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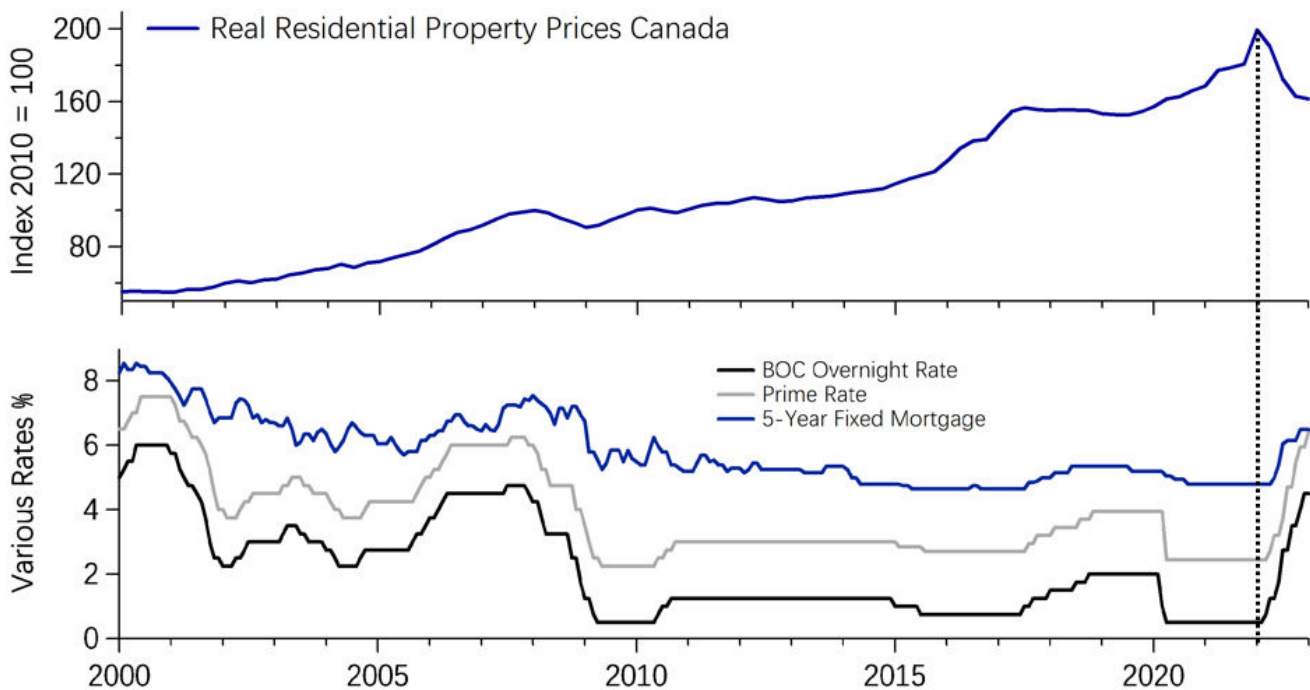
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SECTION I. INTRODUCTION

The Canadian real estate market has passed its peak, marked by dropping home prices and reduced sales since 2022. The combination of raising interest rates and diminishing affordability appears to be the major element contributing to the reversal [Exhibit 1]. This report investigates the current state of the Canadian real estate market, analyzes the interplay of economic factors, and explores underlying issues and implications for the evolving housing dilemma in Canada.

Exhibit 1: Effect of Raising Interest Rates on Home Prices



Source: FRED, Bank of Canada

SECTION II. DEMAND AND SUPPLY

The significance of population growth in shaping the demand side of the Canadian housing market is paramount, playing a pivotal role in influencing the overall real estate landscape.

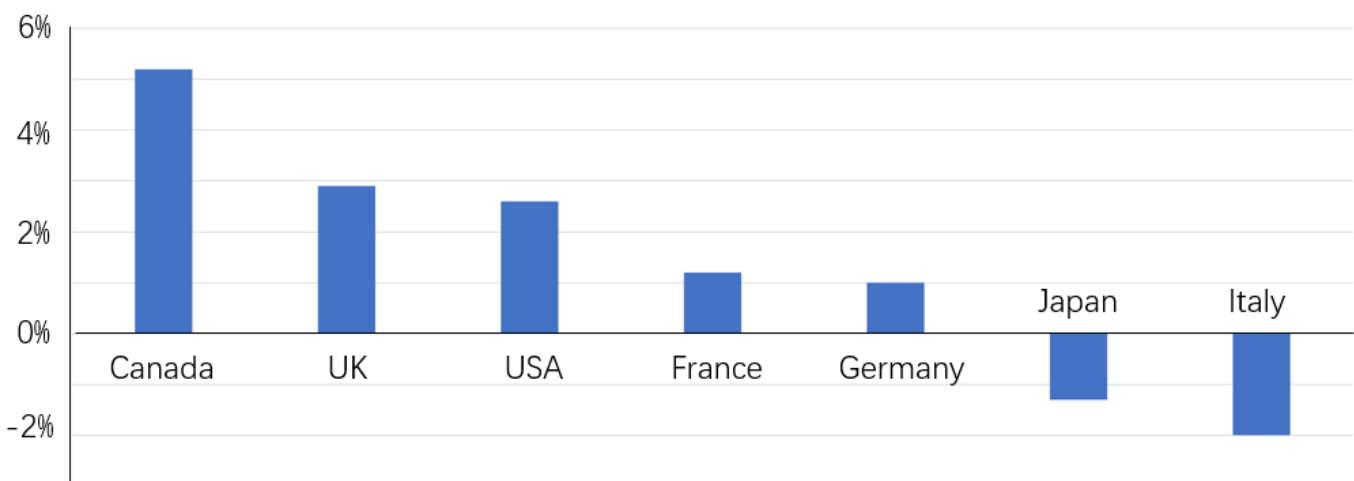
Within the demographic context, natural population growth has slowed due to an aging population and declining fertility rates. In 2014, the natural increase accounted for less than 30% of the nation's population growth, no longer serving as the primary driver of domestic changes [1]. A study by Goldman Sachs highlighted the impact of demographic shifts on the economy, addressing the effects of an aging population on labor force size and overall economic output. Simultaneously, declining fertility rates influence population growth and, consequently, the level of economic activity [2].

