## The Canadian Reverse Mortgage Landscape

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## 1 The global market for reverse mortgage loans

A reverse mortgage typically involves a lump sum, credit line, or guaranteed income stream given from a lender to an older homeowner in exchange for repayment at termination. Termination occurs at the earliest of a voluntary prepayment, a move while alive, or death of the borrower. Typically the lender has no recourse to assets other than the home, and no principal or interest payments are required until the date of loan termination. The present value of collateral at termination, and hence loan to value ratios at origination, will rise with a borrower's age and fall with interest rates, as the discounted value of collateral at termination can be expected to rise with current age and fall with discount rates.

Among the best-developed markets for reverse mortgages globally are the US, the UK, South Korea, and Australia.<sup>1</sup>

In both the U.K. and Australia, both reverse mortgages ("lifetime mortgages") and "home reversion schemes" are available. The latter are forward sales of a fixed fraction of the proceeds from the seniors' home, but in both countries reversion schemes are niche products with much lower market share than reverse mortgages. Per Australian Securities & Invesments Commission (2018), through December 2017, Australian reverse mortgage balances were AUD 2.5 billion on a total population of 24.6 million, with 72% lines of credit and 11.3% lump sum.<sup>2</sup> However, Kobayashi, Konishi, and Takeishi (2017), citing Deloitte and SEQUAL, find larger numbers of 41,500 outstanding loans with a balance of 3.6 billion AUD through 2013. Loan to value ratios appear to be quite low, commonly 30% or lower for 70 year olds based on a government calculator, with interest rates above 6%.<sup>3</sup> and

https://www.canstar.com.au/home-loans/reverse-mortgages/what-might-a-reverse-mortgage-co

<sup>&</sup>lt;sup>1</sup>The Chinese market, despite a population with many very low income, high housing wealth seniors, is tiny, per Hanewald et al. (2020). Japan's government offers reverse mortgage-type specialized loans, but with restricted use of the proceeds.

<sup>&</sup>lt;sup>2</sup>Australian Securities & Invesments Commission (2018), there might be a stock versus flow issue in my reading

 $<sup>^3\</sup>mathrm{Per}\ \mathrm{https://moneysmart.gov.au/retirement-income/reverse-mortgage-calculator \#section-details.}$ 

Australia has a "Pension Loan Scheme" run by its government that allows only a regular payment option. This market is small, at 1,100 users as of October, 2019.<sup>4</sup>.

The UK market appears larger than Australia, with annual originations of roughly 3.9 billion, 44,870 originations in 2019 and a similar number in 2018.<sup>5</sup> Combined with older figures from Kobayashi, Konishi, and Takeishi (2017), this suggests roughly 500,000 outstanding reverse mortgage loans and up to a 10% share of the potential market of senior homeowners.<sup>6</sup> Neither the UK nor Australia appears to have a securitization or insurance market for reverse mortgage loans. Rates appear to be somewhat lower in the thicker UK market and rates somewhat higher.

Until recent growth in the U.K. market, South Korea and the U.S. appeared to be the largest markets for reverse mortgage loans, and notably both featured reverse mortgage-backed securities with government guarantees to investors. In South Korea, the JTYK (JooTaekYeonKeum "Housing pension") program offers relatively low interest rates (under 2% spread above 6-month COFIX rate, currently near 2%, inclusive of the guarantee fee). The Korean Housing Finance Agency guarantees these loans.<sup>8</sup>. Notably, in Korea, while a lump sum is available, a life annuity appears to be the favored drawdown style, and reverse mortgage borrowers appear to have *higher* pre-retirement incomes than non-borrowers. The Korean program was originating roughly 5,000 loans per year in the mid-2000s and up to 10,000 in 2016, suggesting a stock of roughly 50,000 loans on a 65+ homeowner population of roughly 5 million, for a 1% penetration rate.

