

Speculation and Vacancy Tax Act: Review of Act and Regulations

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Ministry of Finance – *Speculation and Vacancy Tax Act* Review of Act and Regulations

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Message from the Minister of Finance

By 2017, the housing crisis in B.C. had been spiraling out of control for many years. Speculation drove up housing prices, pushed rental properties off the market, and left homes vacant.

Instead of turning our backs on the challenge faced by hardworking British Columbians, we introduced Homes for BC: A 30-Point Plan for Housing Affordability. The 10-year approach includes a diverse range of measures, like the Speculation and Vacancy Tax (SVT), to address the complex factors contributing to housing unaffordability.

The SVT is designed to curb speculation and encourage empty homes to return to the market in urban areas with near-zero vacancy rates. This report shows that government was right in implementing this landmark solution – despite the challenges people continue to face, the SVT is working.

Before the pandemic, the SVT was helping to improve housing prices for buyers and renters. It was encouraging those with empty housing in the middle of a housing crisis, including to sell or rent their properties and turning empty houses into homes. Since it was introduced, the SVT has helped add approximately 20,000 condo units to the long-term rental market in Metro Vancouver.

When we introduced the SVT, it was the first of its kind in Canada. Other Canadian jurisdictions, including the federal government have begun to implement their own speculation and empty homes measures and are following British Columbia's lead by increasing tax rates on foreign ownership.

All revenue from the SVT in B.C. is invested in affordable housing solutions in the regions where the tax applies. Over the first three years of the tax, the SVT has generated \$231 million for affordable housing.

Addressing housing in B.C. is a generation-defining challenge and the Province needs to work with partners to resolve it through collaborative actions to support the right forms of housing we need in British Columbia.

Our housing challenges didn't emerge overnight, and costs are especially high for people right now coming out of the pandemic. But there are initial signs that show our work is starting to make a difference – with record amounts of housing underway across the province after so many years of housing not getting built. More than 53,000 new homes were registered in 2021. And as of March 2022, nearly 34,000 new affordable homes are completed or underway in more than 100 communities through the Homes for B.C. plan - more than 13,600 homes are completed, nearly 9,200 are under construction, and the remainder are in the approval phase.

We have made an additional \$2 billion in low-cost financing through BC Housing's HousingHub program to encourage non-profits and private developers to deliver new affordable rental housing. We also made changes to give local governments more authority to simplify and expedite development approvals.

We are not stopping here. Our government is introducing a homebuyer protection period that will help ensure people are protected as they make one of the biggest purchases in their lifetime. We are continuing our work to stop dirty money from driving up housing prices and are offering local governments the tools they need to make a difference.

We have a lot more to do, but we're determined to address the high cost of housing people are facing right now. This report shows that the SVT is working as one of the ways we can help people and families in our province find a place to call home.

A handwritten signature in black ink, appearing to read 'Selina Robinson', with a stylized flourish at the end.

Honourable Selina Robinson
Minister of Finance

Executive Summary

The first tax of its kind implemented in Canada, the *Speculation and Vacancy Tax Act* (SVTA) was announced as part of *Budget 2018* to encourage property owners to turn empty homes into housing for British Columbians, and ensure foreign owners and those with primarily foreign income contribute fairly to B.C.'s tax system. Point 1 of the 30-Point Housing Plan, the speculation and vacancy tax (SVT) is intended to optimize the use of housing supply in specific regions, also known as SVT designated areas, where demand pressures have had a substantial impact on housing affordability.

As required by section 140 of the SVTA, this report examines the effectiveness of the SVT having regard to housing affordability, including vacancy rates, sale prices of residential property, rents for residential property and other relevant factors.

Since 2019, the SVT rate has been 0.5% for Canadian citizens or permanent residents, and 2% for foreign owners and satellite families. The tax structure is intended to apply to vacant properties being used as occasional homes or held as investments, as well as occupied by owners who do not pay income tax in the province but benefit from B.C.'s services and amenities.

For the 2018, 2019 and 2020 tax years, the Province collected approximately \$230M in SVT revenues. Foreign owners and satellite families paid an average of five times more SVT than B.C. residents. Data from the SVT has shown that the tax has helped to add over 20,000 units to B.C.'s long-term rental market and encourage owners who were previously keeping their homes empty to either rent them out or to sell.

Findings by Dr. Tsur Sommerville and Dr. Jake Wetzel of Stada Analytics on the assessment and effectiveness of the SVTA indicate that:

“[A]ffordability has improved somewhat more in the SVTA specified areas in British Columbia than elsewhere in B.C. or Canada, though these findings are especially sensitive to the pattern of emergency economic measures meant to address COVID-19, as measured by their effects on estimated 2020 median incomes, and household responses to these and changes in their preferences resulting from changes in workplace patterns.”

Further analysis indicates that the SVT is achieving its intended outcome and supporting the re-integration of existing, under-utilized housing stock into the housing market for rent or sale. In addition, SVT revenues are directed towards housing affordability initiatives in designated areas, helping the Province provide \$1.7B in annual BC Housing funding for 2022/23 to develop safe, accessible and affordable housing for all British Columbians.

Speculation and Vacancy Tax Overview

The Speculation and Vacancy Tax in British Columbia's Housing Market

The SVT was introduced as part of Government's *Homes for B.C.: A 30-Point Plan for Housing Affordability in British Columbia*¹ in February 2018 (30-Point Housing Plan). The 30-Point Housing Plan supported the largest investment in housing affordability in B.C.'s history with more than \$7 billion over 10 years. The 30-Point Housing Plan consists of five parts: Stabilizing the Market; Cracking Down on Tax Fraud and Closing Loopholes; Building the Homes People Need; Security for Renters; and Supporting Partners to Build and Preserve Affordable Housing.

The SVTA came into force on November 27, 2018 with the aim of helping turn empty homes into housing for people who live and work in B.C. and raise revenues for affordable housing initiatives in the regional districts where the tax is collected.

The SVT targets those who are holding their properties vacant, putting pressure on already low vacancy rates and housing supply levels. The tax also targets foreign owners and satellite families who do not pay their share of income taxes in Canada but enjoy B.C.'s services and high quality of life.

The tax applies in B.C.'s core urban centres that, at the time of implementation, were experiencing near zero vacancy rates and housing prices that were disproportionately high compared to local incomes. The Province applied tax to municipalities within regions that were experiencing housing affordability challenges. This approach was to prevent speculation from being pushed from one municipality to another.

As a transition measure in the first year of the SVT, the tax rate was set at 0.5% of a residential property's assessed value for all owners. For 2019 and subsequent years, the rate remained at 0.5% for Canadian citizens or permanent residents of Canada who are not members of a satellite family, but increased to 2% for foreign owners and satellite families. The SVT applies based on ownership as of December 31 each year.

The tax payable by an owner is based on the use of the property, the owner's interest in the property, the value of the property and the tax rate that applies. Each homeowner must complete a tax declaration each year to declare their residency status, how their property has been used and apply for any relevant exemptions. The annual declaration is necessary to determine how much of an owner's income is reported to the CRA and because the use of property can change from year to year.

¹ Homes for B.C.: A 30-Point Plan for Housing Affordability in British Columbia, Government of British Columbia, Available from: https://www.bcbudget.gov.bc.ca/2018/homesbc/2018_homes_for_bc.pdf

The SVTA and the *Special Accounts Appropriation and Control Act* (SAAC) require the revenue from the SVT to be spent in the Regional District where it is collected, which includes the Capital Regional District, Central Okanagan Regional District, Fraser Valley Regional District, Metro Vancouver Regional District and Nanaimo Regional District. The province took a regional approach with respect to the SVT revenue spending, because housing affordability doesn't affect one municipality in isolation. What is occurring in one municipality affects an entire region. Requiring the funds to be spent within its respective regional district ensures that the money will be spent quickly and efficiently on affordability issues affecting the entire region.

The SVTA requires the Minister of Finance to consult annually with the mayors of municipalities subject to the tax. Annual consultations provide mayors with an opportunity to review the data and statistics from the previous taxation year and provide the government with their feedback on the tax including recommended changes. The legislated consultation must take place each calendar year, on or before December 31. The Act also requires that the Minister must make a report public in respect of each consultation conducted. Consultation results are used by the government to improve the SVT.

The first consultation was held at the Vancouver Convention Centre on September 12, 2019. Several changes were implemented as a result of issues discussed at this consultation, including exemptions for water access only properties and for military families, and simplifying the declaration process for most simple ownership types.

The second SVTA consultation was scheduled to take place virtually on September 29, 2020. However, because the date fell during the interregnum period following the election call on September 24, 2020, it was postponed. It was decided that with limited time remaining and the ongoing pandemic, this annual consultation would be conducted through written correspondence.

The third SVTA consultation was scheduled to take place virtually in early December 2021. But because of the provincial state of emergency declared in the wake of floods within the Lower Mainland, the annual consultation was again conducted through written correspondence.

Lastly, section 140 of the SVTA requires that on or before December 31, 2021, and at least once every five years after that, the government must initiate a review of the Act and regulations and make public a report of the review. The report must take into account the effectiveness of the legislation having regard to housing affordability, including vacancy rates, sale prices of residential property, rents for residential property and other relevant factors. This is the first report under section 140.

The Impact of COVID-19 on British Columbia’s Housing Market

As the COVID-19 pandemic unfolded, homes suddenly became “a workplace, a school, an entertainment centre and a refuge, and buyers have been willing to pay a significant premium to accommodate those new and diverse needs.”² As a result of the pandemic, there were several trends that shifted demand for housing:

- Newfound flexibility: A newfound flexibility for engaging in work, school and social activities from your own space.
- Demand for space: An accelerated demand for more space to accommodate the newfound flexibility.
- Shifting priorities: A shift in prioritizing and managing everyday personal and family life.
- Suburban living: A desire to move away from urban to suburban areas.

The culmination of these trends was reflected in buyers’ preferences for more space and is consistent with the Royal Bank of Canada’s *Hot summer housing market stretched into August... though not everywhere – Report* released in September 2020, which states: “We think this in part reflects the pandemic altering the housing needs of many current owners — who are opting to move, something they might not have considered just a few months ago.”³ The report also suggests that buyers nationwide demonstrated a stronger preference for single-detached homes, leading to stronger price growth. At present, it’s difficult to gauge how long these shifts in preferences will last after the pandemic recedes.

At the federal level, the recently elected government, through their Mandate Letters, have announced a number of new housing programs and initiatives aimed at improving housing affordability. The province will continue to monitor the impact of these announcements and policies and consider how they interact with existing measures at the provincial level. In moving towards a post-COVID-19 environment, the government will be reviewing all housing market indicators, demands for additional space, patterns of migration across the province, as well as changing inflation and interest rates.

²Five Questions for the Post-Pandemic Housing Market, British Columbia Real Estate Association, Available from: <https://www.bcrea.bc.ca/wp-content/uploads/5-Questions-for-Post-Pandemic-WorldV6.pdf>

³Hot summer housing market stretched into August... though not everywhere, Royal Bank of Canada, Available from: <https://royal-bank-of-canada-2124.docs.contently.com/v/hot-summer-housing-market-stretched-into-august-though-not-everywhere-report>

Speculation and Vacancy Tax Design

The SVT is an annual tax based on how owners use residential properties in major urban areas in B.C. The SVT is designed to turn empty homes into housing for British Columbians, and ensure foreign owners and those with primarily foreign income contribute fairly to B.C.'s tax system.

Registered owners of residential property in a designated region must complete a declaration each year to declare their residency status and how their property has been used.

The SVT does not apply to all residential property. There are some exclusions in the SVTA such as farm outbuildings, property that has an assessed value under \$150,000, a building that is divided into four or more apartments for rent and is not stratified, buildings that are used as a bunkhouse, cookhouse, nursing home, rest home or group home. Owners of these types of properties do not have to declare as they are not included in the SVT tax base.

Taxpayers

Property owners for the purposes of the SVT are classified as: B.C. Resident, Other Canadian, Satellite Families, Foreign Owners and Other⁴.

Corporations, trusts, and partnerships are assigned an owner type based on their interest holders.

- B.C. Resident – a person who regularly resides in B.C. within a taxation year and is a Canadian citizen or permanent resident of Canada who is not a member of a satellite family.
- Other Canadian – a person who does not regularly reside in B.C. within a taxation year, but who is a Canadian citizen or permanent resident of Canada and who is not a member of a satellite family.
- Satellite Families – also referred to as an “untaxed worldwide earner,” is an individual whose income that is not reported for Canadian tax purposes income is greater than their income reported for Canadian tax purposes. An individual’s income is combined with their spouse’s income for the purposes of this calculation. The reported and unreported income used are from the year before the SVT year.
- Foreign Owner – a person who isn't a Canadian citizen or permanent resident of Canada.
- Other – an owner not defined in the above.

The exemptions and tax rates that apply differ depending on the property owner type.

⁴ The Other category is used for data reporting and is not referenced in the SVTA. The Other category represents ownership types that may have paid the SVT or declared as non-exempt, but have not yet been assigned an owner type because the declaration is incomplete, or in some cases because the owner has not declared.

Declarations

The Ministry sends SVT declarations annually to eligible residential property owners within SVT designated areas. Owners of residential property must declare by March 31 in the calendar year following the relevant tax year (for example, property owners declare in 2022 based on the use and ownership of their property in 2021). Declarations are required annually because owner circumstances (such as residency) or use of the property (such as principal residence) can change from year to year.

If a property has more than one owner, a separate declaration must be made for each owner, even if the other owner is a spouse or relative, because the tax is based on how each owner uses the property and where they report their income.