Immigrants emerge as a force in enhancing productivity, providing businesses with an expanded reservoir of working-age talent, attracting investments across various sectors, and potentially rejuvenating fertility rates. After all, GDP is linked to the inputs of labor and capital. The study in [1] also forewarns that without immigration, Canada would experience stagnant population growth over the next two decades.

Canada's commitment to multiculturalism, stability, and prosperity attracts foreigners seeking better opportunities and a higher quality of life. Moreover, the nation's renowned education and social welfare systems consistently draw individuals from around the world [3].

As a result, Canada has experienced population growth surpassing that of fellow G7 nations [4], resulting in an increase in housing demand [Exhibit 2].

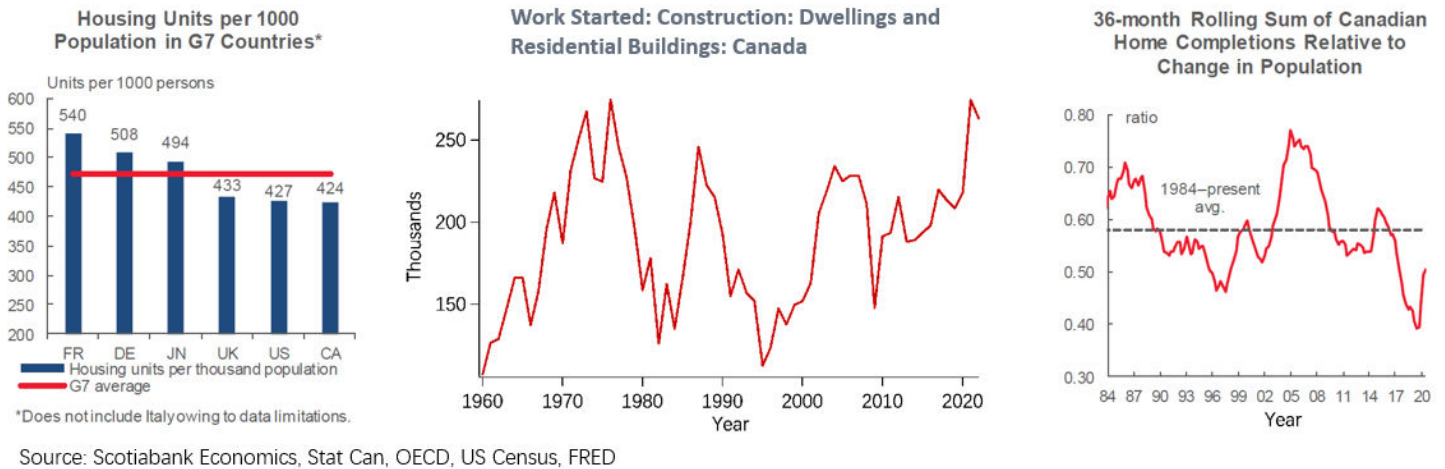
Exhibit 2: Population Growth Rate of G7 nations, from 2016 to 2021



Source: Stat Can

On the supply side, Canadian housing market grapples with a substantial challenge; An imbalance between housing supply and the growing population. Canada, with 424 housing units per 1000 residents [5], exhibits the lowest housing supply among G7 nations. The current annual housing starts are approximately on par with figures from the early 1970s [Exhibit 3]. When considering the doubled population since then, the rate of housing starts has in fact, decreased. This emphasizes that the housing shortage in Canada is not a result of overpopulation but rather stems from a scarcity of available units.

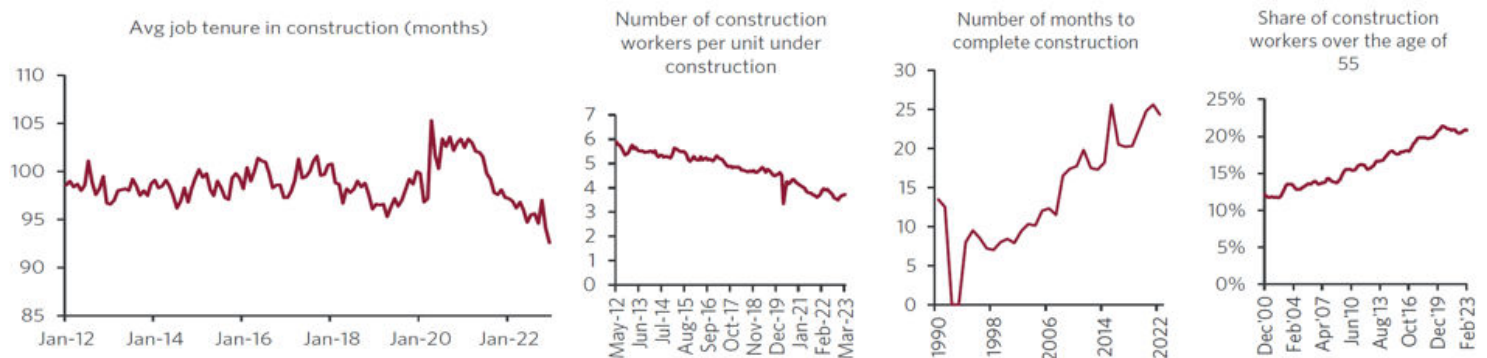
Exhibit 3: Housing Shortage in Canada



Source: Scotiabank Economics, Stat Can, OECD, US Census, FRED

A key impediment to housing supply is the shortage of skilled workers (approximately 70-80K) in the construction sector [6]. As reported by Statistics Canada, there was a notable spike in job vacancies during the first quarter of 2022, twice the pre-pandemic level. CIBC notes that the demand for construction workers, primarily in specialty trades contractors, exceeds 50% [7]. The construction sector is experiencing a noticeable shift in labor bargaining power, evident in record-low average employment tenure, suggesting workers exploration of alternative opportunities for improved working conditions. The situation is further compounded by an unfolding retirement wave [Exhibit 4].

