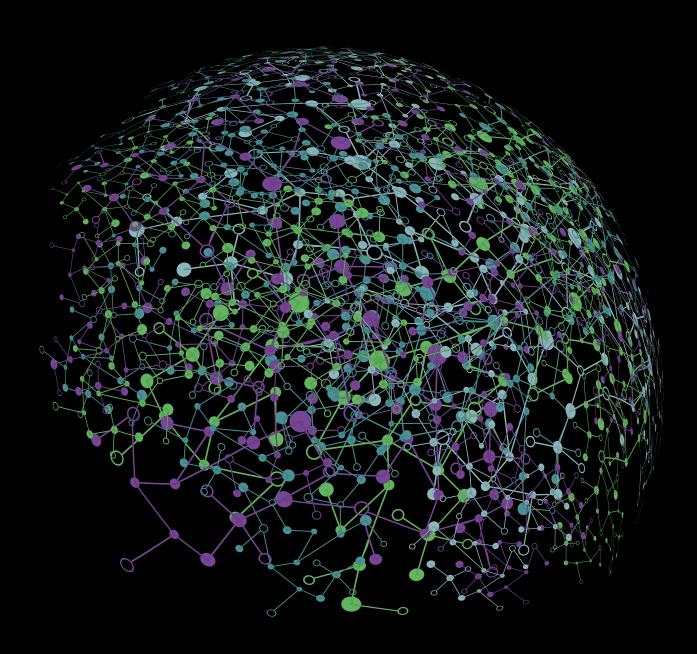
Deloitte.



COVID-19

Toward recovery:
Data-driven approaches for
managing mortgage fraud risks
heightened by the pandemic

We are facing what has fast become a generational crisis. COVID-19 has created an unprecedented level of societal uncertainty. Decision makers across industries are making material choices every day and must act decisively to ensure the wellbeing of their people, resilience of their organizations, and viability of their enterprises. Deloitte's Resilient Leadership framework defines three timeframes of this crisis: Respond, Recover, and Thrive. As we participate in the effort, Deloitte's Financial Services group will publish bulletins sharing our learnings and perspectives.

In Deloitte's previous release, "COVID-19 | Toward recovery: Six actions for mortgage lenders in Canada," we discussed key actions that we believe mortgage lenders should undertake over the next six to 12 months to contend with the stresses being placed on mortgage books due to the COVID-19 crisis. At a high level, we recommended key client-facing actions that lenders should take to proactively assist customers in need through the mortgage deferral process, ensuring the accuracy and integrity of revised customer lending balances and repayment schedules, and key monitoring activities lenders should consider in assessing the overall health of their mortgage books.¹

In this instalment, we bring focus to heightened Fraud for Shelter ("FFS") risks due the current crisis, and provide key considerations lenders should be thinking about in the months and years ahead.



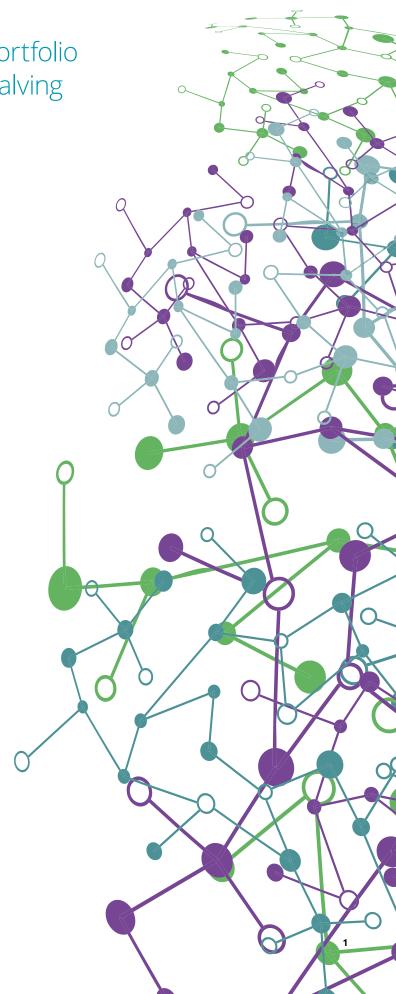
¹ COVID-19 | Toward recovery: Six actions for mortgage lenders in Canada