To help property owners declare, a declaration can be completed either through eTaxBC, by phone or in-person at Service BC. To complete the declaration, the letter ID and declaration code found on the declaration letter is required. Property owners (other than corporations, trusts, and partnerships) are required to provide their SIN and date of birth to enable identification and verification. A SIN can also be used to help property owners sign into eTaxBC to apply for a tax credit.

Once a SIN is collected it is masked, and the ability for employees to view the number is controlled by security access. The personal information that is collected under the SVTA is protected in a manner consistent with the B.C. Government's Information Security Policy, Federal Security Standards, and provisions of the *Freedom of Information and Protection of Privacy Act* (FIPPA).

The Ministry collects, reviews and monitors all SVT data, including property owner types, declared properties and exemptions claimed. The Ministry uses SVT data to inform audit and compliance work, inform evidenced-based decision-making and to make changes where needed. The Ministry also reports out on data outcomes through the annual mayors consultation and subsequent annual report.

Exemptions

Part 3 of the SVTA provides a variety of exemptions for certain owners, certain properties, as well as for certain uses of residential property. Taxpayers can only claim one exemption per property that they own on their annual SVT declaration.

Exemptions for Certain Owners

Exemption for specified owners:

Certain owners are both exempt for the tax and are not required to declare, such as a registered charity, a government entity, or an Indigenous nation.

Exemption for trustees of trust for benefit of registered charity:

Some registered charities (including many churches) place the ownership of their residential property into a trust. The trustee of a trust created for this purpose is exempt for this property. This exemption was added in *Budget 2021* in response to feedback received and is retroactive to 2018.

Exemption for not-for-profit corporations:

Not-for-profit corporations are exempt if the residential property is primarily used for a charitable purpose.

Exemption for bankruptcy:

An owner who is on title as a trustee in bankruptcy as of December 31 is exempt from the tax. A bankrupt owner who is still on title is exempt from the tax if the property was vested in a trustee in bankruptcy as of December 31, or for at least 60 consecutive days during the calendar year.

Exemption for Indigenous nations:

An owner is exempt from tax if their interest in the property is held as a trustee of a trust for the benefit of an Indigenous nation.

Exemption for members of military:

An owner of a residential property who is a member of the Canadian Armed Forces or a spouse of a member of the Canadian Armed Forces is exempt from tax if the owner is absent from the property at any time during the calendar year as a result of the member's military service. This exemption was added in 2019 in response to feedback received and is retroactive to 2018.

Exemptions for Certain Residential Property

Exemption for hazardous or damaged residential property:

Properties that no one can live in a because it becomes uninhabitable due to a hazardous condition or because the residence is substantially damaged or destroyed are exempt.

Exemption for daycares:

Properties that include a licensed daycare are exempt.

Exemption for strata accommodation properties:

A strata accommodation property as defined in the *Assessment Act*, also called a “strata hotel”, is exempt. This exemption was made permanent in *Budget 2022*.

Exemption for water access property:

Properties that can only be accessed by water for 6 or more consecutive months in a calendar year and are more than 100 meters from an existing road are exempt. This exemption was added in 2019 in response to feedback received and is retroactive to 2018.

Exemptions for Certain Uses of Residential Property

Principal residence exemptions:

Generally, an owner is exempt from the tax if the residential property is their principal residence. People who have multiple homes can only claim the principal residence exemption on the home they live in for the longest period in the calendar year.

Spouses cannot claim two different principal residence exemptions unless specific situations apply, such as spouses living apart for work or medical reasons or because of recent separation or divorce.

To be eligible for a principal residence-related exemption, an owner must generally be a Canadian citizen or permanent resident of Canada who is a B.C. resident for income tax purposes and isn't part of a satellite family.

The principal residence exemption also applies in cases where the owner lived in the principal residence but no longer lives there under certain circumstances, such as entering into a residential care facility or if they're away from their home to receive medical treatment.

Tenancy exemption:

If a tenant occupies an owner's home for at least six months in the calendar year, the owner may be exempt from the tax. For the owner to be eligible for the exemption, certain tenancy requirements must be met, such as the tenant occupies the property in at least one-month increments.

Secondary residence close to medical treatment facility:

An owner is exempt for a calendar year on a secondary residence if it is periodically occupied by the owner (or the owner's spouse or child) so they can receive medical treatment and the treatment facility is close to that second home.

Exemption in year of acquisition:

Owners are exempt in the year they bought or legally inherited the property.

Exemptions for residential property under construction or substantial renovation:

Owners of property that is under construction or substantial renovation are exempt if reasonable steps are taken to develop or renovate the property without undue delay.

These exemptions also cover phased developments that occur over time, vacant new inventory, and heritage properties where conservation work is taking place.

Exemption on testamentary trust:

When a testamentary trust has been established by a deceased parent or guardian for the benefit of their minor child, the trustee of the trust is exempt from this tax as long as the child is a minor.

Exemption on death:

If an owner of a property dies, all owners of the property at the time of death are exempt in the year of death and the immediately following calendar year.

Exemption on breakdown of marriage or common-law partnership:

Separating or divorcing spouses are eligible for an exemption on family property in the year they separate if they live apart for at least 90 consecutive days that year and they don't reconcile. Spouses who separate less than 90 days from the end of the year will be eligible for an exemption the following year if they don't reconcile.

Spouses can claim the exemption for a second year if they have not finalized their division of family property and remain apart and do not reconcile.

Transitory Exemptions

Some of the exemptions included when the SVTA was implemented in 2018 were meant to provide a transition period to ensure that existing owners would have time to adjust to the new tax. These exemptions are no longer available.

Exemption for land without residence:

The intent of the exemption was to give owners who held vacant land enough time to either begin developing the land or to sell it to someone who would develop the land. The exemption was originally set to expire by the end of 2018 but was extended by regulation for an additional year. The exemption for land without residence expired after December 31, 2019.

Exemption for properties with rental restrictions:

The intent of the exemption was to give owners who acquired a residential property subject to rental restrictions before the SVTA was implemented enough time to work with their strata corporations to remove rental restrictions, to make the strata property their principal residence, or sell it. The exemption, which was originally set to expire after 2019, was extended by regulation for two additional years. It expired at the end of 2021.

Temporary Exemptions

The government, in response to unexpected circumstances or events, also provided tax relief through remission or temporary adjustment to existing exemptions.

Remission for split-classified properties:

For 2020, government approved an SVT remission order for commercial properties with vacant residential land if they also had a tenant under a triple-net lease. The remission was provided in recognition that business tenants should not be responsible for the SVT, which is based on the characteristics of the owner.

Exemption for hazardous or damaged residential property:

Effective for the 2021 tax year only, the exemption for hazardous or damaged residential property was expanded to apply to properties that were damaged by the floods in late 2021 in Abbotsford, Chilliwack and Mission. The exemption for hazardous or damaged residential property requires that a property is uninhabitable for a period of at least 60 days. The exemption is temporarily expanded to allow properties in Abbotsford, Chilliwack and Mission to claim the exemption despite the timing of the damage, if the disaster prevented them from claiming another exemption under the Act.

Tax Credits

Property owners who are not eligible for any of the SVT exemptions may be eligible for a non-refundable tax credit to help reduce the amount of tax they have to pay. There are two tax credits that are available: a tax credit for B.C. residents and a tax credit for other owners.

The tax credit for B.C. residents can be claimed by Canadian citizens, permanent residents or confirmed provincial nominees who are residents of B.C. for income tax purposes as of December 31, and not members of a satellite family. There is no application for the tax credit for BC residents; the credit is automatically applied if an owner meets the qualifications.

Most B.C. residents are eligible for a maximum tax credit of \$2,000 on a secondary property. This means an owner of a home assessed at up to \$400,000, who would otherwise pay the tax, will be exempt since the value of the tax credit is equal to or more than the tax they would owe. This also means an owner of a home assessed at above \$400,000 will only pay tax on the amount over \$400,000 (for example, for a \$500,000 property, the owner will only pay tax on \$100,000). The credit is limited to \$2,000 per owner and \$2,000 per property (in the case of multiple owners) per year. The tax credit cannot be carried forward or transferred to a spouse.

The tax credit for other owners can be claimed by foreign owners, members of a satellite family, individuals who are not residents of B.C. for income tax purposes, and certain corporations or trusts. The tax credit amount is based on B.C. income reported to the Canada Revenue Agency. Owners who want to claim the tax credit for a calendar year must file an application. This tax credit reduces or eliminates the SVT for property owners who are paying their fair share of taxes in B.C.

Other Improvements

In addition to new exemptions and temporary tax relief measures, additional improvements to the SVTA have been made based on feedback received from stakeholders.

Providing Clarification

Hazardous and damaged property exemption: An amendment was made to section 24 to clarify the application of the exemption for up to two years if a residence is rendered uninhabitable for a 60-day period at the end of a calendar year because of a hazardous condition or disaster.

Tax due date after consequential assessment: An amendment was made to section 78 to provide that the tax due date of additional tax as a result of an assessment due to a consequential assessment under another act is the later of 30 days after the assessment or the annual tax due date.

Ownership interest contingent on death: An amendment was made to section 2 to clarify the meaning of beneficial owner to exclude an individual whose ownership interest is contingent on the death of another individual. This change helps to mitigate the unintended results when life interest trusts are used as will substitutes and aligns with the *Land Owner Transparency Act* and the *Business Corporations Amendment Act*. The change is retroactive to the 2018 tax year.

Line 150 reference: An amendment was made to section 5 to update the reference to Line 150 of an income tax return to reflect the renumbering of the Federal Income Tax and Benefit Return; Line 150 is renamed Line 15000 for the 2019 and future income tax years.

Section 67 wording: An amendment was made to section 67 to clarify that the administrator can assess within the specified time period.

Credit application deadline: An amendment was made to section 61 to extend the deadlines to apply for a tax credit for eligible taxpayers by 90 days when a notice of assessment or a Minister's notice of decision is given after the end of the normal application period. This change ensures that non-BC residents who may be eligible for the tax credit maintain the ability to apply for the credit after an SVT assessment.

Appeal to Minister: An amendment was made to section 98 to standardize and clarify rules on filing appeals to the Minister of Finance

Speculation and Vacancy Tax Outcomes

Comparing data from SVT tax years helps show the effect that the tax has had on property owners and informs policy analysis.

Exemptions

Top 10 Exemptions Claimed: 2018 – 2020				
Exemption Claimed:	2018 Count:	2019 Count:	2020 Count:	2019 to 2020 Change:
Principal residence	1,292,851	1,301,200	1,317,400	16,200
Occupied by a tenant	356,307	363,356	373,847	10,491
Recently acquired or inherited	18,178	21,311	24,525	3,214
Construction or renovation	15,326	14,859	17,216	2,357
Property with no residence	11,920	10,859	-	-10,859
Rental restrictions	5,591	5,194	4,581	-613
Death of an owner	3,030	3,389	4,107	718
Vacant new inventory	2,054	3,943	3,687	-256
Phased development	1,933	2,254	2,353	99
Other exemptions	9,930	7,991	8,892	901
Total	1,717,120	1,734,356	1,756,608	22,252

In all three years of the tax, 75% of all exemptions claimed was principal residence, followed by 21% for occupied by a tenant. Many property owners also claimed the recently acquired or inherited and construction or renovation exemptions.

Property owners could no longer claim the property with no residence exemption after 2019. Of owners that claimed the exemption in 2019:

- 60% selected other exemptions in 2020, such as construction or renovation, vacant new inventory or phased development;
- 20% were no longer exempt in 2020, resulting in approximately \$11 million of revenue; and
- 19% are no longer on title for the property (i.e., they sold their property).

Tax Credits

Tax Credits (millions)						
	2018		2019		2020	
Owner Type:	BC Credit:	Income Credit:	BC Credit:	Income Credit:	BC Credit:	Income Credit:
B.C. Resident	\$3.16	\$0.05	\$3.30	\$0.09	\$4.68	\$0.25
Other Canadian	-	\$0.04	-	\$0.05	-	\$0.03
Foreign Owner	-	\$0.67	-	\$1.73	-	\$1.50
Satellite Families	-	\$0.88	-	\$2.01	-	\$1.34
Other	-	-	-		-	\$0.06
Total	\$3.17	\$1.64	\$3.30	\$3.94	\$4.69	\$3.18

There are two tax credits that are available for the speculation and vacancy tax: a tax credit for B.C. residents (BC Credit) and a tax credit for other owners (Income Credit). SVT tax credits are non-refundable: if a tax credit amount is greater than the tax owing, the tax liability becomes \$0.

The Income Credit total amount increased significantly from 2018 to 2019 to reflect the tax rate for those owners increasing from 0.5% to 2%. The BC Credit increased from 2019 to 2020 to reflect that more BC residents were liable for SVT in 2020.

Property Owners

“Exempt” are owners who do not pay any tax. This can occur if the owner qualifies for an exemption on all of their properties, or if the owner has enough tax credits to offset the tax assessed on any properties that do not qualify for exemptions.

“Non-exempt” are owners who pay some amount of tax on a property (taxpayers). Corporations, trusts, and partnerships with multiple interest holders are assigned a singular owner type for reporting purposes.

The “Other” category represents owners that have not yet been assigned an owner type, often because they are corporations, trusts and partnerships and the declaration does not contain enough information to assign an owner type or the owner has not declared.

Residential Property Owners: 2018				
Owner Type:	Exempt:	Non-Exempt:	Total:	Total by Owner Type (%):
B.C. Resident	1,364,653	2,322	1,366,975	94
Other Canadian	25,950	1,487	27,437	2
Foreign Owner	18,699	4,597	23,296	2
Satellite Family	17,789	2,614	20,403	1
Other	12,902	168	13,070	1
Total	1,439,993	11,188	1,451,181	100

Residential Property Owners: 2019				
Owner Type:	Exempt:	Non-Exempt:	Total:	Total by Owner Type (%):
B.C. Resident	1,382,358	2,270	1,384,628	95
Other Canadian	25,234	1,464	26,698	2
Foreign Owner	18,982	2,106	21,088	1
Satellite Family	17,427	1,458	18,885	1
Other	7,593	63	7,656	1
Total	1,451,594	7,361	1,458,955	100

Between 2018 and 2019, the number of property owners in SVT designated areas grew by 0.5% (7,774).