Exhibit 4: Job Market Status in Construction Sector



Source: Stat Can, CMHC, CIBC

Moreover, the prolonged timeframe for house construction in Canada, lasting between 7 and 25 months exacerbates the issue, exceeding the 8–12 month period typical in the United States (even when factoring in the long Canadian winter) [8]. The process of acquiring and zoning land for marketable use further adds years to housing development timelines [9].

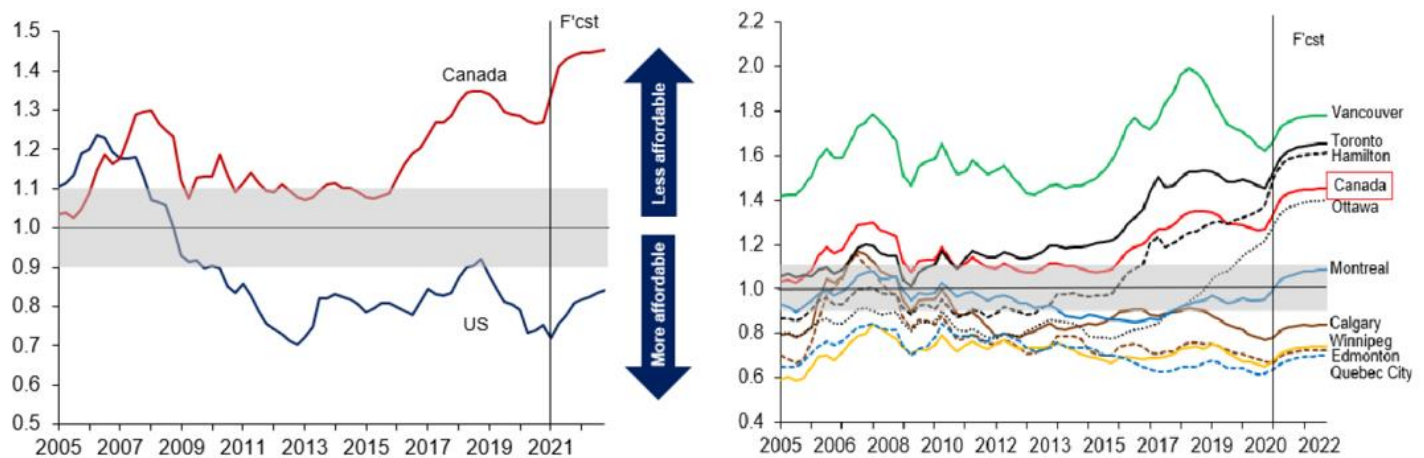
The slow construction pace and land development contrast with the population growth, underscoring the urgent need to address housing supply shortages.

Ultimately, the disparity between supply and demand played a pivotal role in positioning Canada with the highest house price index among G7 nations. As indicated by North America Housing Affordability Indices (HAIs), Canada stands at 1.4, surpassing that of the United States [11, Exhibit 5]. The index also reveals that Vancouver, Toronto, and Hamilton contributed to the diminishing affordability metrics.

Table 1: 2022 Real House Prices of G7 Nations (2015=100) [10]

Canada	USA	Germany	UK	France	Japan	Italy	Globe
153.9	150.4	140.5	121.0	119.1	118.8	95.5	134.1

Exhibit 5: Housing Affordability Index (HAIs): Canada



Source: Oxford Economics / Haver Analytics

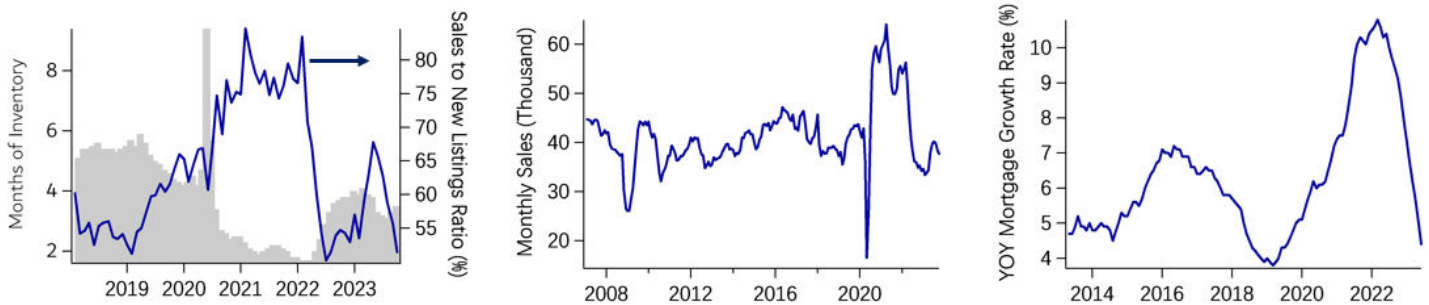
Note: Assumes 25% mortgage debt service-to-income ratio, 20% downpayment on home purchase price, 5-year mortgage rate and 30-year amortization period
Source: Oxford Economics/Haver Analytics

At its core, disregarding the impact of interest rates, sustaining population growth and immigration policies are essential for the Canadian economy. Priority should be given to investing in skills training, streamlining permitting processes, and tailoring immigration policies that attract individuals with construction-related skills, highlighting the need for workforce augmentation.

