ECONOMICALLY PROBLEMATIC: AN EMPIRICAL EXAMINATION OF CMHC'S AFFORDABILITY PROGRAM FOR EXISTING RENTAL HOUSING STOCK

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INTRODUCTION

The Canadian Mortgage and Housing Corporation (CMHC) is a Canadian Crown Corporation. According to the CMHC (2020a), it "exists for one reason: to make housing affordable for Canadians." Outlined in their 2019 annual report, the CMHC explains its goal "that by 2030 everyone in Canada has a home they can afford that meets their needs" (CMHC, 2020a). The annual report further explicates its strategy to achieve affordability housing for all Canadians by advancing homeownership rates and renting solutions. The CMHC facilitates real estate investment by offering mortgage programming with higher loan-to-value ratios, preferred interest rates, and longer amortization periods (CMHC, 2018a).

"In Canada, housing is considered 'affordable' if it costs less than 30% of a household's before-tax income (CMHC, 2018b). Based on this definition, affordable housing includes both homeownership and renting scenarios.

HOMEOWNERSHIP IN CANADA

As compared to other G20 countries, Canada is a leader in homeownership (Trading Economics, 2020). The last century of Canadian policy has facilitated homeownership (Statistics Canada, 2019). As such, the homeownership rate from the 1970s to the present has been greater than 60% but less than 70% (Statistics Canada, 2019; Trading Economics, 2020) (Figure 1). As of 2020, the homeownership rate was 64% (Trading Economics, 2020).

FIGURE 1 – HOMEOWNERSHIP IN CANADA
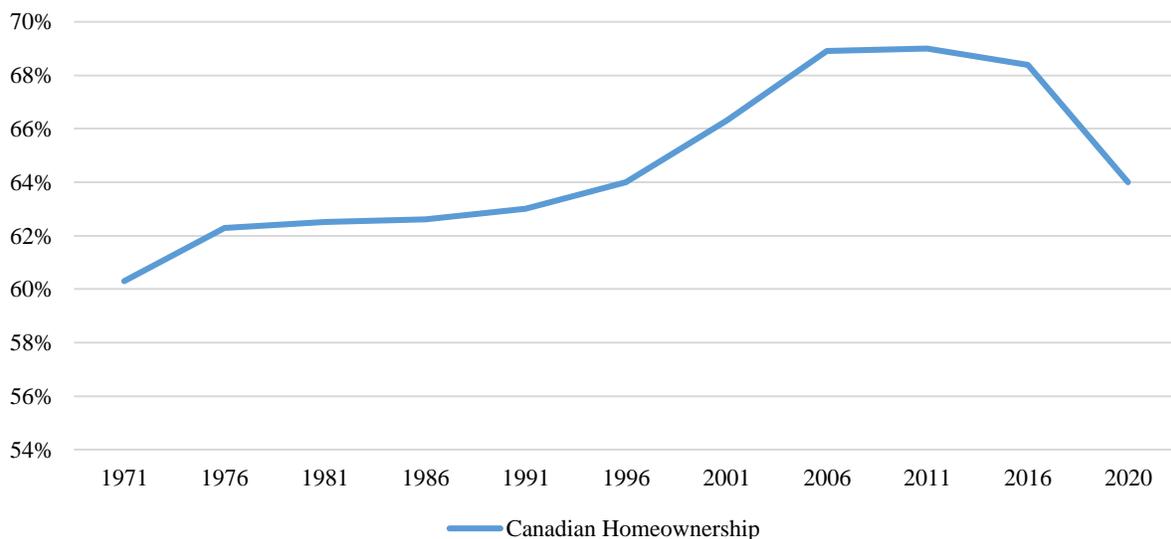
Statistics Canada (2019) and Trading Economics (2020)

RENTING IN CANADA

Although homeownership is high, 36% of Canadians do not own their dwellings (Statistics Canada, 2019; Trading Economics, 2020). Today, it is estimated that 28% of Canadians live in some form of rental housing and 8% are homeless (Statistics Canada, 2016; Statistics Canada, 2019; Trading Economics). Table 1 depicts the average rent across Canada by bedroom type.