The U.S. Home Equity Conversion Mortgage (HECM) has been sponsored and guaranteed by the U.S. Federal Housing Administration and run through the Department of Housing and Urban Development since the early 1990s. Congressional Budget Office (2019) estimates that as of the end of fiscal year 2018, \$111 billion of HECM credit was outstanding, for a penetration rate of 1.5% by value. Combining recent estimates from Congressional Budget Office (2019), Housing Studies (2018), and Community Living (2018), there are approximately 40 million homeowners over age 65, and roughly 400,000 outstanding HECM loans, for a penetration rate of 1%. Growth has slowed dramatically since the Great Financial Crisis. In 2007, there were 107,000 originations, in 2019, just 31,274 (per the National Reverse Mortgage Lenders' Association). Loan to value ratios have fallen, and for seniors with low incomes or poor credit histories (a sizeable fraction of HECM borrowers), a holdback of proceeds was introduced.

<sup>&</sup>lt;sup>4</sup> "Pensioners Win Reverse Mortgage Reprieve", Financial Review, Joanna Mather, October 23, 2019

<sup>&</sup>lt;sup>5</sup>Per https://www.equityreleasecouncil.com/news/2019-was-a-year-of-consolidation-as-equity-lease-lending

 $<sup>^6{\</sup>rm There}$  are roughly 6.5 million UK households over age 65, with 78% homeowners and only 6% still paying a mortgage.  $^7{\rm .}$ 

<sup>&</sup>lt;sup>8</sup>Kobayashietal

The U.S. experience has been notable for very poor ex-post performance of the FHA insurance fund. Because a large fraction of reverse mortgages were originated at the peak of the mid-2000s housing boom, in the states with the largest housing cycles, and in the neighbourhoods with the worst housing cycles within markets, a large number of loans have terminated with outstanding balances greater than collateral value. <sup>9</sup>. As Moulton, Haurin, and Shi (2015) and Begley et al. (2020), a surprisingly large percentage of HECM loans have fallen into property tax and insurance default, which puts servicers and FHA in a difficult position. Allowing non-performing loans to fester with no payments will generate large losses, but displacing delinquent seniors who have run out of cash is also unattractive both for policy and reputational reasons. Responding to this problem, FHA introduced the "Life Expectancy Set Aside." ("LESA") That set aside is placed into an account that grows with time, and can only be used to fund property tax and insurance payments, although there is limited protection against longevity. The Economic Net 2019 acturial analysis: "The Economic Net Worth is defined as cash available to the Fund plus the Net Present Value (NPV) of all future cash outflows and inflows that are expected to result from the mortgages currently insured by the MMIF. As of the end of Fiscal Year 2019, Pinnacle's Actuarial Central Estimate (ACE) of the MMIF HECM Cash Flow NPV is negative \$11.228 billion. The total capital resource as reported in FHA's audited financial statement is \$1.694 billion at the end of Fiscal Year 2019. Thus, the estimated economic net worth of the MMIF is negative \$9.534 billion.

## 2 The Canadian Context

A significant number of Canadian seniors may be characterized as house rich, with a moderate number both house-rich and cash-poor. The high value of homes, particularly in Greater Toronto and Vancouver is well-known. Median income among single Canadian Canadians over 65, per the 2016 Censs was \$28,325. Poverty rates were relatively low, at 4%.

The reverse mortgage market in Canada has grown rapidly with home prices in recent years, but on a very small base. The oldest and largest product, the Canadian Home Income Plan, owned by Home Equity Bank, holds a portfolio of approximately \$4 billion. CHIP originations began in 1986 in Vancouver, and 2019 originations at \$820 million represented roughly 20% of the stock of balances. CHIP offers loan to values up to 55%. Interest rates on CHIP loans vary from 5% for a one-year term to 6% for a five year term. CHIP offers both lump sum and line of credit advances. CHIP originations appear to be growing at roughly

<sup>&</sup>lt;sup>9</sup>Davidoff (2014)

<sup>&</sup>lt;sup>10</sup>This is described in FHA HECM Mortgage Letters 2014-21 and 2015-09. Upon the loan's termination, LESA reverts to borrowers, undoing true annuitization.

20% per year. With roughly 3 million households in Canada headed by a senior over 65, and assuming a \$200,000 average loan balance, CHIP has a market share of roughly one-half of one percent of eligible Canadian owners.

A new entrant to the market is Equitable Bank. They originated only \$20 million in loans in 2019, but have been doubling or tripling volume in recent years. Equitable Bank offers somewhat lower rates than CHIP, at 4.24% to 4.84\$ from 1 to 5 year terms, and lower origination fees, but lower loan-to-value ratios, at only 25% at age 70, and only 40% at 85.

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