SECTION III. RECENT HOUSING MARKET TRENDS

Home Sales have declined, as evidenced by a decrease of sales-to-new-listing ratio from 82% to 52% between January 2022 and September 2023. Simultaneously, the sales volume has reached its low point since 2008 (excluding the pandemic lockdown period) [12]. The downturn is also associated with decelerating mortgage growth [Exhibit 6]. Elevated interest rates emerge as a significant determinant, pricing potential buyers out of the market. Simply put, the demand side is contracting rapidly.

Exhibit 6: Monthly Home Sales and Mortgage Growth Rate



Source: CREA, Stat Can

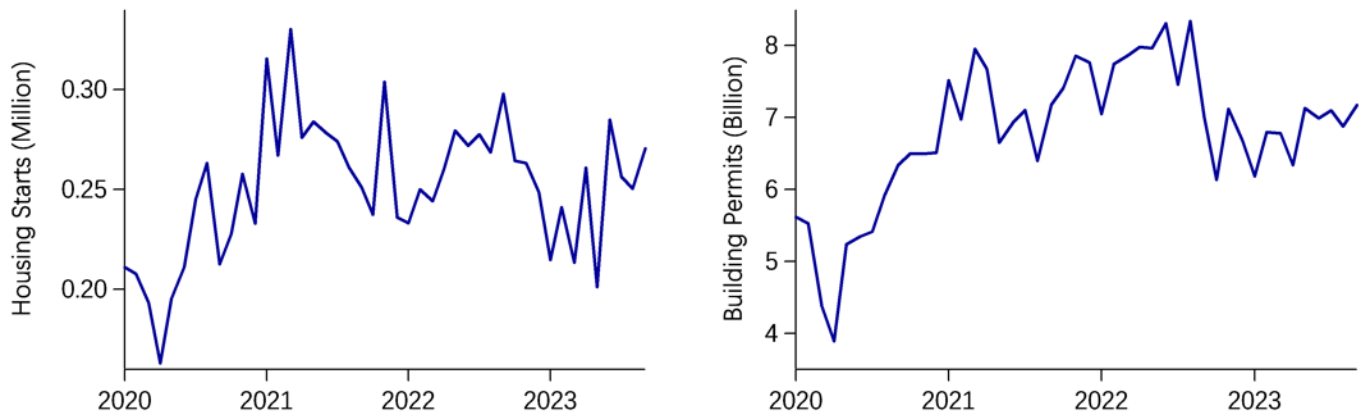
"We are witnessing a decrease in buyer's activity across various sectors, spanning single, multiple dwellings, condos, and apartment complexes, leading to an extended average time on the market," notes [William Yu](#), a senior mortgage broker at Mortgage Architects in Vancouver. Mr. Yu attributes this contraction in demand to elevated interest rates, and the subsequent impact on liquidity. Single-family homes, often referred to as 'Hard Demand', have seen minimal price drops, rendering them illiquid. Additionally, he observes a noticeable price drop in investment properties, due to rental control measures hindering rental income from covering monthly payments. Despite the Vancouver market being perceived as expensive, Mr. Yu dismisses the notion of an asset bubble, pointing to factors such as population influx and unfavorable topography. Regarding the municipal policies (property transfer tax and foreign buyer tax †), he suspects their effectiveness, as excessive taxation could hinder transactions to a point where overall government's tax revenue is reduced. Ultimately, Mr. Yu anticipates a shift towards increased renting as ownership costs rise, leading to a temporary decline in property values before a subsequent return to house buying.

† Other Legislations include The Underused Housing Tax (UHT) and Foreign Buyer Ban, implemented in January 2022 and January 2023 respectively, aiming to address the underutilized properties and the impact of non-resident ownership. Assessing the effectiveness of these policies is currently challenging due (1) the proportion of non-resident owners is relatively small, constituting 6.4% in Vancouver and 3.7% in Toronto [cite]. (2), the legislation was enacted during the peak of house prices, making it difficult to gauge the immediate impact, as the potential decline in profits might be serving as a more potent disincentive.



On the supply side, September data release reveals a downtrend in housing starts since 2022, coupled with a more than 10% reduction in residential building permits [13,14, Exhibit 7]. Developers express heightened concern, due to contraction in demand, lack of capital, supply chain delays and escalated costs in labor and materials, all of which are influenced by the broader inflationary trends. Residential construction costs have increased by 22.6% year over year. On top of that, rising construction wages further complicated matters, with a 6.6% increase in the first quarter of 2022 compared to the same period in 2021 [15].