TABLE 1 – AVERAGE RENT BY BEDROOM TYPE

Province/Territory	Bachelor	1-Bedroom	2-Bedroom	3-Bedroom	Total
Newfoundland and Labrador	$700	$772	$880	$897	$844
Prince Edward Island	$586	$773	$943	$978	$900
Nova Scotia	$774	$927	$1,131	$1,350	$1,064
New Brunswick	$579	$697	$847	$973	$812
Quebec	$626	$716	$815	$984	$800
Ontario	$1,019	$1,179	$1,335	$1,540	$1,277
Manitoba	$729	$942	$1,177	$1,387	$1,057
Saskatchewan	$692	$898	$1,079	$1,250	$1,014
Alberta	$868	$1,032	$1,225	$1,334	$1,150
British Columbia	$1,115	$1,258	$1,458	$1,616	$1,324
Northwest Territories	$1,226	$1,517	$1,744	$2,155	$1,756
Canada	**$820**	**$1,000**	**$1,080**	**$1,199**	**$1,049**

CMHC (2020b)

According to the Canadian Rental Housing Index (2020), the average Canadian renter household earns $53,163 annually and spends 23% of their pre-tax income on rent. Although this figure is below the CMHC's (2018b) affordability threshold, it is an average, and many Canadian renters are in unaffordable scenarios (Canadian Rental Housing Index, 2020). According to the Canadian Rental Housing Index (2020), 40% of Canadian renters spend more than 30% of their pre-tax income on rent and 18% spend over 50% of their pre-tax income on their rent. As such, the CMHC's affordability strategy extends homeownership, with significant focus on affordable renting scenarios (CMHC, 2020a).

CMHC AFFORDABLE HOUSING PROGRAMS

Across Canada's provinces and territories, there are numerous affordable housing programs offered directly by the CMHC and indirectly via their funding to provincial and territorial governments (CMHC, 2018c). The majority of the programs offer assistance to renters or homeowners (CMHC, 2018c). Such programs directly benefit low-income households, seniors, individuals with special needs, homeless, Indigenous peoples, and first-time homeowners (CMHC, 2018c). Other notable CMHC programs are designed to assist first-time homeowners and those looking to repair or renovate their homes (CMHC, 2018c). New programs that directly benefit households include assistance for renters and homeowners during COVID-19 (CMHC,

2020c). Select programs benefit builders that are establishing new affordable housing and owners or acquirers seeking to adapt properties to senior homes (CMHC, 2018c).

Despite the range of programs offered, few are aimed to benefit the owners or acquirers of existing rental stock. Only one CMHC program facilitates the acquisition of existing rental stock for the purpose of affordable housing (CMHC, 2020d). According to the CMHC (2020d), it "provides mortgage loan insurance flexibilities and other tools to facilitate the production and preservation of affordable housing." However, "one of the eligibility criteria for determining affordability is 80% of the units in the project must be at or below the 30th percentile of rents in the subject market for units of a similar type (i.e. number of bedrooms)" (CMHC, 2020d). Table 2 illustrates the 30th percentile rents of major Canadian cities and the corresponding monthly median household and minimum wage incomes. Table 3 shows select Canadian cities with populations of over 50,000 but less than 200,000 and the corresponding monthly median household and minimum wage incomes.

TABLE 2 – 30TH PERCENTILE RENT BY BEDROOM TYPE IN MAJOR CITIES

City, Province	Bachelor	1-Bedroom	2-Bedroom	3-Bedroom	Median	Minimum
Toronto, ON	$903	$1,117	$1,274	$1,441	$5,486	$2,280
Montreal, QC	$533	$615	$700	$850	$4,321	$2,096
Winnipeg, MB	$650	$849	$1,055	$1,319	$5,899	$1,904
Saskatoon, SK	$650	$825	$994	$1,125	$6,583	$1,832
Calgary, AB	$800	$950	$1,150	$1,050	$8,298	$2,400
Vancouver, BC	$1,012	$1,150	$1,399	$1,470	$6,055	$2,336

CMHC (2020d) and Nethris (2020)