Residential Property Owners: 2020				
Owner Type:	Exempt:	Non-Exempt:	Total:	Total by Owner Type (%):
B.C. Resident	1,400,757	3,423	1,404,180	95
Other Canadian	24,872	1,547	26,419	2
Foreign Owner	17,930	1,594	19,524	1
Satellite Family	17,083	1,482	18,565	1
Other	7,074	134	7,208	1
Total	1,467,716	8,180	1,475,896	100

Between 2019 and 2020, the number of property owners in SVT designated areas grew by 1% (16,941).

Non-Exempt Property Owners: 2018 to 2020						
Owner Type:	2018		2019		2020	
	#	%	#	%	#	%
B.C. Resident	2,322	21	2,270	31	3,423	42
Other Canadian	1,487	13	1,464	20	1,547	19
Foreign Owner	4,597	41	2,106	29	1,594	20
Satellite Family	2,614	23	1,458	20	1,482	18
Other	168	1	63	1	134	2
Total	11,188	100	7,361	100	8,180	100

Between 2018 to 2020, the number of non-exempt property owners decreased by 27% (3,008). Over the same period, the number of non-exempt BC resident property owners increased by 47% (1,101) and the number of non-exempt foreign owner and satellite family property owners decreased by 57% (4,135).

There was an increase of non-exempt BC residents from 2019 to 2020 (1,150). This increase was mostly attributable to the expiry of the land without residence exemption.

The instance of non-exempt foreign owners and satellite families decreased between 2018-2020 by 52% (3,329). The data shows that foreign owners and satellite families rented or sold their properties in response to the tax, which suggests that foreign owners and satellite families changed their behaviours either in full or in part in response to the SVT.

Declared Properties

“Declared Properties” are properties for which there is at least one owner who has declared or for which at least one owner has paid tax.

“Not exempt” are properties with at least one owner who must pay or has paid some amount of tax, net of credits (i.e., a taxpaying property).

“Exempt” are properties for which no declared owner owes tax on the property.

Where possible, corporations, trusts, and partnerships are assigned an owner type based on their interest holders.

“Mixed” are properties that have multiple owners which do not all belong to the same category.

“Other” are properties that have not yet been assigned an owner type, often because they are corporations, trusts and partnerships and the declaration does not contain enough information to assign an owner type, or the owner has not declared.

Declared Properties by Owner Type: 2018				
Owner Type:	Exempt:	Non-Exempt:	Total:	Total by Owner Type (%):
B.C. Resident	983,372	1,678	985,050	91
Other	29,037	161	29,198	3
Other Canadian	15,538	833	16,371	2
Foreign Owner	15,154	3,246	18,400	2
Mixed	15,257	1,155	16,412	2
Satellite Family	12,847	1,847	14,694	1
Total	1,071,205	8,920	1,080,125	100

Declared Properties by Owner Type: 2019				
Owner Type:	Exempt:	Non-Exempt:	Total:	Total by Owner Type (%):
B.C. Resident	997,987	1,676	999,663	92
Other Canadian	15,958	840	16,798	2
Foreign Owner	14,804	1,413	16,217	2
Other	25,210	76	25,286	2
Satellite Family	13,403	989	14,392	1
Mixed	13,208	657	13,865	1
Total	1,080,570	5,651	1,086,221	100

Declared Properties by Owner Type: 2020				
Owner Type:	Exempt:	Non-Exempt:	Total:	Total by Owner Type (%):
B.C. Resident	1,017,332	2,682	1,020,014	93
Other Canadian	16,348	925	17,273	2
Other	19,165	232	19,397	2
Foreign Owner	14,206	1,087	15,293	1
Satellite Family	13,558	977	14,535	1
Mixed	13,329	653	13,982	1
Total	1,093,938	6,556	1,100,494	100

During the period for which SVT data are available (2018-2020), the number of declared properties grew by 1.9% (20,369).

Non-Exempt Properties: 2018 to 2020			
	2018	2019	2020
Number of Non-Exempt Properties	8,920	5,651	6,556
Average Value of Non-Exempt Properties	\$1,465,232	\$1,141,297	\$1,148,332

Between 2018 to 2020, the number of non-exempt properties decreased by 27% (2,364). Over the same period, the average value of non-exempt properties decreased by 22% (\$316,901).

Non-Exempt Properties by Property Type: 2018							
	BC Resident:	Other Canadian:	Foreign Owner:	Satellite Family:	Mixed:	Other:	Total:
Condominium	872	478	1,813	743	428	98	4,432
Detached Home	592	260	1,012	867	540	39	3,310
Townhouse	181	88	386	231	175	11	1,072
Other Residential	33	7	35	6	12	13	106
Total	1,678	833	3,246	1,847	1,155	161	8,920

In 2018, 50% of all non-exempt properties were condominiums, followed by detached homes at 37%, townhouses at 12% and other residential at 1%. The Other Residential category includes vacant land.

Non-Exempt Properties by Property Type: 2019⁵							
	BC Resident:	Other Canadian:	Foreign Owner:	Satellite Family:	Mixed:	Other:	Total:
Condominium	921	472	902	487	274	37	3,093
Detached Home	531	257	301	359	285	20	1,753
Townhouse	163	103	199	nr	nr	6	701
Other Residential	61	8	11	nr	nr	13	104
Total	1,676	840	1,413	989	657	76	5,651

In 2019, 55% of all non-exempt properties were condominiums, followed by detached homes at 31%, townhouses at 12% and other residential at 2%.

Non-Exempt Properties by Property Type: 2020							
	BC Resident:	Other Canadian:	Foreign Owner:	Satellite Family:	Mixed:	Other:	Total:
Condominium	964	488	696	457	224	32	2,681
Detached Home	567	228	194	346	284	21	1,640
Other Residential	980	112	70	53	56	174	1,445
Townhouse	171	78	127	121	89	5	610
Total	2,682	925	1,087	977	653	232	6,556

⁵ Data has been suppressed (denoted by “nr” for “not released”) to prevent possible instances of residual disclosure of personal taxpayer information. In order to protect taxpayer privacy, a minimum of 5 entities per cell is required in order for the data to be released. In some cases, a cell that contains 5 or more entities has also been marked as “nr” to ensure that a final total cannot be used to reveal a suppressed number.

In 2020, 41% of all non-exempt properties were condominiums, followed by detached homes at 25%, other residential at 22% and townhouses at 9%. The other residential category increased substantially due to the land without residence exemption expiring at the end of 2019.

Changes to 2018 Non-Exempt Properties in 2019		
Property Status:	Number (#):	Percentage (%):
Remains Non-Exempt	3,315	37
Occupied by Tenant	2,971	33
No Longer on Title (sold)	1,422	16
Principal Residence	808	9
Other Exemption	393	4
Other	11	0
Total	8,920	100

In 2019, 37% of all taxpaying properties from the 2018 tax year remained non-exempt; 33% were claimed as occupied by tenant (i.e., the owner rented the property); 16% had a different owner on title (i.e., sold); and 9% of these non-exempt properties were claimed as a taxpayer's principal residence (i.e., the owner moved into the property).

Changes to 2018 Non-Exempt Properties in 2019 – Foreign Owners and Satellite Families		
Property Status:	Number (#):	Percentage (%):
Occupied By Tenant	2,483	39
Remains Non-Exempt	1,991	31
No Longer on Title (sold)	1,036	16
Principal Residence	609	10
Other Exemption	272	4
Other	7	0
Total	6,398	100

In 2019, 31% of all foreign and satellite family-owned non-exempt properties from the 2018 tax year remained non-exempt. The remaining (69%) changed their behaviour (i.e., claimed another exemption or sold) and were exempt.

Changes to 2019 Taxpaying Properties in 2020		
Property Status:	Number (#):	Percentage (%):
Remains Non-Exempt	2,999	53
Occupied by Tenant	1,036	18
No Longer on Title (sold)	910	16
Principal Residence	474	8
Other Exemption	219	4
Other	13	0
Total	5,651	100

In 2020, 53% of all taxpaying properties from the 2019 tax year remained non-exempt; 18% were claimed as occupied by tenant (i.e., the owner rented the property); 16% had a different owner on title (i.e., sold); and 8% of these non-exempt properties were claimed as a taxpayer's principal residence (i.e., the owner moved into the property).

Changes to 2019 Non-Exempt Properties in 2020 – Foreign Owners and Satellite Families		
Property Status:	Number (#):	Percentage (%):
Remains Non-Exempt	1,525	50
Occupied By Tenant	629	20
No Longer on Title (sold)	551	18
Principal Residence	256	8
Other Exemption	107	3
Total	3,069	100

In 2020, 50% of all foreign and satellite family-owned non-exempt properties from the 2019 tax year remained non-exempt. The remaining (50%) changed their behaviour (i.e., claimed another exemption or sold) and were exempt.

SVT Revenues⁶

B.C.'s 2021/22 First Quarterly Report, published in September 2021, included a forecast of \$80 million for the SVT for fiscal year 2021/22. Actual revenues from the SVT have declined over time as many property owners subject to the tax have sold their properties or changed their behaviour to qualify for an exemption.

Average Amount of SVT Revenues			
Owner Type:	2018	2019	2020
B.C. Resident	\$2,578	\$2,331	\$2,945
Other Canadian	\$3,610	\$3,469	\$3,543
Foreign Owner	\$5,482	\$16,343	\$15,617
Satellite Family	\$6,931	\$17,573	\$16,782
Other	\$7,514	\$34,385	\$20,104

SVT assessed and paid includes tax assessed on non-exempt owners from received declarations plus amounts received from owners who have not declared. The increase in SVT paid by foreign owners and satellite families is consistent with the tax rate change from 0.5% to 2% in 2019 for these types of owners.

Taxpayer - Average SVT Property Value (million)			
Owner Type:	2018	2019	2020
B.C. Resident	\$1.14	\$1.00	\$1.13
Other Canadian	\$1.25	\$1.17	\$1.10
Foreign Owner	\$1.47	\$1.18	\$1.13
Satellite Family	\$1.93	\$1.25	\$1.21
Mixed	\$1.51	\$1.16	\$1.16
Other	\$1.71	\$1.79	\$1.09

Between 2018 to 2019, the average SVT property values for all owner types decreased, except for other owners, which trended slightly higher. Between 2019 to 2020, the average SVT property values for all owner types decreased, except for B.C. Residents, which trended higher by 13.3%. This decrease is mostly due to assessed values decreasing year over year and due to owners of high valued properties being more likely to change their behaviour.

⁶ "SVT Revenue" is tax assessed on received declarations plus amounts received from owners who have not yet declared.

SVT Revenue by Owner Type: From 2018 to 2020 (millions)				
Owner Type:	2018	2019	2020	Total
B.C. Resident	\$6.2	\$5.6	\$11.2	\$23
Other Canadian	\$5.5	\$5.2	\$5.7	\$16.4
Foreign Owner	\$25.6	\$34.7	\$25.6	\$85.9
Satellite Families	\$18.6	\$26.2	\$25.6	\$70.4
Other	\$1.4	\$2.7	\$4.9	\$9
Undeclared	\$7.4	\$11.4	\$7.6	\$26.4
Total	\$64.7	\$85.8	\$80.6	\$231.1

Between 2018 to 2020, there was approximately \$231 million in SVT revenues. The majority of SVT revenue was from foreign owners with 37% (\$85.9M) and satellite families with 31% (\$70.4), for a combined total of 68% (\$156.3M). The SVT revenue from B.C. residents amounted to 10% (\$23M) and other Canadians amounted to 7% (\$16.4M). These figures show that non-B.C. residents are paying most of the SVT.

SVT Revenue by Region: 2018 to 2020 (millions)					
Regional District:	2018	2019	2020	Total	Revenue by Regional District (%):
Capital	\$4.3	\$7.4	\$7.2	\$18.9	8
Central Okanagan	\$3.5	\$4.7	\$4.6	\$12.8	6
Fraser Valley	\$0.6	\$1.1	\$2.2	\$3.9	2
Metro Vancouver	\$55.7	\$71.8	\$65.5	\$193.0	84
Nanaimo	\$0.6	\$0.8	\$1.1	\$2.5	1
Total	\$64.7	\$85.8	\$80.6	\$231.1	100

In 2018, there was \$65 million in SVT revenue. Metro Vancouver Regional District accounted for 86%, followed by the Capital Regional District with 7% and the Central Okanagan Regional District with 5%.

In 2019, there was \$86 million in SVT revenue, an increase of 33% compared to the previous year. Metro Vancouver Regional District accounted for 84%, followed by the Capital Regional District with 9% and the Central Okanagan Regional District with 6%.

In 2020, there was \$81 million in SVT revenue, a decrease of 6% compared to the previous year. Metro Vancouver Regional District accounted for 81%, followed by the Capital Regional District with 9% and the Central Okanagan Regional District with 6%.

Revenues Allocated for Housing

Under the *Special Accounts Appropriation and Control Act*, revenue collected from the SVT must be spent on housing affordability initiatives in the regional district where it is collected. Any SVT revenue received by the government with respect to properties within a regional district that includes a specified area are to be used to acquire, construct, maintain or renovate housing or shelter, as well as support other housing-related activities.