Exhibit 7: Canada Housing Starts, and Total Residential Building Permits

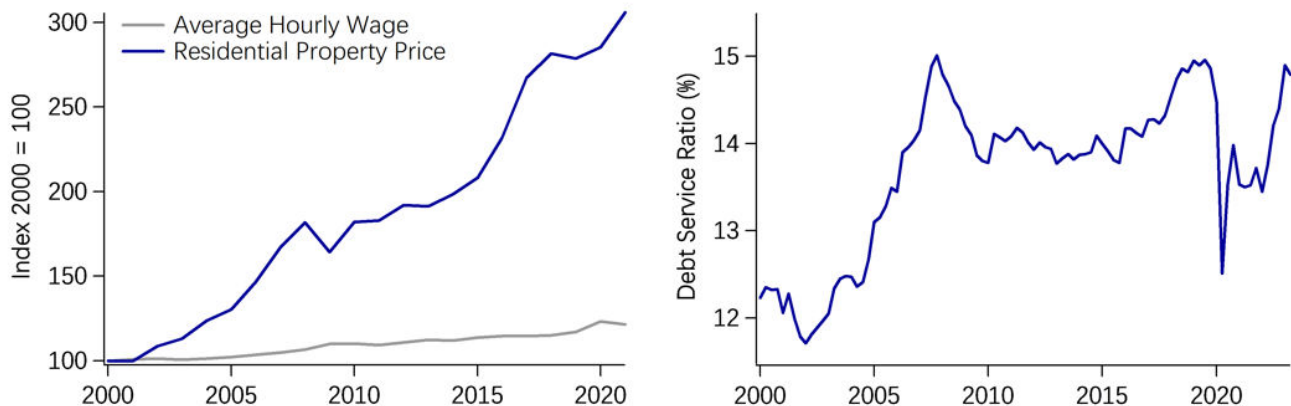


Source: CMHC SCHL, Stat Can

Overall, as buyer activity rapidly declines and the corresponding changes in supply side are relatively modest, hence, to push home prices lower. Prospective buyers are expected to approach the market with caution, postponing purchases in anticipation of lower interest rates and additional price drops, suggesting a likelihood of further price decline.

Section IV. HOUSEHOLD DEBT

Exhibit 8: Wage Growth and Household Debt Level

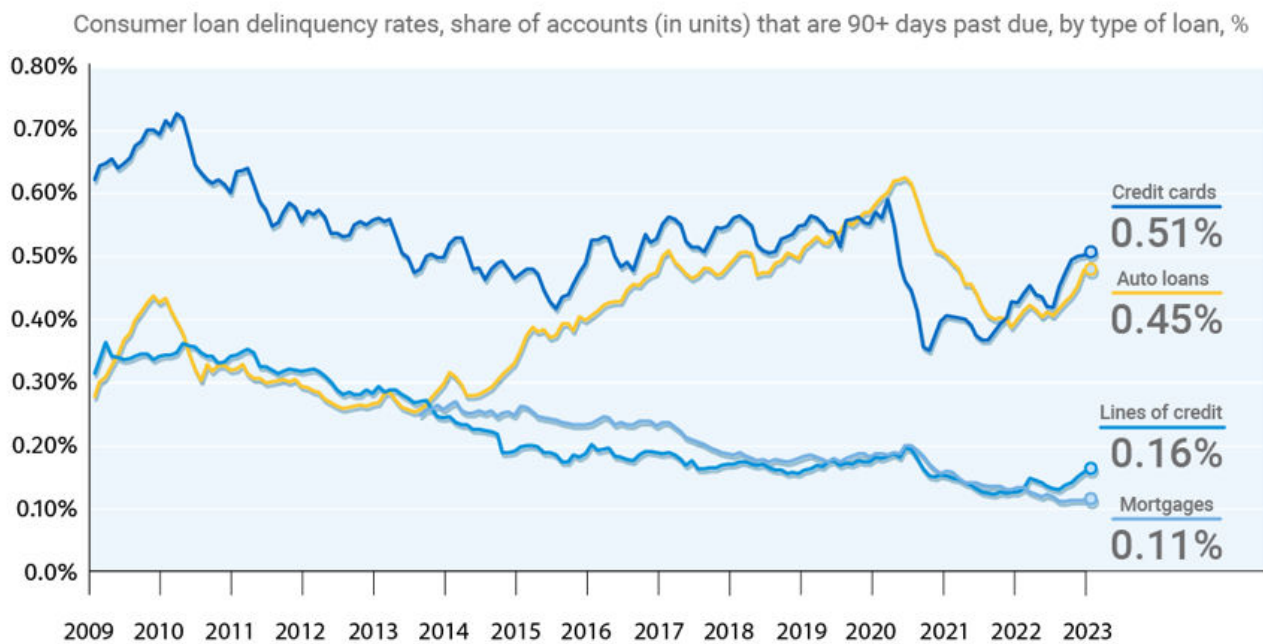


Source: FRED, Stat Can

Since 2008, average hourly wages have risen by 14%, yet the home prices almost doubled. The fact that the current median income only accounts for 10% of the average Canadian home price emphasizes the disparity [16,17]. Mortgage payments now account for 38% of household income [18], with the Debt Service Ratio climbing toward the peak level seen in 2008 [Exhibit 8].

While the current mortgage delinquency rate is relatively low, at 0.11%, other non-mortgage debt delinquency rates have begun to rise in 2022 [19]. However, the impact of rate hikes is nearly negligible on credit cards given their already high interest rates. Also, instalment-type loans typically have stable rates throughout their term. These facts suggest that some mortgage holders are already facing higher monthly payments, reallocating a larger portion of their income to mortgages instead of other debt obligations.