The residential mortgage portfolio glacier is showing signs of calving

We are observing a set of issues confronting lenders who are simultaneously managing increased complexity in the existing book while attempting to prudently originate new loans in compliance with various regulatory requirements. We believe it likely that the industry will experience a rare event akin to glacier calving: when a body of fraud-impacted mortgages will suddenly "release" from the body of performing mortgage portfolios—a process similar to ice chunks falling from the edge of a glacier.

Historically, residential mortgage delinquency and default rates have been very low in Canada, and real financial exposure to lenders has been mitigated by rapidly increasing property values held as collateral.

According to the Canadian Bankers' Association, as of January this year, only 0.24 percent of Canadian mortgages were in a state of arrears, with even lower rates being observed in "hot" markets like Ontario and British Columbia, where delinquency rates of 0.09 percent and 0.15 percent, respectively, were observed.²



² https://cba.ca/mortgages-in-arrears

The mortgage iceberg: Key pressures on the market

Increasing default risk **Declining property values** • Substantial pre-COVID-19 consumer debt • Consensus forecasts show a 5%-30% loads are further increasing decline in housing values There are unprecedented increases in • Key markets like Toronto and Vancouver unemployment rates nationally (10%+) were overvalued by 10%-25% pre-• Early delinquency indicators (locally and COVID-19 and are at high risk of globally) are already on the rise significant price correction Consumer financial health will take a long • Loan-to-value (LTV) ratios will rise as a time to recover result and will create actual financial loss There are fears of new capital entering the exposures to banks and mortgage market being diverted to debt payments insurers Mortgage market **Declining market activity Escalating regulatory concerns** • COVID-19 will force customer Housing buy/sell activity is down between 50%-70% in the wake onboarding to remote channels with of COVID-19 higher use of mobile sales channels. Know-your-customer (KYC) compliance • Overleveraged (and now potentially risks will increase as a result jobless) consumers will not be able to join the market Retail sales conduct challenges will also

increase due to added sales pressure Increasing defaults will elevate capital

provisioning needs

Delinquency and default risk will increase significantly... despite deferral programs

- Applications for federal income support through the Canada Emergency Response Benefit (CERB) program exceeded eight million as of May 26, 2020.³ Once CERB payments end in October 2020, individuals still in need of financial relief will be converted over to government Employment Insurance (EI) rolls, as double-digit unemployment will persist for some time to come.
- 2. As of April 22, 2020, 13 member banks of the Canadian Bankers' Association had provided mortgage deferrals to more than 720,000 Canadians, which represents approximately 15 percent of all outstanding residential mortgages⁴ for a total of \$180 billion thus far.⁵ However, this program is currently offered for a six-month period, after which consumers will be expected to continue with regular payments.⁶ Further, the Office of the Superintendent of Financial Institutions (OSFI) has indicated, through publicly issued guidance to financial institutions (FIs), that loan delinquency and default definitions will not change post the deferral period.⁷
- 3. According to a recent Bank of Canada Financial System review, only 52 percent of Canadians were deemed able to cover 12 months of mortgage payment with current liquid assets, with 20 percent of Canadians unable to cover more than two months of payments.⁸
- 4. The Canadian Mortgage and Housing Corporation (CMHC) predicts alarming levels of leverage among Canadian households, expecting household debt levels to reach 2.3 times disposable income this year, up from 1.76 times pre-COVID-19.9

