Modelling Behaviour

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Key Takeaways

- Understanding how macro models will be wrong is key to our process
- Standard models were predictably blind to the supply constraints that have driven the inflation surge
- Those models may now be too worried about US recession risk…
- …but not worried enough about Canada's higher interest-rate sensitivity

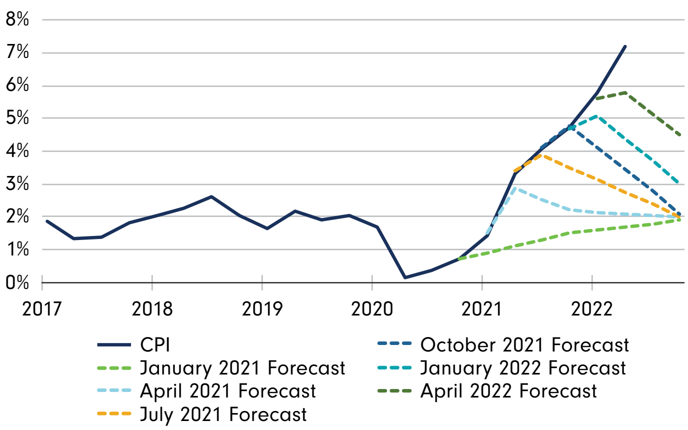
Everyone in our business has macro models. Everyone thinks their models are special. They're not. Everyone has basically the same models, because everyone has access to the same historical data sets on which the same smart people can use the same techniques to determine relationships. These models are interesting. But they're not very useful for us as asset allocators. To outperform as an investor, you need an edge. By construction, models can't give you an edge if everyone has the same ones.

We use macro models. But we use them differently. We run the models so we can understand what the consensus is thinking and discounting. Then we pull apart the models to understand where and why they will be wrong. Because they're always wrong. They're models. They'll be wrong because the future never looks exactly like the past. Relationships change. New things happen. If we can understand how the models will likely be wrong, we can understand where markets may be wrong, and position accordingly. It's hard to do. But it's how you outperform with active asset allocation.

This approach has helped us, and our fundholders, through the challenges of the past year. The models used by market participants and central banks maintained that inflation would be transitory (see Exhibit 1). We disagreed. We strongly believed the models wouldn't catch the persistence of inflation because they were all conditioned on the experience of recent decades, where supply shocks were largely absent. So the models generally assumed that

EXHIBIT 1: Central bank models have consistently underestimated inflation

Bank of Canada inflation forecast revisions



Source: Statistics Canada, Bank of Canada inflation pressure only comes from demand shocks, which had been successfully addressed with monetary policy. So the models couldn't 'see' inflation coming from the supply side, which is how things have played out (see Exhibit 2).

As a result, we were able to position our funds for the 'unanticipated' persistence of inflation. Fidelity Investments Canada launched the first-of-its-kind *Inflation-Focused Fund* last September, and we tilted our broader multi-asset funds in that same direction – buying inflation-linked bonds and gold, reducing equity and interest rate risk, and holding more Canada than we usually do. This has helped to mitigate declines in the values of our funds this year as markets have responded to higher inflation, and the aggressive monetary tightening in response, with double-digit losses in both stocks and bonds.

The models are still probably underestimating inflation – they can now see it but still don't quite understand why it's happened. The upswell in inflation is clearly more priced in than it had been, however leading us to trim – but not eliminate – our active 'inflation' trades in the funds.