Revenue collected from the SVT is directed into the Housing Priority Initiatives (HPI) Special Account, which is used to help create affordable housing solutions in the designated areas. Funding for the HPI Special Account is also generated through the *Property Transfer Tax Act*. For the purposes of the HPI Special Account, the Ministry must keep the information considered necessary to advise the Minister of Finance of the total of the amounts received by the government, in each fiscal year of the government, in respect of each regional district that includes a specified area.

BC Housing is the primary recipient of funds from the HPI Special Account, but also receives other funding to support government's investments in housing affordability. The Province is providing \$1.8B in annual funding to BC Housing in 2021/22, and \$1.7B in 2022/23. Funding from HPI Special Account is used to support many of housing-related programs mentioned in the 30-Point Housing Plan and the government's annual budgets.

BC Housing Total Expenditures⁷ in Regional Districts (millions)			
Regional District:	2018/19	2019/20	2020/21
Capital	\$113.3	\$135.4	\$131.6
Central Okanagan	\$66.3	\$52.2	\$60.5
Fraser Valley	\$58.4	\$85.3	\$68.4
Metro Vancouver	\$647.3	\$594.3	\$686.4
Nanaimo	\$49.3	\$38.6	\$42.1
Total	\$934.6	\$905.8	\$989.0

Source: BC Housing

Speculation and Vacancy Tax Administration

The initial undertaking of the SVT administration was a significant project. The SVT is administered using existing resources within the Ministry of Finance.

⁷ Total Expenditure includes initiatives that are under construction or in development and all other direct costs incurred to provide subsidized housing including all costs that directly contribute to units (capital renewal projects, one-time grants, operating subsidies/rental assistance to societies/tenants).

In 2018, a public information campaign, including information translated into multiple languages, was conducted using both traditional media (e.g., inserts, newspapers) and digital media platforms. Since then, the SVT website information has been translated so that instructions are available for non-English speaking taxpayers. Additionally, the SVT website was designed with accessibility experts, so that it is accessible by screen readers, and TaxAid BC offers support to persons with disabilities through Disability Alliance BC.

To facilitate a simple, flexible and user-friendly experience, the Ministry sends declaration letters to residential property owners by mail and has made the declarations process available online. Property owners receive their declarations throughout January and February. All required declarations must be completed by March 31. If owners are not exempt, they must pay the tax by the first business day in July (e.g., July 4 in 2022). The Ministry provides the public with access to information and support to seek tax information, complete declarations and claim exemptions for the SVT in a variety of ways and in multiple languages.

To communicate with taxpayers, the Ministry uses eTaxBC, a free and secure 24/7 online B.C. government application that provides taxpayers with access to a variety of convenient online services for several provincial taxes and fees. All information entered into eTaxBC is encrypted at the time of entry. Taxpayers, and their representatives can use eTaxBC to:

- file tax returns;
- make payments for taxes or other fees;
- access and update account information and history;
- designate someone, such as an adult son/daughter, spouse, family member, accountant or notary to the account, to complete the declaration and exemption process; and,
- correspond with Ministry staff.

Taxpayer Contact Service

Several resources have been put in place for property owners to request help with any SVT related issues. Since implementation, the Ministry established a call centre and e-mail support services to help taxpayers resolve issues.

The Ministry's dedicated SVT call centre helps property owners throughout the declaration process, including the completion of their declaration form(s). The call centre provides these services in multiple languages. In addition, taxpayers can access Telephone Device for the Deaf (TDD) services for the hearing impaired. The call centre triages calls, with Tier 1 of the call centre responding to simple questions or requests and Tier 2 responding to complex tax scenarios (i.e., owners with multiple properties that were occupied in various means), so that property owner taxpayers get the support needed based on the complexity of their inquiry.

	2018 Tax Year	2019 Tax Year	2020 Tax Year
Calls received – Tier 1	365,800 received; 185,565 answered	254,216 received; 217,304 answered	188,703 received; 160,634 answered
Calls Received – Tier 2	182,878 received; 92,929 answered	20,961 received; 18,714 answered	17,773 received; 15,721 answered

	2018 Tax Year	2019 Tax Year	2020 Tax Year
Tier 1 – Average time per call	10:06 (min:sec)	4:57 (min:sec)	5:58 (min:sec)
Tier 2 – Average time per call	5:13 (min:sec)	8:57 (min:sec)	8:30 (min:sec)

Between mid-January and March 31 each year, the call centre is open from 8:00 AM to 8:00 PM (Pacific Standard Time), Monday to Sunday, excluding statutory holidays.

From April to early January each year, the call centre is open from 7:30 AM to 5:00 PM (Pacific Standard Time), Monday through Friday, excluding statutory holidays.

Declaration Process

Declaration support is provided for taxpayers, including seniors, non-English-speaking taxpayers, corporations, trustees, individuals, as well as any other homeowners who may need help throughout the declaration process.

The declaration process was simplified for the 2019 tax year for the majority of property owners by creating two separate declaration streams – one for individuals, and one for corporations, trusts, and other more complex ownership structures. By creating two streams, owners that chose the individual declaration stream were asked fewer questions and only questions related to their ownership type.

The process for declaring on behalf of deceased owners on the property title, and executors on the property title, was also improved. For the 2019 tax year, the declaration form was changed to be clearer in handling the legal complexities associated with these types of owners.

A standardized process was created for applying for the consideration of contiguous properties as single property owners were able to choose an applicable exemption for a “first” property, and then, when filing for a contiguous property, they were able to link with the first property in the declaration. In addition, improvements to data were made to identify deceased joint tenant owners.

Declaration Forms

Property owners need to receive their declaration letter to complete their declaration forms. Declaration letters are sent out every January and February to a taxpayer’s mailing address on file

with BC Assessment. All declaration letters contain detailed instructions regarding the declaration process and should be delivered to all property owners by the end of February.

Declaration letters contain a taxpayer's Letter ID, Declaration Code and other information needed to complete the declaration process. The declaration letter also includes a list of all the residential properties that a respective property owner taxpayer owns in the five regional districts.

	2018 Tax Year	2019 Tax Year	2020 Tax Year
Declarations Required	1,621,705	1,635,187	1,666,839
Declarations Received	1,608,150	1,619,160	1,643,430
Completions:			
Online	1,428,556	1,438,456	1,493,687
Tier 1	81,426	153,690	121,979
Tier 2	61,859	3,044	3,643
By an acknowledged third party	33,051	20,936	21,860
Service BC	3,258	3,032	1,859
Total	1,608,150	1,619,160	1,643,028*

The Ministry is authorized through the SVTA to collect information from property owners through the annual declaration to administer the tax. The declaration process and form aim to collect the information identified below to help prevent SVT evasion:

- Every corporation, business partnership or trust is required to provide the same information on their interest holders as is required from individual owners;
- Corporations that do not have corporate interest holders are required to verify this in their declaration;
- Foreign corporations are required to provide a federal Business Number or certify that they do not have a Business Number;
- Canadian spouses of foreign owners are required to provide their Social Insurance Number (SIN); and,
- The corporate interest holder, beneficial owners, and partnership interest form was embedded directly into the declaration.

A (SIN) is also requested as part of the declarations process to verify tax residency, qualify for the principal residence exemption, as well as identify different taxpayers. In October 2019, the Office of the Information and Privacy Commissioner (OIPC) completed a formal inquiry (Order F19-37), which stated that the SIN provides an important link between a property owner and their residency status for tax purposes. Canadian citizens are required to provide their SIN to complete the declaration process and form.

Despite COVID-19, over 90% of property owners completed their declaration on time by March 31, 2021 for the 2020 tax year (the third year of the tax). There were no penalties for property owners who were unable to declare by the deadline and support remains in place to ensure property owners can successfully declare and claim any eligible exemptions.

Interest on Unpaid Taxes

	2018 Tax Year	2019 Tax Year	2020 Tax Year
	<i>As of 2019</i>	<i>As of 2020</i>	<i>As of 2021</i>
Total Interest	\$1,590,074	\$6,449,313	\$5,153,938
Number of Taxpayers	6,280	9,792	18,226

Section 86 of the SVTA imposes interest on the unpaid amount from the date the tax was payable until the date of payment on owners who fail to pay the SVT by the due date. Interest has been incurred by taxpayers who have paid their SVT late (after the annual due date) or who have not yet paid.

The previous table shows the amount of interest charged on unpaid taxes as of December 31 of the first 3 years of the tax, and the number of taxpayers who have incurred interest. However, due to the nature of the tax whereby taxpayers may change the status of their declaration for up to three years, the figures for the 2019 and 2020 tax years will continue to change.

Liens for Unpaid Taxes

	2018 Tax Year	2019 Tax Year	2020 Tax Year
Total Active Liens	1,767	2,102	1,171

When an owner does not pay SVT (either the owner has declared and a debt is generated or the owner does not declare and is assessed), the administrator may register a lien against the real property or personal property of that person. The table shows the number of liens still active as of April 1, 2022, for each year.

Refunds of Overpayment

	2018 Tax Year	2019 Tax Year	2020 Tax Year
	<i>As of 2019</i>	<i>As of 2020</i>	<i>As of 2021</i>
Refunds Sent	\$1,051,308	\$1,087,010	\$502,993
Number of Taxpayers	367	173	52

Taxpayers may receive a refund of an overpayment after a reassessment or change to a declaration (e.g. a taxpayer determines after filing a declaration that they are eligible for an exemption), or a refund of a payment reduced after an appeal. There are two mechanisms for refunds: (1) crediting the taxpayer's account; or (2) issuing a cheque to the taxpayer. Because the amount overpaid must first be applied on amount owing by the taxpayer, the table above only shows refunds where cheques were issued. Refunds are paid from the consolidated revenue fund. Refunds have been decreasing year over year as taxpayers have become more familiar with the online declaration.

Audit and Compliance

The Ministry's focus has been on implementing the tax, and work is underway to improve inspections and audits. Audit work relies on a number of sources, including tips from taxpayers, Canada Revenue Agency and provincial government staff across a variety of ministries.

With three years of declaration data, alongside other property tax data (e.g., Home Owner Grant data), the Ministry can refine and improve its processes for SVT inspections and audits. In addition, tax administration software compiles data and identifies anomalies that are subsequently reviewed by the Ministry's audit and compliance team.

Audits and Recoveries

	2018 Tax Year	2019 Tax Year	2020 Tax Year
Audits	1,214	681	212
Audit Recoveries	\$1,232,846	\$2,170,074	\$325,438

"Audits" are where the administrator chooses a file, conducts audit work and makes a reassessment as necessary. An "audit" represents one taxpayer with respect to one property and tax year. The administrator uses a risk-based approach to assist in determining the audits to be performed.

"Audit recoveries" are recoveries that were identified through audits, including imposition of a higher tax rate (0.5% to 2%), recalculation of BC income, or ineligibility for a claimed exemption.

Technical Report

An Assessment of the Effectiveness of the
Speculation and Vacancy Tax Act in Addressing
Rental and Ownership Affordability and Foreign
Investment in Housing

Report to the
British Columbia Ministry of Finance

by

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&
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Stada Analytics

FINAL REPORT

May 12, 2022

Introduction

Objective

The purpose of this report is to answer four questions raised by the British Columbia Ministry of Finance to aid it in addressing the requirements of the *Speculation and Vacancy Tax Act (SVTA)* to evaluate the effects of the Act on housing affordability and foreign ownership in the specified areas on BC.⁸ The Ministry has asked for the following:

1. A presentation of rental and ownership affordability in the specified areas and how this has evolved over the previous decade.
2. An assessment of housing vacancy and foreign investment in the specified areas prior to the introduction of the SVTA with a comparison to other areas in British Columbia and Canada.
3. A discussion of the economic theory explaining: i) how vacancy taxes affect housing markets, focusing on rents and prices; and ii) how foreign investment can affect housing market affordability and its relationship to vacancy rates.
4. Data analysis of the estimated effects of the SVTA, based on comparing the evolution of vacancy, foreign investment, and affordability measures in the specified areas with changes in other areas in British Columbia and Canada.

This report is structured around these four topics.

⁸ For this analysis the specified areas are linked to Statistics Canada (StatsCan) definitions of Census metropolitan areas (CMAs) and Census agglomerations (CAs), see <https://www12.statcan.gc.ca/Census-recensement/2016/ref/dict/geo009-eng.cfm>. Of the population of the Vancouver CMA, 99.4% is in municipalities that are SVTA specified areas; for the Victoria CMA, 98.6%; for the Kelowna CMA, 82.1%; for the Abbotsford-Mission CMA, 99.8%; for the Chilliwack CA, 84.4%; and for the Nanaimo CA, 90.6%, details in Appendix A. Data definition and availability issues with housing prices for the Abbotsford-Mission CMA and Chilliwack CA mean that we exclude those areas in the affordability analysis. A casual survey of data reveals that these areas have patterns very similar to those for the Vancouver CMA but higher levels of owner and renter affordability than is the case for the Vancouver. CMA.

Summary

1. Rental and Ownership Affordability in the Specified Areas Prior to the SVTA

An analysis of available data demonstrates very clearly that from 2010 to 2018, prior to the introduction of the SVTA, owners and renters faced challenges with affordability in the specified areas. Estimated annual owner payments for mortgage costs, property insurance and taxes, and heating for a new buyer were a greater share of median family income than is considered affordable. This owner affordability challenge worsened between 2015 and 2018. When compared to other similar Census metropolitan areas (CMAs) and Census agglomerations (CAs) elsewhere in Canada and to CAs in BC not in the specified areas, affordability has been worse in the specified areas and become comparably less affordable since 2015. Between 2015 and 2018 this burden worsened by 11.6 percentage points in the specified areas, compared to 3.6 percentage points elsewhere in BC, 3.4 percentage elsewhere in Canada, and by 6.4 percentage points in the included cities in Ontario (ON).⁹

For renters, affordability, as measured by a ratio of rent to income, exceeded the 30 percent of income threshold, which is treated as the limit of reasonable affordability, throughout this period.¹⁰ This burden worsened between 2014 and 2017. Rising by 11.7 percentage points in the specified areas, compared to 0.9 percentage elsewhere in Canada, and by 3.2 percentage points in the included cities in ON.¹¹ Rent-to-income ratios in the specified areas were lower in 2014 than they were in the comparison cities in Ontario. This gap shrunk or was eliminated between 2014 and 2017 as rental burdens in the specified areas worsened at a faster pace than they did elsewhere.