- 5. Dominion Bond Rating Service (DBRS) is currently forecasting a tripling of mortgages falling into arrears, to levels not seen since the 1980s recessionary times, with the moderate-to-adverse scenarios predicting between 0.64 percent and one percent. In certain sensitive markets, like British Columbia and Ontario, arrears could rise between 500 percent and 800 percent¹⁰ over historical arrears rates.
- 6. The United Kingdom-based economic forecasting firm Oxford Economics estimates that 15 percent of homeowners will fall behind on their monthly mortgage payments. This is unprecedented; even during the Great Recession of 2008, the peak delinquency rate reached only 10 percent.¹¹

The value of mortgaged properties is set to drop, driving real financial exposures to lenders

- 1. CMHC expects residential real-estate prices to fall anywhere between nine percent and 18 percent in Canada this year.¹²
- 2. At the same time, recent research released by other Canadian FIs and ratings agencies indicates a potential for a five percent to 10 percent fall in housing prices in 2020, with some pessimistic scenarios indicating the potential for a 30 percent price decline.¹³
- 3. Pre-COVID-19, in certain Canadian markets including Ontario and British Columbia, a 10 percent to 25 percent overvaluation of properties was being estimated.¹⁴

³ https://www.canada.ca/en/services/benefits/ei/claims-report.html

⁴ https://cba.ca/canadian-banks-are-standing-by-canadians

 $^{^{5}\,}http://business.financialpost.com/news/fp-street/big-six-banks-has-offered-deferrals-on-more-than-180-billion-in-mortgages-so-far$

⁶ https://www.cmhc-schl.gc.ca/en/finance-and-investing/mortgage-loan-insurance/the-resource/covid19-understanding-mortgage-payment-deferral

⁷ https://www.osfi-bsif.gc.ca/Eng/fi-if/dti-id/Pages/DTIFAQ_Cov.aspx

⁸ https://business.financialpost.com/news/economy/bank-of-canada-warns-of-excess-business-household-debt-from-covid-19

⁹ https://nationalpost.com/news/covid-19-will-raise-household-debt-levels-and-drag-on-gdp-growth-cmhc-head-warns

¹⁰ https://betterdwelling.com/canadian-real-estate-prices-to-make-double-digit-drop-another-risk-agency-tells-institutional-investors/

¹¹ https://www.marketwatch.com/story/mortgage-delinquencies-caused-by-the-coronavirus-will-exceed-great-recession-levels-according-to-this-forecast-2020-05-13

¹² https://nationalpost.com/news/covid-19-will-raise-household-debt-levels-and-drag-on-gdp-growth-cmhc-head-warns

¹³ https://betterdwelling.com/canadian-real-estate-prices-could-drop-up-to-30-moodys-advises-institutions/

¹⁴ https://building.ca/dbrs-morningstar-releases-macroeconomic-scenarios-canadas-residential-mortgage-market/

Lenders will be challenged to mitigate the risk of contraction in their largest portfolios

- The federal government has moved to infuse liquidity into the market through a \$150 billion purchase of insured mortgage pools through CMHC (insured mortgages purchase program).¹⁵
- Despite this, sales volumes in some of Canada's key housing markets have declined between 50 percent and 70 percent¹⁶ in the months since the onset of the crisis.
- Similar declines have also been observed in markets outside of Canada, where the spring selling market has been effectively aborted.¹⁷ This provides corroboration for the expected slowdown here at home.
- 4. Further, household debt levels will reduce the ability of many to engage in new property purchases, as disposable income and savings ability (for down payments) is overtaken by increased debtservicing obligations.¹⁸

Regulators will be watching closely

 As with all financial crises, the medium- and longerterm economic and business ramifications will become more transparent; regulators will likely review and determine modifications to the current regulatory regimes to provide financial stability. Currently, OSFI has temporarily paused proposed changes to capital requirements, amendments to mortgage stress testing, and changes to accounting standards to allow FIs to deal with the immediate operational needs they face because of COVID-19.^{19, 20}