TABLE 3 – 30TH PERCENTILE RENT BY BEDROOM TYPE IN SELECT CITIES

| City, Province	Bachelor	1-Bedroom	2-Bedroom	3-Bedroom	Median	Minimum
London, ON	$606	$800	$922	$1,076	$5,168	$2,280
Sherbrooke, QC	$415	$480	$590	$700	$6,510	$2,096
Brandon, MB	$493	$625	$795	$1,125	$5,496	$1,904
Regina, SK	$625	$825	$975	$1,114	$6,819	$1,832
Red Deer, AB	$661	$750	$875	$995	$7,530	$2,400
Kelowna, BC	$939	$938	$1,196	$1,378	$5,720	$2,336

CMHC (2020d) and Nethris (2020)

Although it is comprehendible that the CMHC is attempting to increase affordability with this program, the rationale for the 30th percentile eligibility criterion is not specified much less empirically validated. Moreover, it is curious why more programs do not exist given the current and future importance of existing rental stock.

EXISTING RENTAL STOCK

According to the CMHC (2020b), as of 2019 there were 2,126,060 properties in Canada's rental universe (Figure 2). Of these properties, 539,140 (25.4%) were built before 1960. Almost half of the properties in the Canadian rental universe (1,026,020) were built between 1960 and 1979. From 1980 to 1999, 287,555 (13.5%) rental properties were built. Since 2000, 273,345 (12.9%) rental properties were built. Considering these figures, almost 90% of the properties in the Canadian rental universe were built in the previous century.

FIGURE 2 – RENTAL UNIVERSE BY YEAR OF CONSTRUCTION
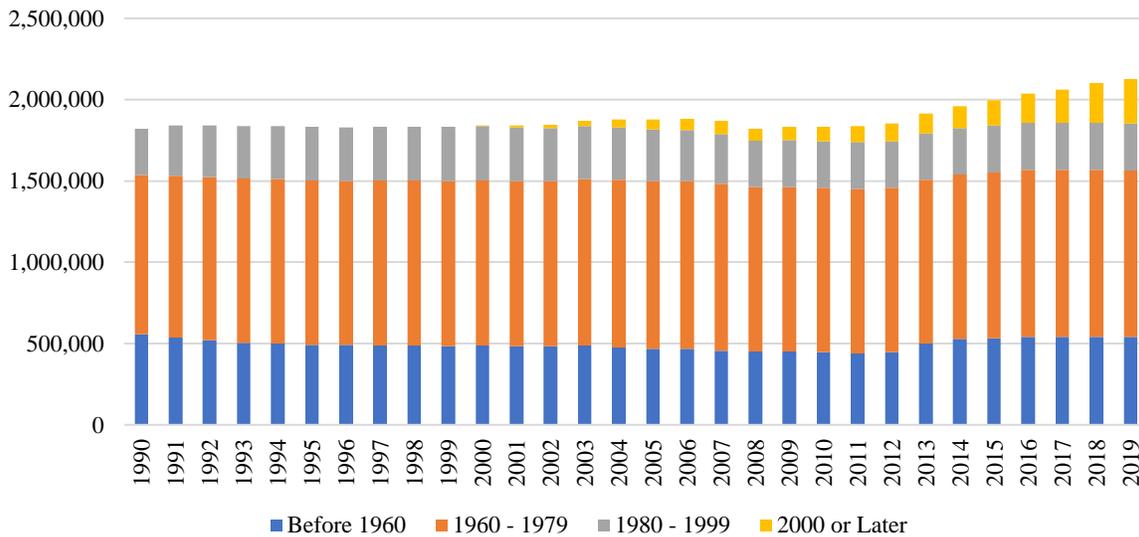
CMHC (2020b)

Given the historical and present importance of these assets, it is curious why the CMHC primarily focuses on new construction as opposed to property ownership succession and the preservation of existing stock. Based on Statistics Canada's (2020) population projections (Figure 3), it is clear that new construction is required to accommodate the low and high growth estimates. However, existing rental properties are arguably more important, as they account for the majority of the rental universe and will continue to serve as the foundation.