⁹ Non-specified areas in BC are Kamloops and Prince George CAs. The included areas in Ontario are the Barrie, Belleville, Guelph, Kitchener-Waterloo, Ottawa, Peterborough, and Toronto CMAs. Non-ON areas are Calgary, Halifax, Montreal, Quebec City, Regina, Saint John, Saskatoon, and St. John's CMAs.

¹⁰ Rents are the average 1-bedroom rents for vacant units as reported by CMHC. Income is median income for persons not in Census families for Statistics Canada.

¹¹ For rental, the specified areas in BC are the Kelowna, Vancouver and Victoria CMAs. The included areas in Ontario are the Barrie, Kingston, Kitchener-Waterloo, Ottawa, Peterborough, and Toronto CMAs. Non-ON areas are Calgary, Halifax, Montreal, Quebec City, Regina, Saint John, Saskatoon, and St. John's CMAs. Then rental analysis using vacancy rates does include the Nanaimo CA among the specified areas and the Kamloops and Prince George CAs among the non-specified areas. The Belleville CMA is also added.

2. Housing Vacancy and Foreign Investment in the Specified Areas Prior to the SVTA

In 2016, the specified areas had lower rates of rental apartment vacancy, more units not occupied by usual residents than was the case for comparable CMAs and CAs outside BC. Vacancy rates for 1-bedroom units in apartment buildings in the specified areas in 2017 was 0.9 percent, compared with 2.5 percent elsewhere in BC (Kamloops and Prince George), 3.4 percent outside of BC, and 1.7 percent in ON. At the same time that vacancy rates for units in purpose built rental apartment buildings in the specified areas have fallen when compared to vacancy rates elsewhere, the estimated overall number of units left vacant is higher than in other areas in BC and Canada. The former describes units owned with the intention to rent them for income, so a low vacancy rate creates challenges for tenants: low vacancy rates result in faster rent appreciation, and it is more difficult for renters to find units. The latter includes individual condominium apartments, row houses, and detached dwellings, where ownership need not be based on expected rental income, so that high rates reflect owner decisions to keep the units vacant for future personal use, as short-term rental accommodation (Airbnb), or as investment in future price appreciation. This type of vacancy worsens affordability as the housing stock is not used to house local residents. The difference between the vacancy rate in apartment buildings where all units are rented and the overall rate of vacancy is highest in the specified areas, which suggests a much larger number of units purposefully left vacant than elsewhere in Canada.

There is not a time series of foreign ownership as Statistics Canada Canadian Housing Data Program has data on non-resident ownership beginning in 2018, and then only for BC, Nova Scotia (NS), and ON.¹² These data show not only a higher level of non-resident ownership in the specified areas than in the other jurisdictions, but that the rate of non-resident ownership is highest for new condominium (strata) apartment units, so that a larger part of the new supply intended to alleviate stress in housing markets has been absorbed by buyers who do not live in

¹² Statistics Canada defines non-resident ownership as property owned by persons whose primary place of residence is not Canada. This definition will include as “non-residents” Canadian citizens who own property in Canada, but whose primary residence is outside of Canada. This differs from a common understanding of “foreign” and as those who are not “Canadian persons”, i.e., neither a citizen or a permanent resident.

Canada. Finally, CMHC surveys of condominium apartments also finds higher rates of ownership by non-residents in the specified areas than elsewhere in Canada.

3. How Vacancy Taxes and Foreign Investment Affect Prices, Rents and Housing Market Affordability

Theory suggests that taxes on vacant units will increase the units available for purchase and occupancy or for rent.¹³ The limited empirical research on the effect of vacancy taxes, primarily in France, does find the introduction of taxes increases occupancy, especially in areas with a shortage of units affordable to low-income households.

There is both theoretical and empirical research on the effects of foreign capital inflows on local house prices. Theoretical work finds that when foreign owned units are vacant at higher rates than those owned by domestic households, renters are unambiguously worse off. Even though local sellers of properties receive higher prices for their units because of the foreign demand, this does not offset the greater loss of welfare to renters.¹⁴ Empirical work shows that house prices are higher in cities or areas that receive foreign capital inflows compared to control cities and neighborhoods.¹⁵ As with demand in general, the distorting effect of these inflows will be greater where because of geography or land use policy, the supply of the new units is more restricted.¹⁶

¹³ See Segu, M. (2020). The impact of taxing vacancy on housing markets: Evidence from France. *Journal of Public Economics*, 185.

¹⁴ Favilukis, J.Y. and S. Van Nieuwerburgh, Stijn. 2021. Out-of-Town Home Buyers and City Welfare. *Journal of Finance*, published on-line May 2021: <https://doi.org/10.1111/jofi.13057>.

¹⁵ See Badarinza, C. and T. Ramadorai. (2018). Home away from home? Foreign demand and London house prices. *Journal of Financial Economics*, 130(3); Ari, A., Puy, D. and Y. Shi. (2020). Foreign Demand and Local House Prices: Evidence from the US. IMF Working Paper WP/20/43.; Pavlov, A. and T. Somerville. (2020). Immigration, Capital Flows and Housing Prices. *Real Estate Economics*, 48 (3), 915-949: <https://doi.org/10.1111/1540-6229.12267>.

¹⁶ Saiz, A. (2010). The Geographic Determinants of Housing Supply. *Quarterly Journal of Economics*, 125 (3), 1253-1296: <https://www.jstor.org/stable/i27867500>.

4. Data Analysis of the Estimated Effects of the SVTA

An analysis of the effects of the SVTA in addressing affordability is complicated by the COVID-19 pandemic. Government interventions through income support and eviction moratorium and the disruption in the normal home-work location patterns mean the 2020 and 2021 data are a noisy signal. For instance, purchases of property by foreign buyers in 2020 and 2021 could be lower just because they were unable to enter Canada, rather than because of the taxes introduced in the Act.

With this important caveat, a preliminary analysis of the data finds that conditions for owners and renters improved in the specified areas when compared with the reference CMAs and CAs. Using the owner payment as a percent of income measure, the percentage fell by 8.0 percentage points in the specified areas, compared to a 2.3 percentage point decline elsewhere in BC, a drop of 2.2 percentage elsewhere in Canada, and fell by 1.9 percentage points in the included cities in ON. The difference is not as stark with the rent to income burden and there is less improvement. The average burden in the included specified areas rose by 0.2 percentage points between 2018 and 2020. Outside of BC, the increase was 1.1 percentage points, but it fell by 0.1 percentage points in ON, mainly on the back of a 10.7 percentage point decline in Barrie (excluding Barrie, the burden rose by 2.0 percentage on average among the ON cities).

Data on rental units among condominium apartments by CMHC shows an 18,000 unit increase in 2019 and 2020, compared with an annual value between -1,000 and 5,000 for 2011-2018. The number of units among single family, townhouse and duplexes, and condo units that were not exempt from the SVT fell by 42 percent from 2018 to 2020, an estimated additional 15 percent may have moved from being units that would have been subject in 2017 had the SVTA been in place to being exempt in 2018.

Regression analysis of the data on movement between not exempt and exempt suggests that the largest effects have come from the increase in the tax rate on foreign and satellite family owners from 0.5 to 2.0 percent. Very generally, this pushed foreign owners of vacant units to get tenants at rates of up to twice that for other owners of non-exempt properties. Properties that were not

exempt and were owned by satellite families were more likely to have transitioned to being exempt from the SVT by becoming a principal residence for a BC resident.

The difference in transaction prices pre- vs post-SVTA in the specified areas in BC between neighbourhoods with more owners subject to the SVT and those without was between 3 and 9 percent lower depending on the property type and the definition of a neighbourhood with a high percentage of not-exempt units. This is a decline relative to neighbourhoods with lower incidence of non-exempt properties, so prices still rose in these areas, but by less than the control group.

1. Rental and Ownership Affordability in SVTA Specified Areas Prior to 2018

Summary

Housing affordability in the SVTA specific areas worsened between 2010 and 2018 both for renters and owners. For owners this is true uniformly between the highlighted metropolitan areas in British Columbia designated specified areas in the SVTA (Vancouver, Victoria, Kelowna, and Nanaimo are highlighted here) and comparison areas in British Columbia and across Canada.¹⁷ The rental data shows difficult conditions for renters, with affordability deteriorating in the years leading up to 2018. By 2018 all markets in specified areas except for the Nanaimo CA would be considered unaffordable by the criteria defined below.

For purposes of simplicity and consistency, the affordability criteria used here are “percentage of income” measure. These are shown in all affordability figures by a dotted line at annual owner payments at 32 percent of income and annual renter payments at 30 percent of income.¹⁸ No defining criteria is shown for house price to income ratios, though some use 3.0 as an affordable ratio. Nearly all British Columbia areas, and nearly all Canadian metro areas outside of Atlantic Canada, exceed this ratio over the analysis period. Percentage of income measurements are sensitive to the choice of housing, assumed down payment (for owners), and choice of type of income and for what group, for instance, individuals vs families). In looking across metropolitan areas and over time, the focus should be on the comparison between the metropolitan area of interest and other areas that are comparable in size and how this comparison changes over time, rather than specific payment or rent to income levels in the metropolitan area itself. Uniformly, affordability for both renters and owners in the BC CMAs and CAs in the specified areas of the SVTA worsened between 2015 and 2018. For owners in 2018, all areas exceed the 32 percent payment to income ratio based on the house price and income measures used here.

¹⁷ The Abbotsford-Mission CMA and Chilliwack CAs are also specified areas in the SVTA. However, data challenges with consistent house price measures in these areas because they have historically been included in the Fraser Valley CREA price series, meant that they are not included in this analysis. Their price, rent, and affordability patterns mimic those of the Vancouver CMA, but both owner and renter burdens are lower, though still high compared to other areas in British Columbia and Canada of similar size.

¹⁸ Mortgage underwriting uses gross debt service (GDS), mortgage and related house payment such as property taxes and heat, relative to income, as a key parameter in the lending decision. 32 percent is a standard level for this ratio. BC Housing uses 30 percent of income as affordable for rental housing. A fuller discussion of the definition of housing affordability is presented in Appendix B.

These ownership affordability measures are based on estimated prices for a benchmark single family detached unit and median household income and need to be understood as a means to characterize affordability and do not reflect what a first-time homebuyer is actually spending for what type of unit.¹⁹ For rental affordability we use average rent in 1-bedroom apartments in rental apartment buildings and the median income of individuals less likely to be homeowners. The burden measures are sensitive to the choice of income used, but this hierarchy is similar across cities so more critical than the level itself is the comparison with other areas and the consistent pattern of worsening of conditions in SVTA specified areas in the period leading up to 2018.

Home Ownership Affordability Prior to the SVTA

To measure the affordability of home ownership over time and across cities we need standardized measures of income, a consistent house type, and similar mortgage choices and expenditure profiles. For house prices we use the Canadian Real Estate Association's (CREA) single family benchmark price, which is designed to reflect a common bundle of housing services thus providing a standardized measure of the quantity housing embodied in the house price measure across geographies.²⁰ This creates some challenges as CREA does not cover all Canadian CMAs and excludes smaller CAs in British Columbia.²¹ Income measures are challenging as they vary in how well they match by tenure choice and household size to different types of housing units: single person household income is more compatible with 1-bedroom rental or condo unit and income measures for Census families (household with at least one minor child present), especially those with two adults, should be a better match with home ownership. For this section we use Statistics Canada's median total income, all Census families measure, as it is a better match for an analysis of home ownership affordability that uses single family detached house prices (77 percent of Census families not in band housing in 2016 were

¹⁹ The data used to calculate rental and owner affordability is presented in Appendix F.

²⁰ <https://www.crea.ca/housing-market-stats/mls-home-price-index/>.

²¹ For Halifax we use the Brookfield RPS (BRPS) price series (<https://www.rpsrealsolutions.com/house-price-index/house-price-index>) scaling their Halifax benchmark to the CREA data using the ratio of the two for Quebec City in 2020. House price data for Prince George are median sales prices for the area's BC Real Estate Association region adjusted to be consistent with the benchmarks, which unlike the CREA and BRPS statistical methods does not standardize the quantity of housing priced over time, so it is not as fully comparable.

owners).²² Just as other house price measures (2-bedroom condo or townhouse prices) yield different affordability ratios, other measures of income (median household income, individual income, or per capita income) will result in different levels of the affordability ratio for a city. However, as the differences between cities and over time are relatively consistent across different measures of house prices and income, the ranking of affordability, which cities are more or less affordable, and how this ranking changes over time will not differ in any meaningful way if we used other house price and income measures.²³

The data are presented here in groups of similar metropolitan areas based on size and type, with a SVTA specified area matched with other CMAs and CAs outside of BC. These are structured as i) large CMAs, Vancouver compared with Calgary, Montreal, Ottawa, and Toronto); ii) mid-sized CMAs, Victoria compared with Halifax, Kitchener-Waterloo, Quebec City, and Regina; smaller CMAs, Kelowna compared with Barrie, Guelph, Saskatoon, and St. John's; iv) CAs, matching Nanaimo with Belleville, Peterborough, and Saint John; and v) a within BC comparison of the four areas mentioned here compared to the Kamloops and Prince George CAs, both of which are not specified areas. The report uses these groups for most of the figures that compare affordability and housing market measures for the specified areas with those for other BC and Canadian metropolitan areas.