- Significant movement of customers to online and mobile channels due to social-distancing requirements will likely become the subject of regulator review to ensure continued diligence around KYC requirements, ultimate beneficial ownership of properties, and source of funds.
- 3. Canadian banks are already experiencing some regulatory easing to enable digital customer servicing (e.g., simplified authentication to register an account for government benefits).²¹ The regulators will be focused on consumer protection and the sales practices needed to retain and onboard new business.
- 4. Based on the inherent industry risks of FFS schemes, lenders' portfolios may have varying FFS loans, and may need to demonstrate to regulators and mortgage insurers that defaults were driven by COVID-19 issues, and not by misrepresentations that may have been reasonably detected during the origination and underwriting processes.
- Further, regulated lenders will need to continue to demonstrate compliance with all applicable Proceeds of Crime (Money Laundering) and Terrorist Financing Act (PCMLTFA) requirements, given the increased digital customer onboarding.

¹⁵ https://www.cmhc-schl.gc.ca/en/media-newsroom/news-releases/2020/cmhc-expands-insured-mortgage-purchase-program

¹⁶ https://business.financialpost.com/executive/posthaste-canadas-housing-market-may-soon-face-a-bigger-problem-than-just-social-distancing

¹⁷ https://www.marketwatch.com/story/why-the-next-big-shoe-to-drop-in-the-us-economy-could-hit-by-july-2020-05-13?reflink=mw_share_flipboard

 $^{^{18}\} https://nationalpost.com/news/covid-19-will-raise-household-debt-levels-and-drag-on-gdp-growth-cmhc-head-warns$

¹⁹ https://www.osfi-bsif.gc.ca/Eng/osfi-bsif/med/sp-ds/Pages/JR-BG20200521.aspx

²⁰ https://www.osfi-bsif.gc.ca/Eng/fi-if/dti-id/Pages/DTIFAQ_Cov.aspx

²¹ Retail Banking in the Age of COVID-19, Scenarios for Resilient Leaders, May 2020, Page 10, Mondaq

The "Fraud for Shelter" risk

FFS is defined as a situation in which a borrower or party to the transaction (agent, broker, lawyer, etc.) misrepresents the borrower's financial situation in order to qualify for a mortgage that would not otherwise be approved based on the lender's requirements. A recent Equifax report suggests that since 2013, mortgage frauds have increased by 52 percent, largely fuelled by the Canadian housing affordability crisis.²²

While mortgage lenders, in concert with government and regulators, move to mitigate the immediate COVID-19 impacts, the FFS glacier will emerge and create additional risks that require careful navigation. Current credit-risk modelling and scenario-planning efforts may not consider FFS risks, as typically these have been camouflaged as performing loans when in favourable economic and real-estate market conditions.

As noted previously, estimates around mortgage arrears are forecasted to increase to between

0.64 percent and one percent. If we look at the total value of the mortgage market, which is \$1.6 trillion²³ in Canada, we can roughly extrapolate mortgages in this population to be valued at anywhere between \$10.2 billion and \$16 billion. Contrast this to a recent Equifax survey report—which found that 8 percent of respondents admitted to making material misrepresentations on mortgage applications, and that 13 percent of respondents indicated they saw no issue in telling "white lies" on applications²⁴—and the value of the "FFS iceberg" increases to between \$128 billion and \$208 billion.

These statistics beg the question of whether there may be an additional layer of risk brought on by FFS, given the unprecedented pressures on borrower capacity to repay, and the potential impending fall in property values, both brought on by COVID-19.