FIGURE 3 – HISTORICAL & PROJECTED POPUALTION
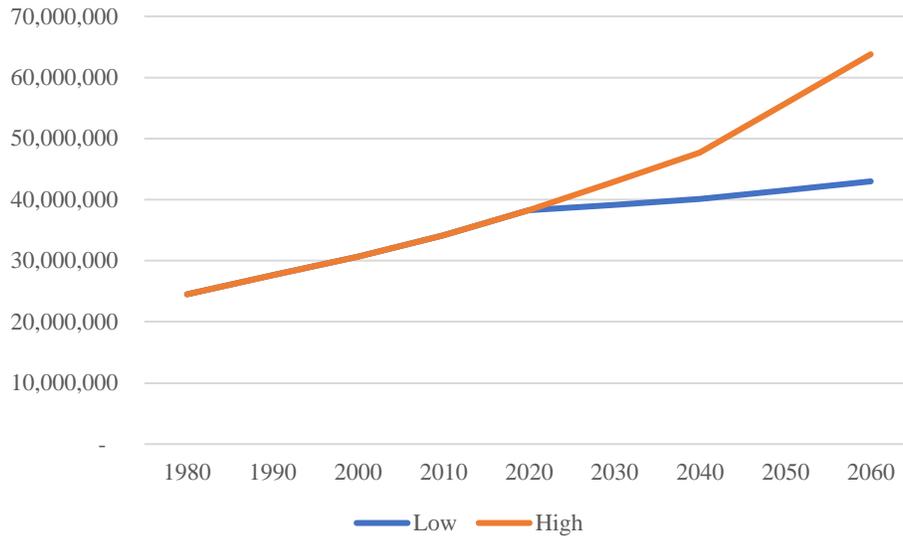
Statistics Canada (2015) and Statistics Canada (2020)

Based on scope alone, the CMHC's limited programming is highly concerning, as it erroneously focuses on new construction. This paper further argues, via an empirical exploration, that the sole CMHC program facilitating the acquisition of existing rental stock for the purpose of affordable housing is economically problematic.

METHODOLOGY

Sample

Per the CMHC's (2018d) definition, multi-family residential properties are defined as those comprised of five or more units. Based on this definition and the affordability program's eligibility, only properties with five or more units that were built before the year 2000 were included. Utilizing REALTOR, LoopNet, and Point2, 19 publicly available properties across Canada were identified. All 19 multi-family residential property listings were included in the analysis.

Data Analysis

Microsoft Excel was used to create pro forma income statements and cash flow statements. For each multi-family residential property listing, 10-year income and cash flow statements were created. Based on a property's statements, internal rate of return (IRR) and total leveraged free cash flow (TLFCF) was computed. IRR is the single rate of return that "summarizes the merits of a project" (Ross, Westerfield, Jordan, & Roberts, 2007, p. 250). IRR is commonly used to assess the return of real estate investments. In real estate finance, the IRR is the percentage earned on each dollar invested over the holding period. In addition to IRR, it is important to assess real

estate investment's cash flow. Cash flow is the difference between incoming and outgoing cash or cash equivalents in a given time period (Phillips, Libby, Libby, & Anderson, 2007). A real estate investment "cash flows" if the difference between incoming and outgoing cash is positive. The extent to which a real estate investment's IRR and cash flow is desirable is project-dependent. However, it is generally accepted that IRR should rival alternative investments of the same risk level and cash flow needs to be positive in the long-run.

Listing Details

The income and cash flow statements were based, in part, on listing data. The asset asking price, number of bedrooms, bedroom type, location, and property taxes were derived from the listing and used for analysis.

Model Assumptions

The income and cash flow statements were based, in part, on a number of economic, financing, and property assumptions. Economic assumptions included market rent, property tax, utilities, and operating expenses. Due to the program's eligibility criterion, revenue was estimated based on the CMHC's 30th percentile market rents for bedroom type and region. Market rent was expected to increase by 2% from the first to second year and 3% annually for subsequent years. Property taxes and utilities were estimated to increase by 3% annually. The increase in operating expenses were based on the annual inflation assumption of 2%. Financing assumptions included mortgage interest rate, amortization period, and down-payment percentage. A conservative 2% was used for a 10-year mortgage interest rate. The amortization period was assumed to be the conventional 30-year period with a 25% down-payment. Given the identified multi-family residential property listings did not provide detailed operating statements, CMHC's publicly available data for area occupancy rates and operating expenses, based on number of units and unit type, were utilized.

RESULTS & DISCUSSION

Based on the 10-year income and cash flow statements, property IRRs ranged from -23.8% to +5.2%. Only six of the 19 properties yielded positive returns with an average IRR of -4.5%. All properties were cash flow negative. The TLFCF for the 19 properties ranged from -$2,118,860 to -$51,255 with an average of -$718,381. Table 4 details each listing and its corresponding IRR and TLFCF.