Exhibit 9: More Canadians Are Falling Behind On Debt Payments



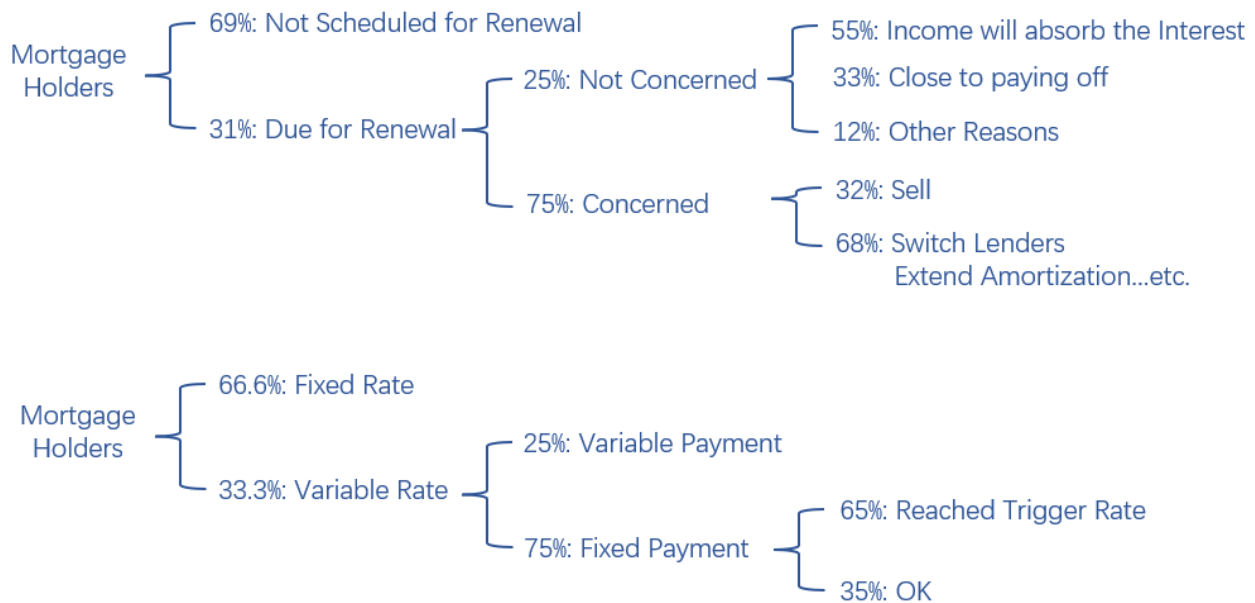
Source: TransUnion, RBC Economics

The real estate market is currently characterized by a slowdown in new listings, and there is no sign of forced selling underway [Exhibit 6]. Homeowners are adeptly maneuvering through this difficult period; their resilience will become vulnerable to external disruptions that may emerge during this period. The imminent recession and the continuing impact of elevated interest rates will certainly intensify pressure in the coming period-widespread defaults cannot be ruled out.

SECTION V. EFFECTS OF RAISING INTEREST RATES

Presently, 35% of Canadians carry mortgage payments [20]. As per the 2023 Mortgage Renewal Survey by Royal LePage [21], 16% of mortgage holders plan to renew their lending agreements within the next 12 months, with an additional 15% planning to renew within 12-18 months, totaling 31% of mortgages due for renewal in the next 18 months.

Exhibit 10: Canadian Mortgage Holder Profile



Source: Royal LePage, Stat Can

[Exhibit 10] For a conservative estimation, 75% of individuals renewing mortgages in the next 18 months express concerns about the persistent interest rates, with 32% considering selling to downsize, rent or move in with family-equating to 7.4% (= 31% x 75% x 32%) of current mortgage holders. Notably, 55% of the not-concerned group believe their income could absorb the interest rate. Taking into account the fact that Canada is heading toward a recession and the potential rise in the unemployment rate, this figure could be higher.

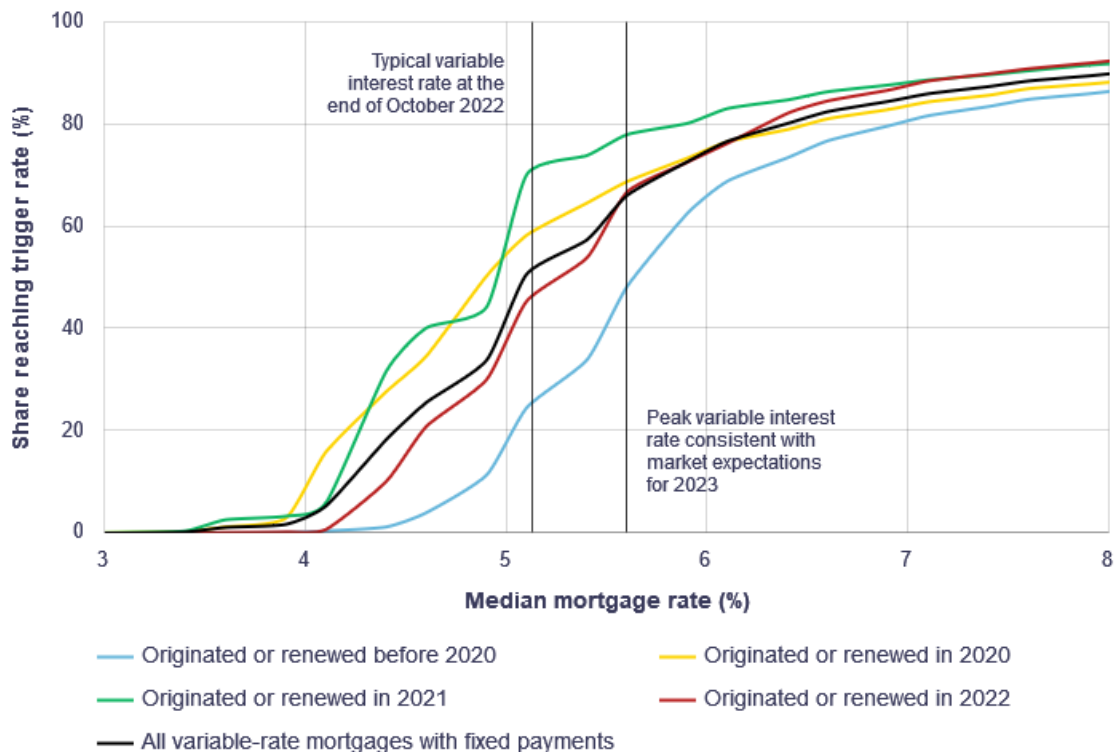
[Exhibit 10] From a pessimistic standpoint, about one-third of mortgage debt in Canada is variable rate mortgages, with 25% having variable payments and 75% featuring fixed payments [22]. Consequently, 8.3% (=33.3% x 25%) of total mortgages have experienced payment increase. 65% of the remaining variable rate with fixed payment have breached the trigger rate: A critical rate where payment only covers the interest portion of debt, beyond which, outstanding mortgage balance will start to increase (also known as negative amortization). At this point, borrowers can either increase their payment or extend their amortization period. The latter option is unlikely for 38% of homeowners who have paid less than 25% of their home