²² https://www.fsco.gov.on.ca/en/mortgage/pages/mortgage-fraud.aspx

²³ https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1010012901

²⁴ https://www.consumer.equifax.ca/about-equifax/press-releases/-/blogs/equifax-canada-mortgage-fraud-on-the-rise/

Key risks to lenders related to FFS schemes on the existing book include:

- Mortgages obtained through misrepresentation, particularly on high LTV and non-conforming loans, will face increased risk for repayment as borrowers come under increased cash-flow pressures and struggle to make payments post the deferral period.
- Compounding the risks associated with driving new business, and financial pressures faced by existing borrowers, it is anticipated that many will start to exhibit the signs of "pre-delinquency" risk and may be unable to return to a regular repayment schedule.
- Insurers will likely review mortgage losses claimed by lenders to determine that they were free from fraud²⁵; insured mortgages are not immune to lender losses being realized.
- A key challenge with identifying Fraud for Shelter mortgages is that they generally do repay under normal conditions. Historically we've seen very low overall delinquency rates, so the signs of FFS risk can be difficult to spot.

Key risks to lenders related to FFS schemes through new originations:

- With mobile sales employees and other parties to mortgage deals (i.e., lawyers, brokers, agents) being largely compensated through deal commissions and professional fees, this may increase pressure to maintain deal flow—thus creating incentives to misrepresent application details to get deals done.²⁶
- Opportunities will be created for borrowers who want to obscure their identities due to migration to online onboarding and operational KYC process limitations, providing fertile ground for increased money-laundering risks to lenders.
- Similarly, risks inherent in origination and underwriting decisions will also rise due to limitations placed around direct client interactions. Lenders will need to consider how COVID-19 affects their ability to conduct appropriate levels of customer due diligence, and to maintain compliance with KYC requirements.



²⁵ https://www.cmhc-schl.gc.ca/en/finance-and-investing/mortgage-loan-insurance/mortgage-fraud-mli

²⁶ FCAC - Domestic Bank Retail Sales Practices Review, March 2018

A pragmatic, data-driven approach, for uncovering "Fraud for Shelter" risk

There is an opportunity to develop "collective intelligence" capability to identify those FFS loans, through understanding the key features of FFS schemes (income, existing debt obligations, appraisal, and other forms of application misrepresentation), so that the lender can tailor remediation strategies to mitigate financial loss and inform program changes (i.e., proactive customer interventions).

Notwithstanding tightening underwriting controls, and enhancing customer due diligence, data and analytics have a huge role to play in creating an intelligence base to identify and quantify FFS risk.

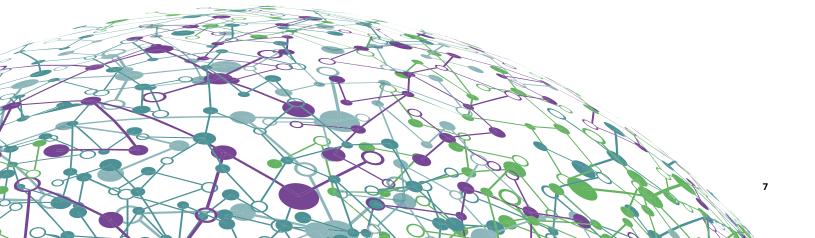
There are four capabilities that we see providing enhanced visibility into the FFS issue faced by lenders:

- Data aggregation Combining siloed internal data sources with publicly and commercially available data to create inherent value in undiscovered linkages.
- **Entity resolution** Resolving data in real/near-time to create a single source of truth for entities that exist across vast and disparate data sources.
- Network analytics Leveraging a user interface to reduce the time it takes to gather intelligence and investigate, and assess risk by reviewing network visualizations, geospatial visualizations, and transaction details.
- **Dynamic scoring** Generating scoring networks created from the underlying data to drive insights and uncover hidden relationships.

Data aggregation should not be limited to traditional data sources. We recommend the overlay of funded and unfunded mortgage application data, mortgage payment history, adjudication decisions, historical fraud events, and external data (e.g., land title history, company ownership, adverse media), and social demographic data to obtain a more holistic view of portfolio risk.

Our experience is that a holistic data-driven analysis of residential mortgage portfolios, coupled with an "investigative mindset" and appreciation of FFS typologies, provides additional transparency and insights into lending risks. The ability to generate dynamic contextual networks can provide lenders with additional transparency to identify key drivers or shared traits of FFS exposures that inform effective mitigation strategies.