TABLE 4 – IRR & TLFCF BY LISTING

Listing	City, Province	IRR	TLFCF
1	Hamilton, ON	-11.1%	-$355,581
2	London, ON	-19.0%	-$309,176
3	Ottawa, ON	-7.8%	-$454,275
4	Toronto, ON	4.8%	-$975,500
5	Toronto, ON	-23.8%	-$926,126
6	Toronto, ON	-0.5%	-$2,118,860
7	Winnipeg, MB	5.2%	-$104,422
8	Regina, SK	-5.8%	-$716,099
9	Swift Current, SK	-4.8%	-$164,319
10	Calgary, AB	0.8%	-$831,813
11	Calgary, AB	-1.7%	-$445,420
12	Calgary, AB	1.3%	-$51,255
13	Edmonton, AB	-0.8%	-$307,409
14	Edmonton, AB	0.5%	-$486,930
15	Red Deer, AB	4.4%	-$1,014,678
16	Red Deer, AB	-12.4%	-$1,070,891
17	Vancouver, BC	-2.6%	-$920,324
18	Vancouver, BC	-8.5%	-$957,543
19	Vancouver, BC	-3.0%	-$1,438,620
Average		**-4.5%**	**-$718,381**

The individual and aggregate data is obvious, the CMHC program facilitating the acquisition of existing rental stock for the purpose of affordable housing is financially flawed. Of the 19 properties analyzed, all IRRs were nominal or negative. Given the risk associated with property ownership, even the most unsavvy of investors would be deterred by these IRRs. As Stanchill (1987) aptly states "any company, no matter how big or small, moves on cash, not profits. You can't pay bills with profits, only cash." As such, the negative TLFCF shown among all analyzed listings is deeply concerning and fails to support a reasonable business case for the acquisition of a single identified property. Without adjustments, the program cannot generate returns or liquidity.

A central component of this paper's model is its rent assumption, as it drives revenues and cash collections. Basic financial accounting indicates that increased rent would positively influence both the IRR and TLFCF figures. As previously noted, the CMHC's rationale for the 30th percentile rent is not specified, much less mathematically supported. If the program's rent stipulations were adjusted to truly reflect the CMHC's affordability definition (e.g. 30% of a household's before-tax income), investors may be enticed to acquire existing rental stock to create affordable housing.

Tables 5 combines data from Tables 2 and 3, showing the potential average rents based on the CMHC's definition of affordability and the median incomes in major and select cities. Comparing Tables 2 and 3 with 5, it is clear that there is a substantial difference between the 30th percentile rent and potential rent based on CMHC's affordability definition.

TABLE 5 – AFFORDABLE RENT IN MAJOR AND SELECT CITIES

City, Province	Affordable Rent	Median Income
London, ON	$1,550	$5,168
Toronto, ON	$1,646	$5,486
Montreal, QC	$1,296	$4,321
Sherbrooke, QC	$1,953	$6,510
Brandon, MB	$1,649	$5,496
Winnipeg, MB	$1,770	$5,899
Regina, SK	$2,046	$6,819
Saskatoon, SK	$1,975	$6,583
Calgary, AB	$2,489	$8,298
Red Deer, AB	$2,259	$7,530
Kelowna, BC	$1,716	$5,720
Vancouver, BC	$1,817	$6,055

RECOMMENDATIONS

Based on the results of this paper, two recommendations are delineated.

According to the CMHC (2020b), 90% of rental properties were built before 2000. Despite the obvious importance of these assets, serving as the foundation of the rental universe, there is only one affordability program for aging and existing stock. Recommendation one involves creating more programs for existing rental stock.

The CMHC's sole affordability program is broken. The 30th percentile rent requirement prohibits positive returns and cash flows. Recommendation two is to change market rent stipulations based on substantiated economics and to better align with the CMHC's definition of affordability.

CONCLUSION

This study's empirical analysis of the publicly available multi-family residential properties, using the CMHC's program parameters, proved to be economically problematic. Based on the insight from this data, it is apparent that this CMHC program needs to be revised. More needs to be done to support the maintenance, succession, and ultimate existence of current properties, as our future and the affordability of Canadian housing depends on it.

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