (Chart 6), means that debt servicing costs absorb roughly 1½ times what they do in the US as a share of after-tax income. Unlike Americans with low mortgage rates locked in prior to or at the height of the pandemic, about half of all Canadian mortgages are still facing a refinancing at higher interest rates through 2026, unless we see deep cuts in interest rates before then.

Curiously, the Bank's neutral rate models place essentially no weight on the role of private household debt burdens and the structure of US and Canadian mortgage markets. That is surprising because not only is this one of the main considerations for the Bank in assessing how well monetary policy is working, but also because there is a strong theoretical case to including household debt in neutral rate modelling. Three prominent economists from Princeton, Harvard and the University of Chicago proposed the idea of "indebted demand" in 2021 — that higher debt burdens cause borrowers to reduce their spending, pushing up savings in the economy and depressing the neutral rate. If this force were in the models, it would undermine the case for having the Canadian neutral rate estimate march higher if the US rate heads that way.

A guide for policy, or a hazard?

Markets will likely make a bigger deal out of the Bank and eventually the Fed's reassessment of neutral than they should. But we don't expect central bankers to show a lot of confidence in these estimates. The neutral rate is just one way to assess the stance of monetary policy, but it is just so imprecise that it can be just as much of hazard as it can be a guide for policy. Both central banks are fully aware of this, and will judge how tight monetary policy is by looking at the data first. As they ease policy, they'll pay close attention to how well the economy is actually faring, and investors would be wise to not lean heavily on neutral rate estimates as a guide to where rate cuts will come first, or be more aggressive.

While GDP growth will likely surprise to the upside in 24Q1, that should not be hurdle for rate relief in Canada. Most of the forces driving that upturn — the end of public sector strikes in Quebec and the removal of supply bottlenecks — are not durable trends. We also don't discount the prospect of some residual seasonality. The strength in January has feelings of déjà vu after almost exact same pattern last year. The Canadian and US economies are still set to slow until rate relief starts to kick in (Table 1 & 2). The softer underlying growth path of the Canadian economy should entail a steeper path to lower rates than we we'll see in the US (Table 3 & 4). While we've pared back our call for Fed cuts this year by a quarter point, we see enough of a slowdown ahead in the US to bring the Fed into rate cuts in the latter of the year, but no pressing need to get to wherever the neutral rate is in a hurry.

Table 1: Canada forecast detail (real % change, SAAR, unless otherwise noted)

Variable	23Q3A	23Q4A	24Q1F	24Q2F	24Q3F	24Q4F	2023A	2024F	2025F
Real GDP Growth (AR)	-0.5	1.0	2.8	0.0	0.5	1.2	1.1	1.0	1.6
Real Final Domestic Demand (AR)	0.8	-0.7	1.9	0.7	1.4	1.3	0.5	0.9	1.8
Household Consumption (AR)	0.5	1.0	2.2	0.2	0.5	0.8	1.7	0.9	1.4
All Items CPI Inflation (Y/Y)	3.7	3.2	2.8	2.5	1.9	1.9	3.9	2.3	1.8
Unemployment Rate (%)	5.5	5.8	5.9	6.2	6.3	6.2	5.4	6.1	5.8

Table 2: US forecast detail (real % change, SAAR, unless otherwise noted)

Variable	23Q3A	23Q4A	24Q1F	24Q2F	24Q3F	24Q4F	2023A	2024F	2025F
Real GDP Growth (AR)	4.9	3.4	2.0	1.5	0.9	1.7	2.5	2.3	1.9
Real Final Sales (AR)	3.6	3.9	1.7	1.6	2.0	1.4	2.9	2.3	1.9
All Items CPI Inflation (Y/Y)	3.5	3.2	3.1	2.8	2.5	2.6	4.1	2.8	2.5
Core CPI Inflation (Y/Y)	4.4	4.0	3.8	3.3	3.1	2.9	4.8	3.3	2.5
Unemployment Rate (%)	3.7	3.7	3.8	4.1	4.2	4.2	3.6	4.1	4.0

Table 3: Canadian interest rates (end of period)

Variable	2024 Apr 5	2024 Jun	2024 Sep	2024 Dec	2025 Mar	2025 Jun	2025 Sep	2025 Dec
Overnight target rate	5.00	4.75	4.50	4.00	3.50	3.25	3.00	2.75
98-Day Treasury Bills	5.00	4.60	4.35	3.85	3.40	3.15	2.85	2.60
2-Year Government Bond	4.26	3.90	3.70	3.25	3.00	2.85	2.75	2.85
10-Year Government Bond	3.66	3.35	3.30	3.25	3.10	3.05	3.00	3.05
30-Year Government Bond	3.56	3.45	3.35	3.30	3.25	3.20	3.15	3.25
Canada - US T-Bill Spread	-0.37	-0.70	-0.45	-0.05	-0.70	-0.70	-0.80	-0.75
Canada - US 10-Year Bond Spread	-0.76	-0.85	-0.80	-0.65	-0.70	-0.65	-0.50	-0.50
Canada Yield Curve (10-year — 2-year)	-0.60	-0.55	-0.40	0.00	0.10	0.20	0.25	0.20

Table 4: US Interest rates (end of period)

Variable	2024 Apr 5	2024 Jun	2024 Sep	2024 Dec	2025 Mar	2025 Jun	2025 Sep	2025 Dec
Federal funds rate (midpoint)	5.375	5.375	4.875	4.625	4.125	3.875	3.625	3.375
91-Day Treasury Bills	5.37	5.30	4.80	3.90	4.10	3.85	3.65	3.35
2-Year Government Note	4.73	4.35	3.85	3.50	3.10	3.00	2.85	2.85
10-Year Government Note	4.42	4.20	4.10	3.90	3.80	3.70	3.50	3.55
30-Year Government Bond	4.56	4.45	4.30	4.25	4.15	4.00	3.90	3.95
US Yield curve (10-year — 2-year)	-0.31	-0.15	0.25	0.40	0.70	0.70	0.65	0.70

Table 5: Foreign exchange rates

Exchange rate	2024 Apr 5	2024 Jun	2024 Sep	2024 Dec	2025 Mar	2025 Jun	2025 Sep	2025 Dec
CAD-USD	0.73	0.73	0.74	0.74	0.75	0.77	0.77	0.78
USD-CAD	1.36	1.37	1.35	1.35	1.33	1.30	1.30	1.29
USD-JPY	151	155	147	145	143	140	140	140
EUR-USD	1.08	1.07	1.09	1.11	1.12	1.13	1.14	1.15
GBP-USD	1.26	1.25	1.27	1.31	1.32	1.32	1.33	1.34
AUD-USD	0.66	0.66	0.66	0.67	0.67	0.68	0.68	0.69
USD-CNY	7.23	7.30	7.25	7.20	7.18	7.15	7.15	7.15
USD-BRL	5.05	5.05	5.20	5.00	5.10	5.10	5.00	5.00
USD-MXN	16.48	17.50	18.00	17.50	17.50	17.80	17.80	17.50

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