Intelligence MEMOS

From: Jeremy M. Kronick and Steve Ambler

To: Inflation observers

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Re: **Slaying the Beast: The Bank of Canada's Inflation Fight**

The surge of inflation as economies recovered from the COVID lockdowns of 2020 and 2021 took central bankers and most other observers by surprise. Canada was no exception. Year-over-year CPI inflation rose from -0.4 percent at its nadir in May 2020, to a peak of 8.1 percent in June 2022 before finishing 2022 at 6.3 percent.

Underestimating both the persistence of the economy's supply constraints and the growth in demand seems to have led the Bank of Canada to fall behind the curve in terms of raising its policy rate to fight inflation. While the Bank was not alone among central banks in this regard – and, indeed, was first among its peers to begin tightening, and as a result the first to go on pause – it is important to delve deeper into measures that explore when and where they fell behind.

Would any other indicators have given the Bank clues that inflation was coming? And where do we now stand in the inflation fight? Our proposed measures of the appropriate monetary policy stance are designed to explore these questions in more detail.

Our recent C.D. Howe Institute **E-Brief**, starts with a short overview of the evolution of the Canadian economy and the Bank of Canada's monetary policy since 2020.

Next, we analyze several different indicators of the Bank's monetary policy stance over the post-COVID period to understand where and by how much the Bank fell behind the curve as inflation took off. In this analysis, we start with a series of different versions of the **Taylor rule**, and then turn to the gap between trend money growth and trend inflation, where a higher gap means inflation is likely to have to play catch up. All measures confirm that the Bank of Canada's policy rate lagged its expected values during the fight against well-above-target inflation.

We found five contributing factors:

1. The Bank (along with other central banks and most professional forecasters) underestimated the persistence of supply chain bottlenecks.
2. The unusual nature of the economic shocks that led to the pandemic recession (forced shutdowns of many sectors of the economy led to the fall in aggregate demand as spending opportunities vanished under lockdowns) meant it was difficult to predict the size of the output gap.
3. Headline inflation measures the average of (annualized) monthly changes in the consumer price index (CPI) over the preceding 12 months. By construction, this measure has a high degree of persistence. Headline inflation moved above the 2-percent target for the first time in March 2021. This number included changes in the CPI from early in 2020, when it was still decreasing. This means that prices were increasing more rapidly in 2021 than the headline inflation numbers indicated.
4. The Bank's forward guidance meant promising to keep its policy rate lower for longer. The promise was conditional on the persistence of excess productive capacity in the economy but, as we note in our second point, measuring this became difficult due to the unusual nature of the pandemic shocks and its persistent supply bottlenecks.
5. Lastly, with all that going on, the continued belief that monetary aggregates had lost relevance in predicting future inflation. The evidence is increasingly clear that the link returns when inflation becomes unanchored, but we would take this a step further, and argue that large shocks to money – insofar as they increase money's long-run trend growth – act as leading indicators for future inflation.

There are many lessons for the Bank of Canada and other central banks from this episode. They include:

1. the challenges in estimating the output gap in crisis periods exacerbated by huge supply chain bottlenecks, and the consequences for the appropriateness of forward guidance;
2. the dangers of using year-over-year CPI when there have been large swings in prices, and the importance, then, of complementing the analysis with a month-over-month or other shorter duration measure; and lastly,
3. the importance of money growth when it experiences large shocks, or changes, as a leading indicator of changes in inflation.

Jeremy M. Kronick is Director, Monetary and Financial Services Research at the C.D. Howe Institute and Steve Ambler taught at l'École des sciences de la gestion de l'Université du Québec à Montréal (ESG UQAM) from 1985-2020, and chaired the Department from 2012-2015. Both were honoured this weekend with 2023 Douglas Purvis Prize for economics writing, shared with their co-author Thorsten Koeppl.

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