equity [23]. Thus, 6.2% ($=33.3\% \times 75\% \times 65\% \times 38\%$) of variable rate mortgages with fixed payments will witness payment increases. In total, 14.5% ($=8.3\% + 6.2\%$) of mortgages will increase in variable rate sector.

For those with fixed rate mortgages, protection from interest hikes has been enjoyed. However, upon renewal, they will face the same reality as the variable rate holders. Approximately, 20.1% ($=66.6\% \times 31\%$) will face higher monthly payments. This results in a total of 34.6% ($=14.5\%+20.1\%$) of mortgage holders experiencing payment increases. This will be the worst-case maximum as not all borrowers are willing to default or sell.

To the authors' best knowledge, further increases in interest would have a negligible impact on the above estimation on the variable rate groups, as the proportion of reaching trigger rate starts to concave upward, and levels off beyond 5.0% [Exhibit 11].

Exhibit 11: Share of Variable Rate, Fixed Payment Mortgages that Reach Their Trigger Rate at Various Interest Rates



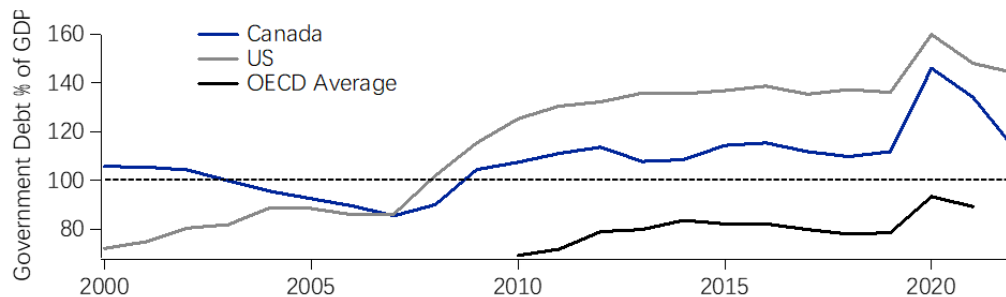
Note: Calculations include variable-rate, fixed-payment mortgages that originated or were renewed at federally regulated financial institutions. The sample includes only mortgages that have not yet reached the end of their contractual loan term. To determine whether a mortgage has reached its trigger rate at current interest rates, we update the initial interest rate to October 2022 by applying changes in the prime lending rate.
Sources: Regulatory filings of Canadian banks and Bank of Canada calculations

SECTION VI. RISKS AHEAD

Sustainability of High Interest Rate Environment

Historically, overshooting interest rates tend to be short lived. However, it is crucial to note that the current interest rate, although perceived by some as not aggressive enough to provoke an economic meltdown, must be considered in the context of the rapidly escalating national debt. The economy may no longer sustain interest rates comparable to those seen in the past. The current situation is clearly unsustainable.