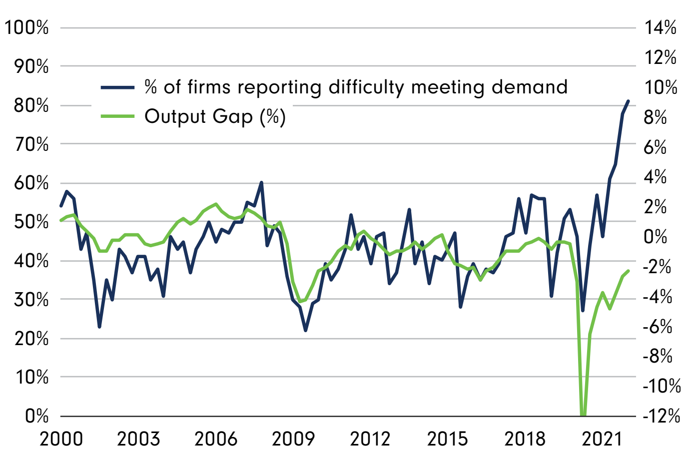
By contrast, the models are also now probably overestimating the likelihood of a resulting recession, at least in the US. The models can all see the big increase in interest rates and estimate their demand-destructive effects. But, as noted above, what has been restraining the economy is supply, not demand. As a result, you can hit demand materially and still get economic growth, so long as the supply side is gradually improving. For example, you can take some folks out of a restaurant line-up and still have a line-up; the restaurant can still grow their business if they hire more staff to open more tables.

We may still get a recession in the US. But it's not as 'obviously imminent' as the models suggest. And so with markets having gone a long ways towards pricing a recession, we have retained a neutral weighting to equities versus a more defensive positioning.

Canada is a different story. We think the more glaringly-wrong model right now is the Canadian dollar model. Everyone uses essentially the same model for the currency, valuing the exchange rate to the US dollar as a function of commodity prices and the Canada-US interest rate

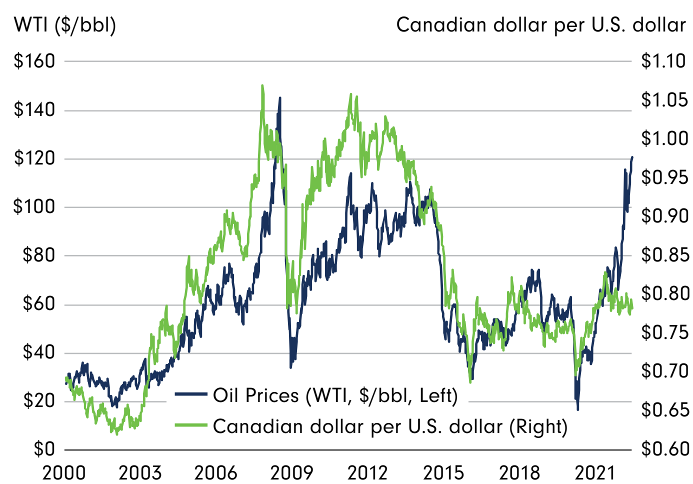
EXHIBIT 2: The Bank of Canada should have listened to its own survey

Bank of Canada Outlook Survey



Source: Bank of Canada

EXHIBIT 3: The Canadian dollar's failure to launch is a 'tell'



Source: Bloomberg

differential. This is the model that the Bank of Canada published 30 years ago and has generally worked quite well since. But not now. Commodity prices have soared. The Canadian dollar has not (see Exhibit 3).

Some have pointed to this gap as a reason to expect the Canadian dollar to rise relative to the US dollar. We don't think that's the right way to look at it. What needs to be understood is why the currency hasn't *already* risen, given everyone in the market is aware of these relationships. We think we understand why it hasn't. And it points to a weaker, not stronger, Canadian dollar as the cycle progresses.

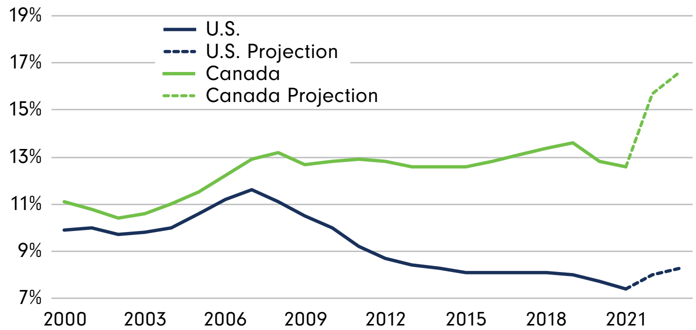
Why hasn't the CAD rallied with commodity prices? Usually it appreciates not just because the prices themselves are higher but also because of what that says about the strength of global demand, which is critical to an open, resource-producing economy like Canada's. But extending the theme above, right now commodity prices are telling us far more about supply than demand. Higher prices are being driven primarily by shortages of oil, wheat and other commodities, owing to logistics challenges, environmental issues and the war in Ukraine. Demand is weaker than it 'usually' is for this level of commodity prices. Thus so is the Canadian dollar.