Ownership affordability is especially sensitive to the choice of the income measure. Measurement of income as it relates to house prices for the purposes of affordability is most accurately done by matching incomes of demographic groups with the housing they would reasonably be expected to choose. The nature of this report results in the use of fairly broad income measures, median or average income for broad demographic groups independent of what housing and tenure choices they make and without differentiating between first-time buyers, renters, and others. Overall levels and growth rates may not be representative if some groups are doing notably better than others, i.e., income growth is not uniform across income groups. In this

²² Statistics Canada, Cansim Table 11100009, median total income, all Census families. And Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016226.

²³ Median total income for all households is lower than the figure we use for Census families, so using this for our affordability measure would generate lower measures of affordability in all cities in all years. Condo prices are lower, so using these would generate higher measures of affordability in all cities in all years. However, in both cases the general pattern of which cities are less affordable and how this has worsened over time would not change.

case while overall medians and averages may move together, those of subgroups might not move with the overall representative measures. This is a particular concern in a time of increasing income inequality, so that while incomes might be keeping up with house prices and rents for better off households, they would not for lower income ones. For owners we choose to use median total income for Census families, as this is a reasonable choice for likely first-time buyers or young homeowners.

House Price to Income Ratios

The simplest measure to reconcile prices and income to gauge affordability is the ratio of house prices to household income (house price to income ratio). This measure has the advantage of simplicity, but it excludes the role of mortgage interest rates, mortgage underwriting, and operating costs in ownership by not converting price to a periodic cost of home ownership. These payments, along with other ownership costs, reflect the per period economic burden of ownership, which is more indicative of a household's ongoing ability to shoulder the cost of home ownership and their ability to qualify for a mortgage of sufficient size. The house price to income ratio is still a useful benchmark both for its simplicity and because it sheds light on the challenge to households to accumulate sufficient liquid wealth to make a down payment on a house. The higher the ratio, the greater the share of income needs to be saved and over a longer period to accumulate savings for the down payment, for households not able to benefit from family or other sources of wealth.

The first group of figures (Figures 1A-1E) present the evolution of ownership affordability as measured by the ratio of the benchmark single family house to median income for 2010-18. The SVTA came into force in late November 2018, so for expositional purposes we treat 2018 as a year before the effect of the tax would be seen, at least for ownership, as the prices reflect pricing over the entire year. The house price to income ratio rises over time in the BC CMAs and CAs in the SVTA specified areas. Figure 1A shows that over the entire period this ratio is higher in Vancouver than the other cities, but that after 2014 it worsens in absolute and relative terms. In the cities other than Toronto the ratio is fairly stable. In Figure 1B, Victoria shows the same pattern as Vancouver compared to its reference group, though the ratio is not as high or as different from other CMAs as it is for Vancouver. The pattern is repeated for Kelowna in Figure

1C, though the affordability gap between Kelowna and Barrier, Guelph, Saskatoon, and St. John’s is not as large as was the case for Victoria in Figure 1B. The last comparison with other areas in Canada is between the Nanaimo CA and its reference group in Figure 1D. The pattern is again consistent here, high price to income ratio and clear worsening after 2014. Other patterns in these data are that the ON CMAs and CAs have affordability challenges similar to those in the specified areas, though not as acute, and that as measured by the house price to income ratio affordability is worse in larger metropolitan areas than smaller areas. The data for these figures and all subsequent affordability calculations are presented in Appendix F.

Figure 1E compares the specified areas in BC with two non-specified area CAs, Kamloops, and Prince George. The house price to income ratio is higher in the metropolitan areas that consist principally of SVTA-specified areas than in the two CAs that are not SVTA-specified areas. As in Figures 1A-1D, the house price to income ratio grew after 2014 in the years leading up to the enactment of the SVTA.

Figure 1A House Price to Income Ratio, Larger CMAs

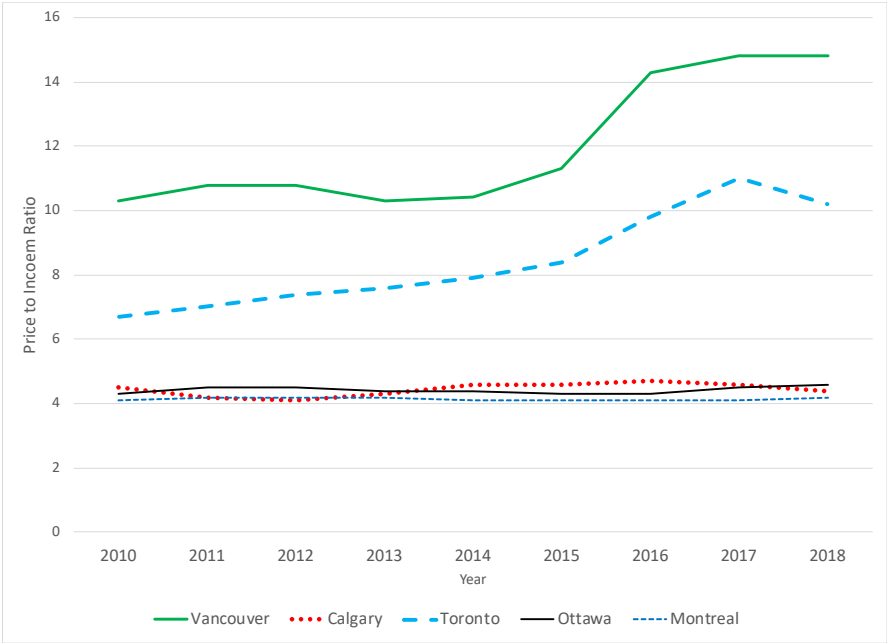


Figure 1B House Price to Income Ratio, Midsize CMAs

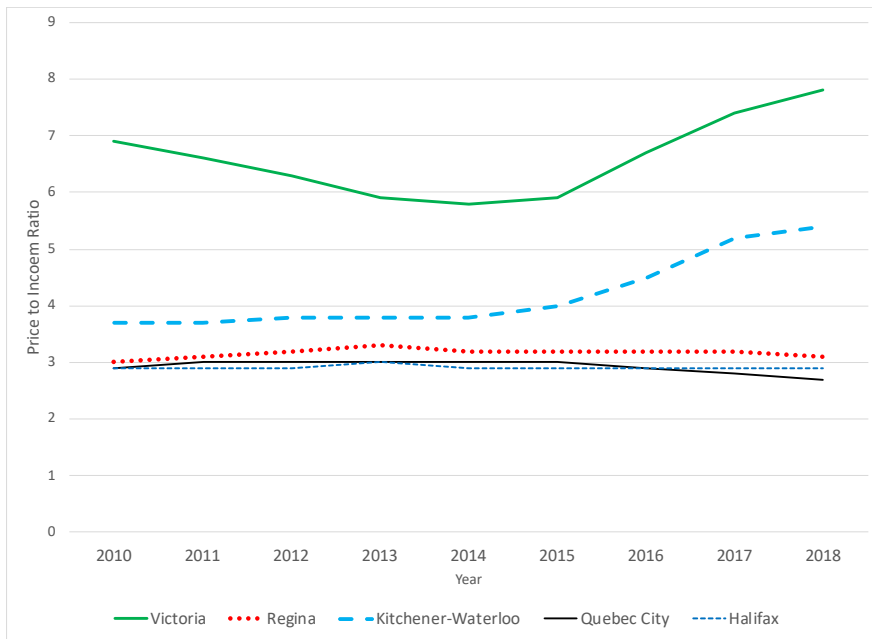


Figure 1C House Price to Income Ratio, Smaller CMAs

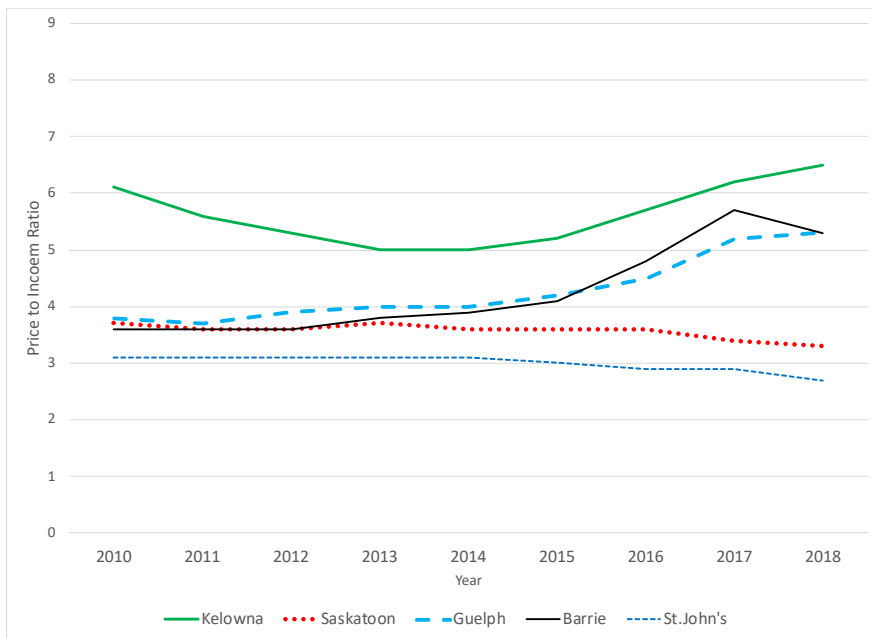


Figure 1D House Price to Income Ratio: Select CAs

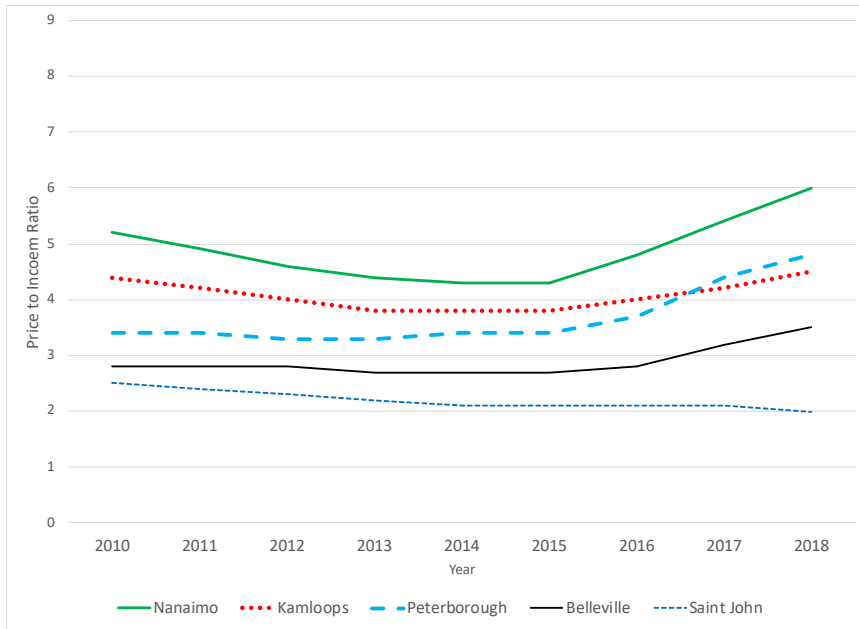
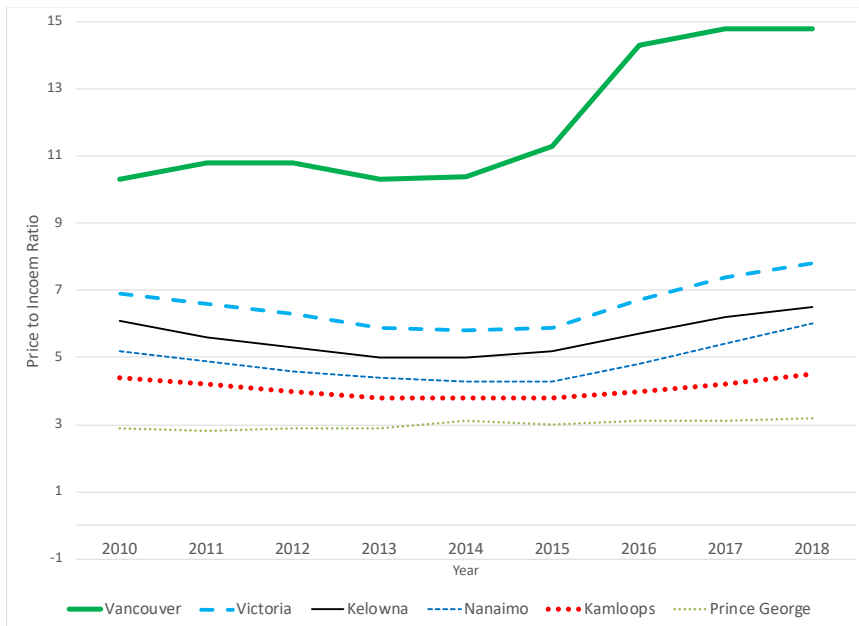


Figure 1E House Price to Income Ratio: BC Select CMAAs and CAs



Sources: Figures 1A-1E. Ratios are single family benchmark house price to median total income for Census families. House prices, Canadian Real Estate Association (CREA) (single family benchmark), Brookfield Real Property Solutions (RPS) for Halifax, and BC Real Estate Association (BCREA) median price for Prince George. Income, median total family income, Census families from StatsCan Cansim Table 1110009. For 2020, the median income measure is estimated using average provincial weekly earnings, Cansim Table 14100223.

