

Intelligence MEMOS



From: Jeremy M. Kronick

To: Government Debt Watchers

Date: June 15, 2020

Re: **A BASELINE UNDERSTANDING OF FISCAL SUSTAINABILITY**

When the COVID-19 crisis erupted, and it was clear economies would be shut down, there was widespread agreement that both fiscal authorities and central banks would have to inject unprecedented stimulus to create a bridge to the other side.

Governments across this country, as well as the Bank of Canada, have done just that. Now that the economy is re-opening, old debates about whether government debt is good or bad have renewed.

To answer this complex question, we need to begin by acknowledging that there is a difference between whether debt is sustainable versus whether it is optimal.

I will leave the question of whether it is optimal for another time - [or someone else](#). The focus here is explicitly on ensuring the math that underlies the question of fiscal sustainability is well understood.

We do not want governments to default on their debt. To ensure that doesn't happen we need some kind of credible fiscal anchor. At present in Canada, in non-COVID times, that anchor is the debt-to-GDP ratio. To keep this ratio from growing, the primary budget balance must be greater than or equal to the stock of outstanding debt multiplied by the difference between the interest rate the government has to pay on its debt and the rate of nominal GDP growth (for more mathematical detail see [here](#)).

Using simple numbers, imagine the debt-to-GDP ratio is 100 percent and governments do not want to see it go higher. Now, imagine governments forecast economic growth at 2 percent and forecast the interest rate on debt to be 1 percent. The so-called risk premium (interest rate minus GDP growth) is then -1 percent. Then, as long as the primary budget balance relative to GDP is greater than or equal to -1 percent – in other words the primary deficit is no greater than 1 percent – the debt-to-GDP ratio will be no higher than 100 percent

You may have noticed that what this is really saying is that as long as the interest rate on government debt is less than the growth rate of the economy, we can run primary deficits of varying sizes. This requires both an ability to forecast the growth rate of the economy – and, by extension, tax revenue – and an ability to forecast the interest rate on government debt. And, do so, over many years.

Those unconcerned about budget deficits would argue that with interest rates low, the economy doesn't have to grow by much for it to outpace government borrowing costs. But the present doesn't guarantee the future. So, let's get a more historical appreciation for the risk premium.

A relatively new [dataset](#) from Oscar Jorda, Moritz Schularick, and Alan M. Taylor aggregates datasets from across 17 advanced countries and 45 real and nominal variables dating back to 1870. This database allows one to calculate the risk premium using Government of Canada long-term bond interest rates and nominal GDP growth. This tells us how often economic growth outpaced government borrowing costs since, essentially, the birth of our country.

Their database stops in 2016, but over the 146 years of data, 85 show the economic growth rate exceeding the interest rate, i.e., a negative risk premium. Of the 61 years where it was positive, 19 of those came in a row from 1980 to 1998, which is why we were forced to move aggressively on the federal deficit in the mid-1990s.

Since 2000, the interest rate exceeded the economic growth rate only five times: 2001-2003, during the dot-com bust and 9/11, 2009 during the financial crisis, and 2015 during the oil price collapse. Since WWII, other than the 1980 to 1998 period, there have been consecutive years with the interest rate exceeding the economic growth rate just twice: 1960-61, and 2001-2003.

That's the good news as we look ahead. The bad news is that the volatility of the risk premium is quite high, and far exceeds the average of the premium itself. Over the post-WWII period, the average risk premium was -1.23, but the standard deviation was 4.89, meaning the risk premium can be pushed positive quite abruptly. And, as [Mauro and Zhou](#) show, the volatility in the premium comes mostly from changes in the interest rate. Therefore, keeping investor confidence high is critical for our ability to keep government borrowing costs low.

Canada has benefited immensely from strong fiscal and monetary anchors over the past 25 years, including through low risk premiums. We should not take this for granted, however. We have a strong monetary anchor with our commitment to a 2 percent inflation target. We had to give up the fiscal anchor during the COVID-19 crisis. We are going to need governments to help us get back to full employment. But we should not lose sight of what allows us to do that, so that the next time a crisis hits, we have the flexibility to do it again.

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