The Canada–US interest rate differential in the model is also giving a misleading signal, in our view. That differential hasn't moved much, as interest rates in the two counties have largely risen in tandem. The models see this as implying a similar economic outlook in the two countries, given that interest rates tend to reflect what the economy can bear. But that only works if inflation is not an issue. Right now it's obviously a big issue. And when it is, interest rates reflect the stance of policy necessary to quell it. That stance may be similar in the US and Canada. But the economic consequences are far more threatening to Canada, given how much more interest-rate sensitive the Canadian economy is, which reflects Canada's much higher leverage and much greater exposure to housing (see Exhibits 4 and 5).

Both of these factors are likely to get worse for the Canadian dollar. Commodity prices may not fall if supply stays tight, but demand is almost certain to weaken as the cycle progresses and the effects of the global tightening cycle take hold. The Canada-US interest rate differential may not move

EXHIBIT 4: Canada is more vulnerable than the U.S. to interest rate increases

Debt service ratio – % of personal disposable income

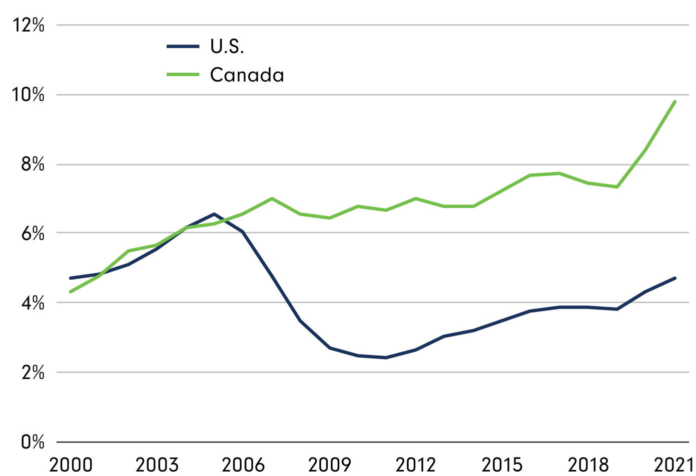


Source: Bank for International Settlements, FMRCo.

This chart is based on several important assumptions. We assume a path for the effective interest rate consistent with current market pricing, the level of household debt and disposable income grows at the 2016–2019 pre-Covid average quarterly growth rate.

EXHIBIT 5: Canada is more exposed to housing than the U.S.

Residential investment as a share of GDP, %



Source: Bureau of Labor Statistics, Statistics Canada (yet), but the Canadian economy is almost certain to have a harder time with those rates; a Canadian recession is far more likely than a US recession, in our judgment.

So the classic Canadian dollar model has been wrong, and we expect it to get even more wrong ahead. If investors continue to rely on a flawed model in expecting the Canadian dollar to go up, we are happy to take the other side. We expect that holding more US dollars will not only contribute to fund performance but also provide protection against the risk of a worse global economic outcome than we currently expect. The models are always wrong, but we know that we can be too. Recognizing the fallibility of markets, we continue to focus on taking advantage of the model-driven consensus to enhance return; recognizing our own fallibility, we proceed in a risk-controlled way for our fundholders.

David Wolf, David Tulk and Ilan Kolet, June 28, 2022

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Ilan Kolet is an Institutional Portfolio Manager for Fidelity Investments. In this role, Mr. Kolet serves as a member of the investment management team, maintaining a deep knowledge of portfolio philosophy, process and construction. He assists portfolio managers and their CIOs in ensuring portfolios are managed in accordance with client expectations.

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