House Payment Burden: Annual Payment as a Percentage of Income

The per year cost of home ownership is typically measured by comparing the regular periodic cost of home ownership with incomes. The fullest measure would include all aspects of ownership including mortgage payments, property insurance, property tax, maintenance, and utilities. However, Canadian underwriting criteria for lenders uses a gross debt service (GDS) ratio of mortgage payment, property taxes, and the cost of heating to household income levels. The standard ratio used for an appropriate maximum house payment burden is 32 percent.²⁴ The mortgage is the standard 5-year fixed rate mortgage with an 80 percent loan to value (LTV) ratio, i.e., down payment of 20 percent, using the uninsured mortgage rate and a 30-year amortization.²⁵ Here, we make one adjustment to the standard GDS formula, including property insurance as mortgage contracts require homeowners to carry insurance, making it a necessary cost of annual ownership. As noted above, although we perform these comparisons for a benchmark price and a single median income measure, there are other ways looking at the distribution of income and house prices, but these can only be done with quinquennial Census year micro data for larger CMAs, and we want an annual measure that we can calculate for smaller areas as well.

The mortgage payment calculated for the benchmark single family detached prices using uninsured mortgage rates along with annual estimates of property tax and heating costs are divided by the median family income. Since peaking in 1990 at levels above 13%, the nominal interest rate on Canadian mortgages has been falling fairly steadily, making a mortgage of a given size more affordable to Canadians. This pattern is the same for different interest rates measures including the average rate charged by the chartered banks, which in 2016 held nearly

²⁴ While mortgage insurance is available with a GDS as high as 39 percent for loans with mortgage insurance, which allows for down payments at or below 20 percent of the purchase price (<https://www.cmhc-schl.gc.ca/en/media-newsroom/notices/2021/cmhc-reviews-underwriting-criteria>), 32 percent is the standard quoted by lenders (e.g. <https://www.rbcroyalbank.com/mortgages/budgeting-home-ownership-costs-d.html> and <https://www.ratehub.ca/debt-service-ratios>).

²⁵ Strictly the mortgage amount is the level that gives an LTV of one dollar less than 80% to avoid the requirement for mortgage insurance, which obviates the need to add the mortgage insurance fee.

three quarters of outstanding mortgages in Canada, and the average rates for insured and uninsured mortgages for all mortgage lenders.²⁶

Putting the annual ownership costs together with household income generates the affordability measure that reflects the hurdle for home ownership. Using the combination of the mortgage and other periodic costs described above matched to the price of the benchmark house price annually in each city and dividing this by the median family income measure presented produces the annual burden home ownership can place as a percentage of income. We show these time series below in Figures 2A-2E using the same pattern of CMA and CA selection as above. The burden measure here is intended as a first-year cost, ignoring how a household's income might grow over time.

Figure 1A-1E highlights two important facts regarding home ownership affordability in the BC CMAs and CAs with municipalities that are SVTA specified areas. First, over this entire period the annual cost of owning a single-family house in these BC areas exceeded their reference CMAs and CAs elsewhere in Canada (Figures 2A-2D) and the two smaller CAs in BC that have no SVTA specified areas (Figure 2E). Second, affordability worsened noticeably after 2014 in the CMAs and CAs with the SVTA specified areas (Vancouver, Victoria, Kelowna, and Nanaimo) compared to the comparison groups. By 2018, all markets in the specified areas exceeded the 32 percent affordability threshold. With a 7.5 percent down payment and accompanying mortgage insurance fee, the measure would exceed the 32 percent in Vancouver, Victoria, and Kelowna in all years 2010-2018.

In the aggregate these data tell a clear story of challenges to housing affordability in the BC metropolitan areas and cities. In particular, those regions that are designated as specified areas in the SVTA had greater challenges with affordability. As well, between 2014 and 2018 problems with affordability for first-time homebuyers in these locations worsened both in absolute terms and in relative terms when compared with other CMAs in Canada and select CAs in BC. Prior to 2014 these cities had affordability challenges but the problem with affordability for first time

²⁶ Bank of Canada, Cansim Table 17600689. The average rate was discontinued in 2018. Prior to 2013 the insured and uninsured rates are not reported.

buyers were not getting worse at a rate different from that in the comparison areas. It is in the years following 2014 through 2018 where the data suggest a dramatic change for the worse in absolute and relative terms.

Figure 2A Owner Cost as Percent of Income: Larger CMAs

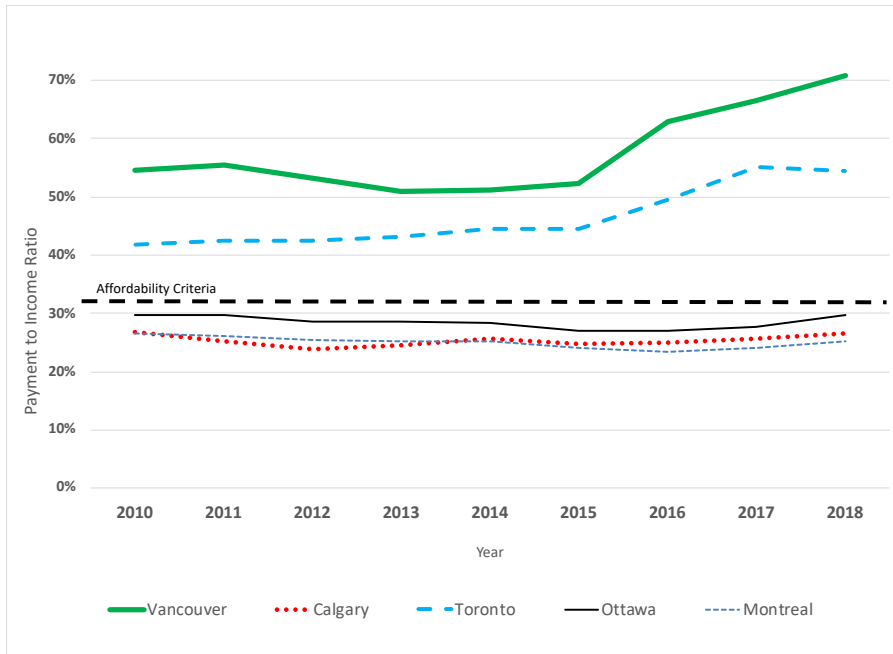


Figure 2B Owner Cost as Percent of Income: Mid-size CMAs

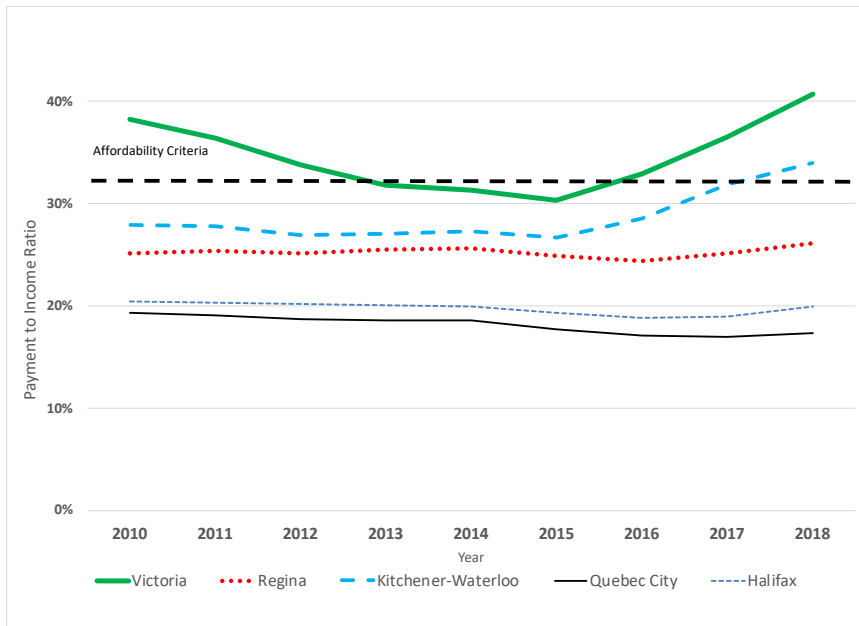


Figure 2C Owner Cost as Percent of Income: Smaller CMAs

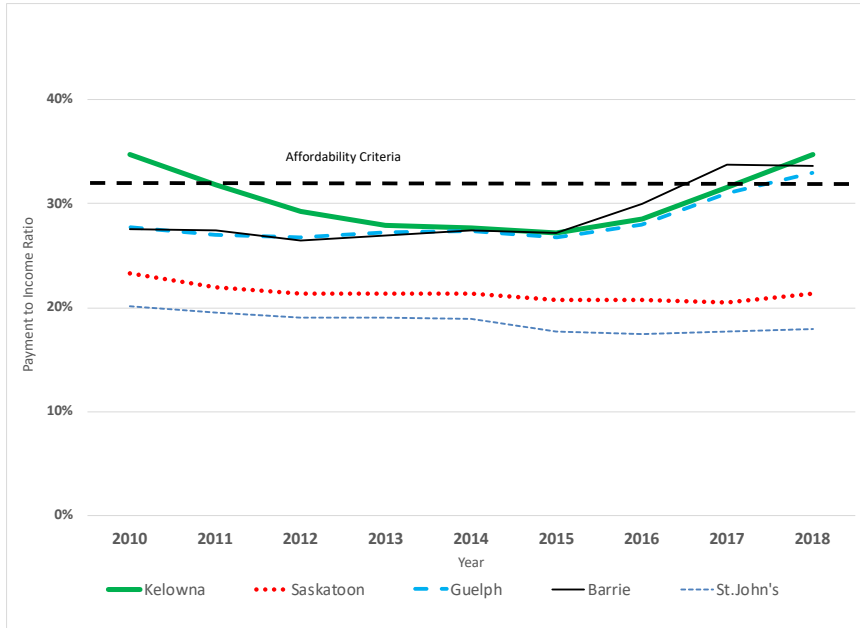


Figure 2D Owner Cost as Percent of Income: Select CAs

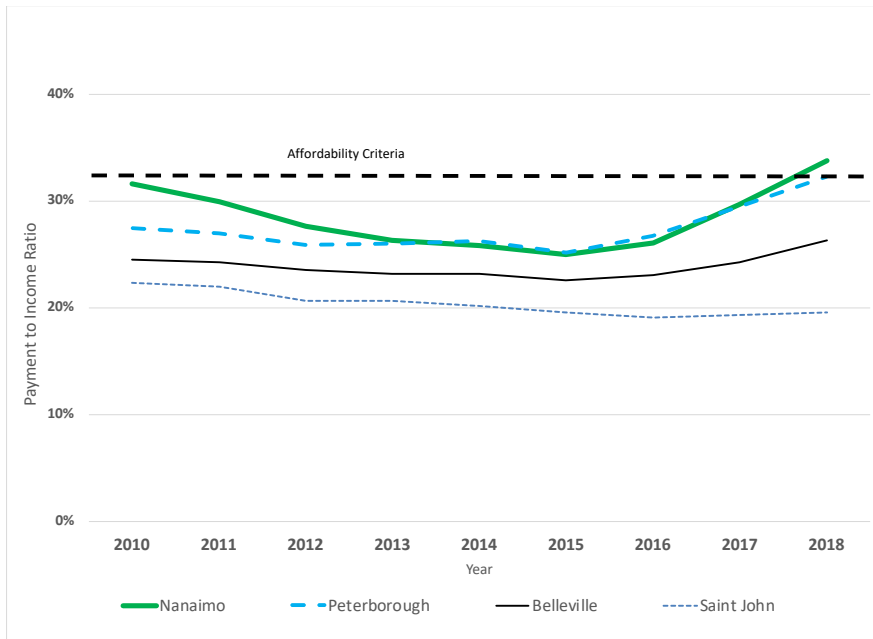
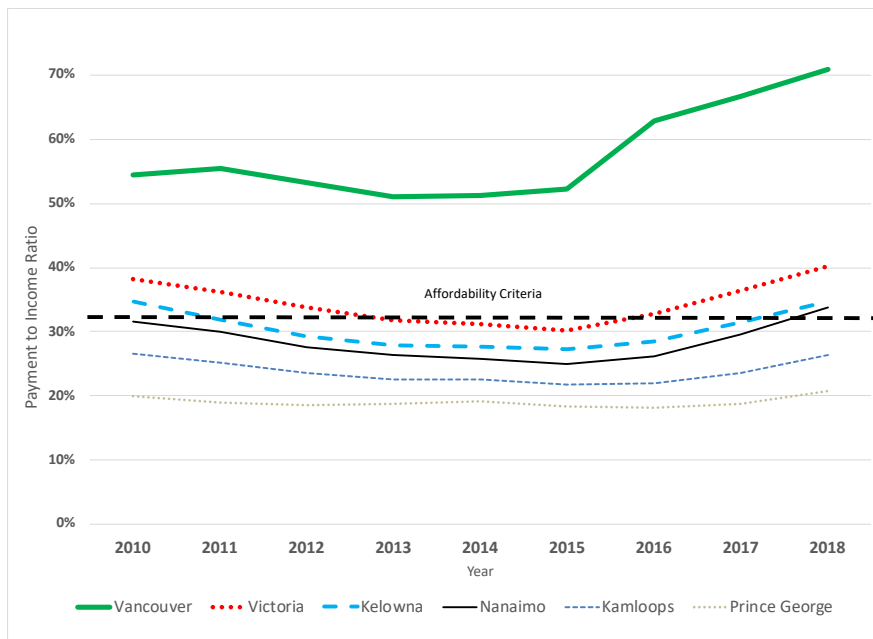


Figure 2E Owner Cost as Percent of Income: Select BC CMAs and CAs



Sources for Figures 2A-2E: calculations of ratio of mortgage and operating costs to median family income. Data sources include CREA (single family benchmark), Brookfield RPS, and BCREA for house price series. StatsCan Cansim Tables 1110009 for median family income, 10100006 for mortgage rates, and 11100222 and 18100005 for owner operating costs. Calculation details are in the appendix.