Exhibit 12: Government Debt % of GDP



Source: OECD

Forecasted Interest Rate

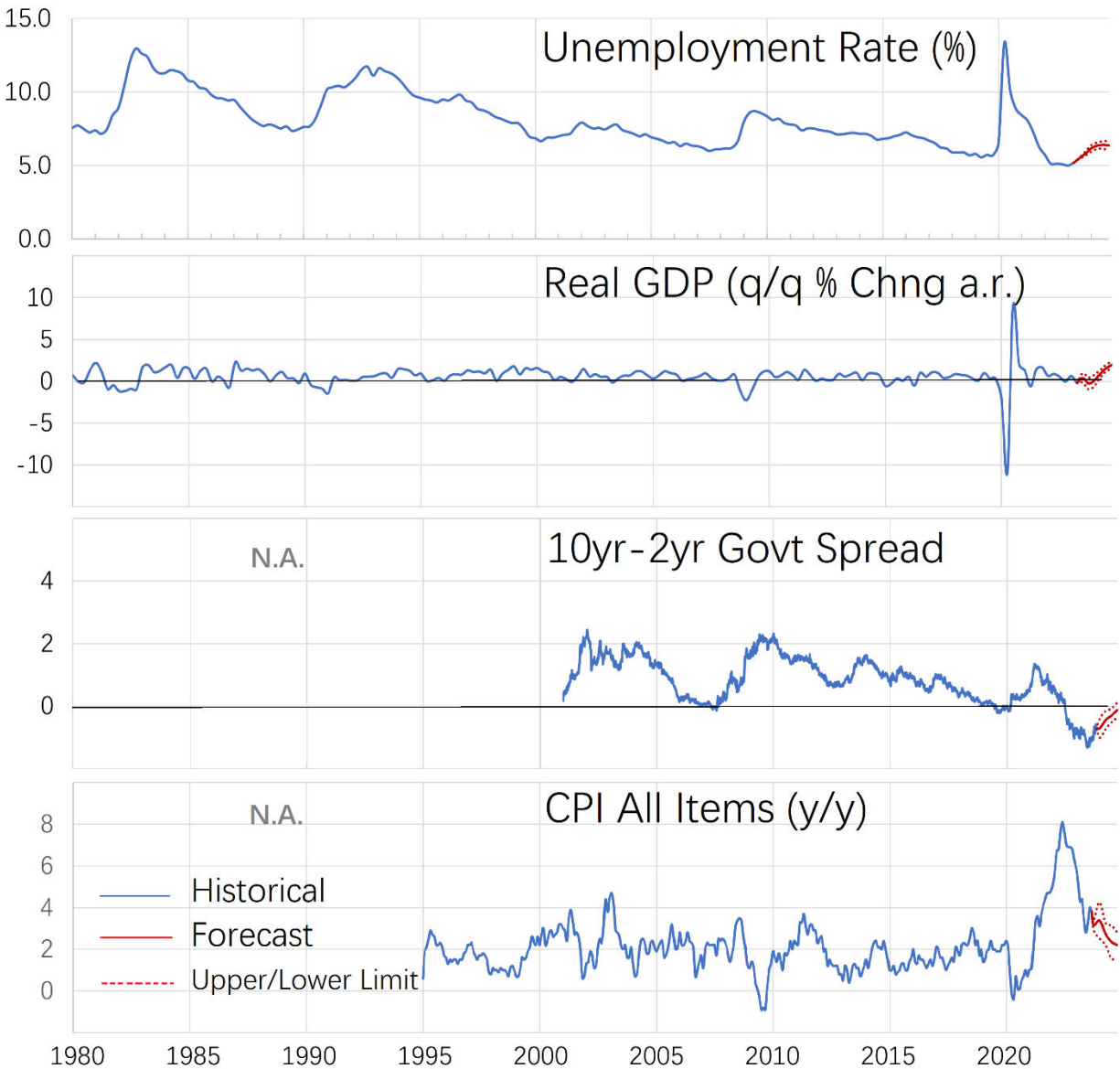
Inflation (Consumer Price Index, Excluding Gasoline) in Canada has seen a noteworthy decline, dropping from its peak value of 6.6% in June 2022 to 3.7% in September 2023 [24]. While there is a possibility of another 0.25%-0.5% uptick of overnight rate, a more probable scenario is a slow decline down the line. Historical patterns suggest that after reaching the peak rate, it typically takes the central bank around 6 months to initiate a rate reduction. Also, aligning with the Fed Funds' rate is a strategic move for Canada to prevent substantial depreciation of the Canadian Dollar, which could, in turn, trigger inflation back again. Despite the likelihood of a Canadian recession preceding that of the U.S., the Bank of Canada might postpone rate reductions to maintain its currency and economic stability. The Table below presents forecasted interest rates by various financial institutions.

Table 2: Forecasted Overnight Rates (%) by Financial Institutions [25-31]

	Q4-2023	Q1-2024	Q2-2024	Q3-2024	Q4-2024
Bank of Canada	5.00	5.00	4.75	4.50	4.00
RBC	5.00	5.00	5.00	4.50	4.00
Scotiabank	5.00	5.00	4.75	4.25	4.00
TD	5.00	5.00	4.50	4.00	3.50
CIBC	5.25	5.25	5.25	4.50	4.00
BMO	5.00	5.00	5.00	4.75	4.50
National Bank of Canada	5.00	5.00	4.75	4.50	NA

The Impending Downturn

Exhibit 13. Economic Indicators and Outlook



Source: Bank of Canada, Stat Can

The forecast based on [25-31], anticipates a rise in the unemployment rate, peaking at 6.4% by late 2024. In comparison to previous recessions (1981, 1990, 2008), such an increase is less abrupt. Several factors, including policy measures, inflation control, globalization, and overall economic adaptability contributed to the trend of smaller peak unemployment rates during consecutive recession, indicating that exceedingly high unemployment levels are unlikely to occur in future downturns. The authors suggest that the impending recession is expected to be moderate. The change in GDP will experience a negative shift, persisting for two quarters. The yield curve is anticipated to remain inverted throughout 2024. Moreover, with elevated interest rates, the CPI is forecasted to gradually decrease, converging back toward the target rate.



Impact on Markets and Banks

As outlined earlier, the housing market is presently experiencing a slowdown marked by reduced demand and declining property values. The combination of prolonged high interest rates and anticipated increases in unemployment rates is set to worsen the decline in purchasing power. Simultaneously, financially strained property owners may be compelled to sell. These listings will mitigate the slowdown in New Housing Starts to some extent, the overall effect will still be a downward pressure on housing prices.

Negative amortization and an increase in non-performing loans contribute to higher loan balances and mortgage portfolio risks, negatively affecting the bank's overall asset quality. This strain on liquidity, resulting from the need to allocate more funds to cover potential losses, can impact the bank's ability to meet short-term financial obligations and maintain operation. Additionally, the departure of investors and depositors may decrease the bank's stock value, posing challenges in raising funds. Thus far, extending the amortization period appears to be a compromise for borrowers and lenders to navigate these challenges. Nevertheless, the banks' profitability will be reduced due to an extended period required to recoup the original loan amount.

The Bank of Canada is navigating an even more challenging situation, as it combats inflation through policy interest rates, while incurring financial losses due to paying higher interests on deposits than earning on its bond portfolios. In 2022, Bank of Canada reported net income loss of 1.1 billion (first time in history), in contrast to the 2.4 billion positive net income in 2021 [32]. The anticipated short to medium term losses highlight the potential effectiveness of a straightforward solution: supplementary capital investment from the federal government.

SECTION VII. CONCLUSION

To conclude, the imminent recession presents a formidable challenge for homeowners, businesses, and banks alike, setting the stage for a challenging year ahead in 2024. As economic uncertainties loom, careful consideration and proactive strategies will be essential to navigate the complexities and mitigate the impact on various sectors.

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