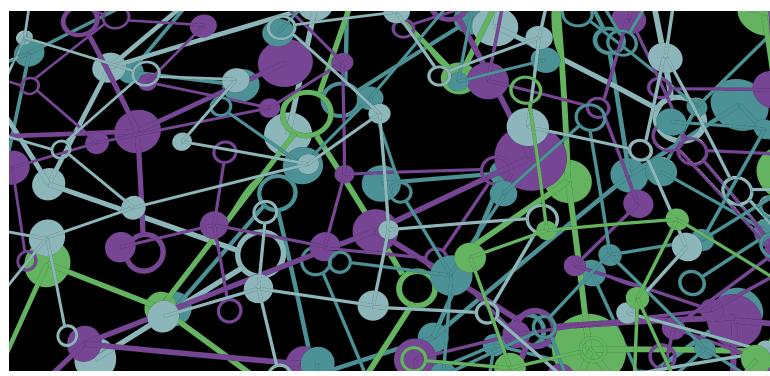
Leverage existing mortgage or risk models and overlay these to the dynamic networks to readily identify those networks that present risk that is outside the lender's risk appetite. Through the analysis of the combination of individual risk scores, previously unknown patterns of behaviour and typologies indicative of possible FFS may be identified, providing an opportunity to tailor mitigation (e.g., onboarding and application processes) and remediation (e.g., revised consumer risk rating and repayment plans) activities.



Key recommended activities when adopting a data and analytics driven approach:

- Be sure to embed external, public, and commercially available data sources to provide greater context to risk segments (i.e., property value + title data; geospatial + socio-demographic data; and watch-lists/black-lists).
- Analyze certain segments of the mortgage book where FFS risk may be higher; for example, the deferred portfolio in addition to higher-risk mortgage vintages (i.e., time periods in which property values were escalating more rapidly relative to other time periods, particularly in the hottest geographical micro-markets).
- 3. Segment the portfolio into granular risk groups to tailor strategies for triaging and accelerating customer engagement and required interventions.

- 4. Link segments together through entity resolution and network analysis to identify concentration of common clusters of risk, and to identify players across risky deferral mortgages (brokers, agents, buyers, lawyers, etc.) to identify potential indicators of FFS collusion risk.
 - a. Contextual networks should be dynamically built through entity analytics, whereby attributes attached to "bad/failed loans" (e.g., broker, valuator, applicant, business, legal, etc.) can be identified across the entire portfolio.
 - b. Moving from the traditional "transaction" decisions to "network-based" decisions can add valuable context to every loan decision and increase the integrity of the portfolio.
- Review your fraud risk detection monitoring capabilities and fraud risk libraries, and harden feedback loops to embed learnings into ongoing onboarding, underwriting, and post funding monitoring processes.



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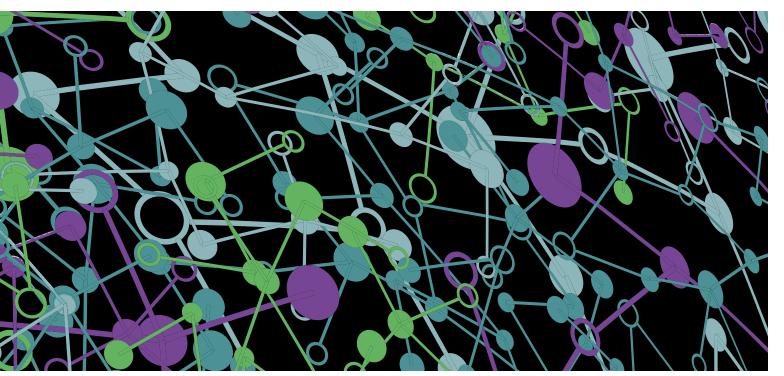
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