The affordability challenges can be shown in other ways that generate the same outcomes. Using Census data on 2016 incomes, Stewart and von Bergmann apply Meen and Whitehead’s use of a Lorenz Curve methodology to housing affordability to Canadian data.²⁷ The Lorenz Curve is a graphic presentation and calculated value that shows the extent to which wealth is equally/unequally distributed. They apply it to what percentage of housing is affordable to a given part of the wealth distribution. This can only be done with the quinquennial Census, so we cannot study the evolution of conditions on an annual basis. It is better at showing the distribution of affordability at a given point in time. Stewart and von Bergmann use Census reports of home values rather than a market measure, but their approach shows how Vancouver

²⁷ See <https://doodles.mountainmath.ca/blog/2020/09/28/first-time-buyer-lorenz-curves/> and Meen, G. and C. Whitehead. (2020). *Understanding Affordability: The Economics of Housing Markets*. Bristol, UK: Policy Press.

and Victoria, along with Toronto, had the most unequal distribution of the ability to afford home ownership among principal Canadian CMAs in 2016.

Rental Affordability

Rental affordability is measured as rent payments as a percent of income. This measure is both more straight forward to calculate and less clear than the owner payment as a percent of income measure above. The simplicity is defining affordability based on a straight comparison of rents to incomes. The complication is that average rents paid, which is what is reported consistently across the country and over time, do not adjust immediately with changes in market conditions and do not reflect what someone looking for a unit would expect to pay. Rental leases or provincial rental control rules do not allow adjustments more frequently than once a year. In provinces with rent control (BC, Manitoba (MB), ON, Quebec (PQ), and Prince Edward Island (PEI)) rent increases are capped. If market rent growth exceeds these caps the growth in the average rent paid lag the increase in market or “spot” rents. Even in markets without rent control, rents for existing tenants are often not raised to the prevailing market rent when leases are renewed, so a new tenant would pay more than the prevailing average rent. Thus, when market conditions change, we would not expect rental burdens (the ratio of rents to incomes) to adjust as much as price to income ratios or ownership payments as a percent of income measures because house prices can and do react more quickly to market conditions. A number of websites report advertised rents, but these do not have widespread coverage over multiple years. For more recent years CMHC has begun to report rents for vacant units, which will better reflect market conditions and rents than the overall average, though a small sample size may inhibit the accuracy of analysis using these figures.

Data for this analysis comes from CMHC, for rents, and Statistics Canada for incomes. For rents we use the 1-bedroom apartment rents derived from CMHC’s annual rental market surveys, which in a given year reflect conditions in October of that year. For income, we do not have access to a measure of renter household incomes that allows us to track changes in this measure regularly over time and across CMAs and CAs. Of the available options, median employment income of persons not in Census families seems the best approximation of persons likely to be

renters, particularly of 1-bedroom units.²⁸ The other median income measures in this dataset relate to Census families and thus are less suitable for renters (in 2016, 51% of non-family households are renters vs 23% of Census families).²⁹ As with the estimates of owner income, the choice matters more for the level of the calculation of rent payments as a percent of income rather than to how this percentage varies between cities or over time because of the high degree of correlation. As mentioned in the introduction, for rental burdens we use the definition of affordability as rent not exceeding 30 percent of income, which is the definition of affordability used by BC Housing.³⁰

The rental affordability patterns are more mixed than those for owners. We present these burdens by CMA and CA over time in Figures 3A-3E in the same groupings as shown above for owner affordability. Uniformly the rental burden, as measured here with median total income for persons not in Census families, exceeds the 30 percent affordability threshold and worsened after 2014. Rental burdens in the ON cities included here were the same or exceed those in the BC cities in SVTA specified areas. As well, in Figure 3E, comparing specified and non-specified areas in BC, the rental burden in Kamloops is similar to those in Victoria, Kelowna, and Nanaimo. Nonetheless, the consistency of the patterns and ordering suggest clear affordability challenges for renters in Vancouver, Victoria, Kelowna, and Nanaimo that worsened after 2014.

²⁸ Statistics Canada, Cansim Table 11100009, Median employment income of persons not in Census families

²⁹ Statistics Canada, 2016 Census of Population, Statistics Canada Catalogue no. 98-400-X2016226.

³⁰ A history of this ratio in the US is provided by Herbert, C., Hermann, A, and D. McCue. 2018. Measuring Housing Affordability: Assessing the 30 Percent of Income Standard. Cambridge, MA: Joint Center for Housing Studies

https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Herbert_Hermann_McCue_measuring_housing_affordability.pdf.

Figure 3A Rental Burden (Rent to Income): Larger CMA

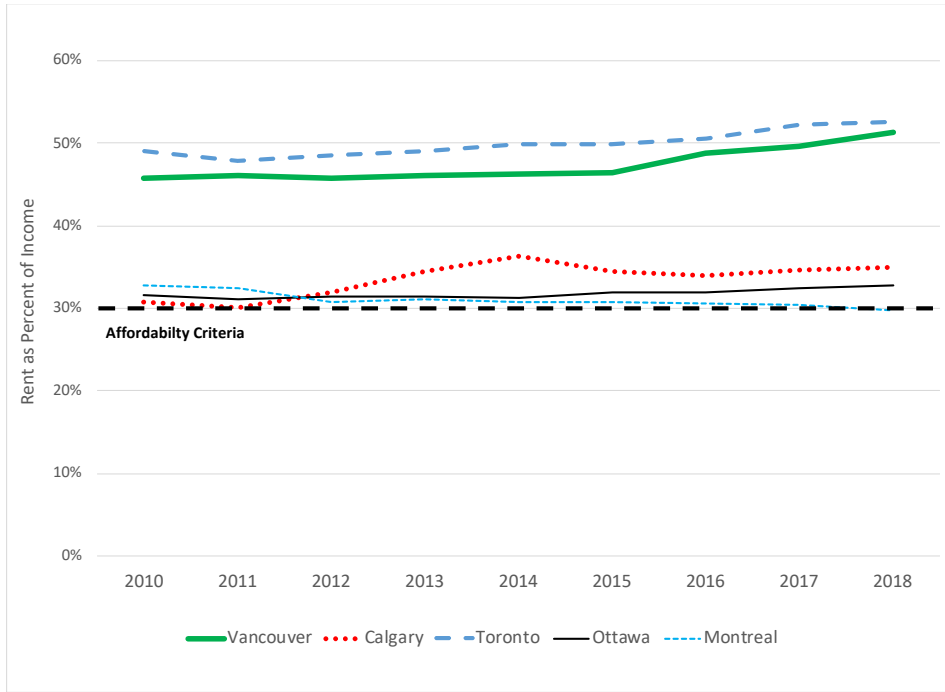


Figure 3B Rental Burden (Rent to Income): Mid-Size CMA

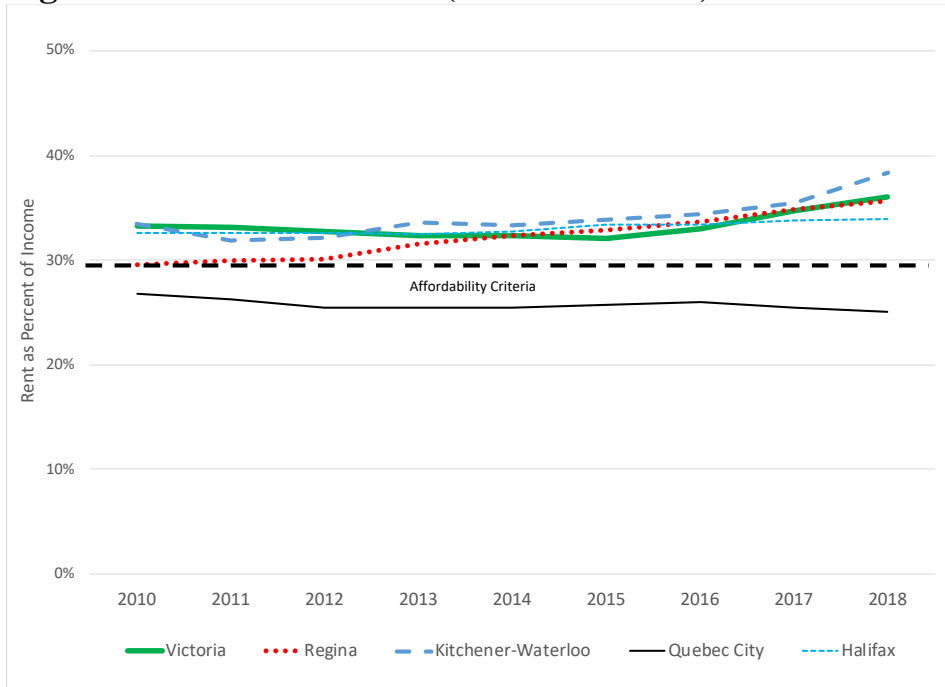


Figure 3C Rental Burden (Rent to Income): Small CMAs

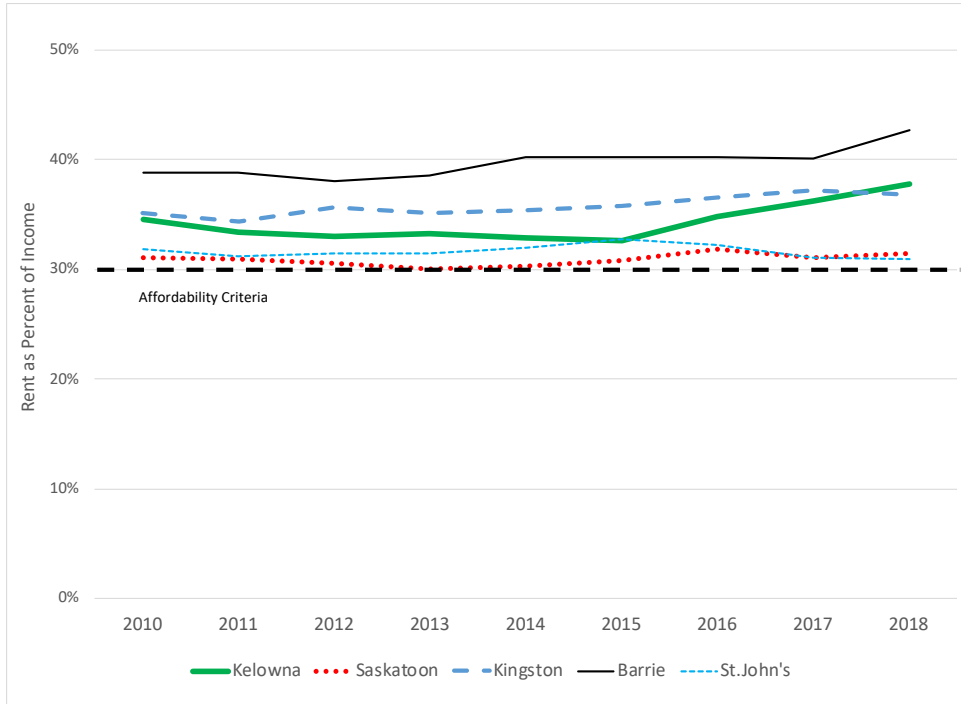


Figure 3D Rental Burden (Rent to Income): Select CAs

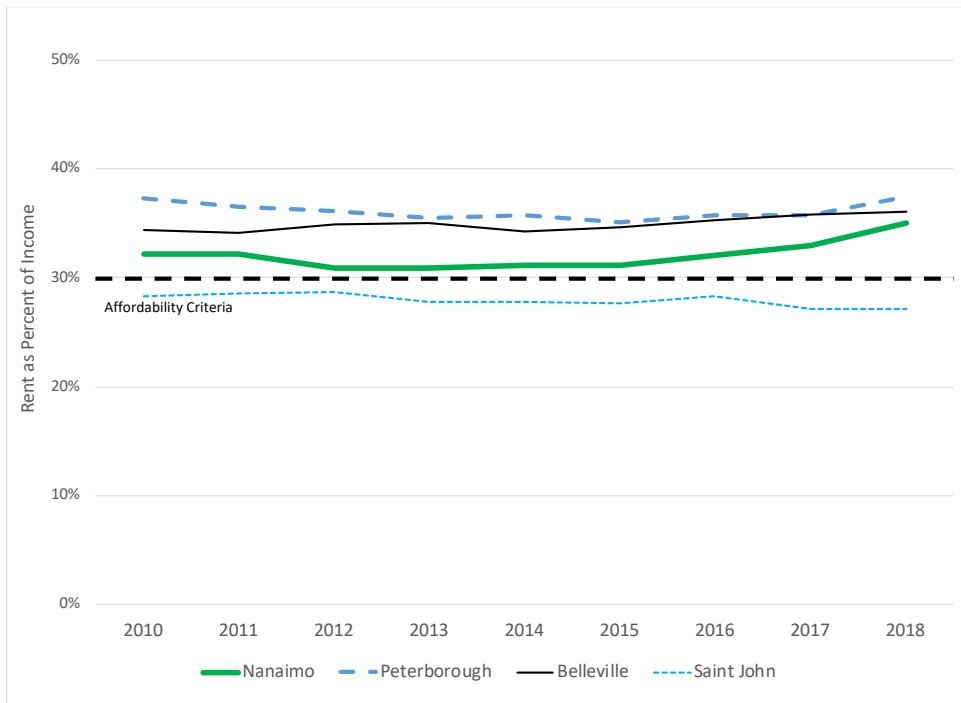
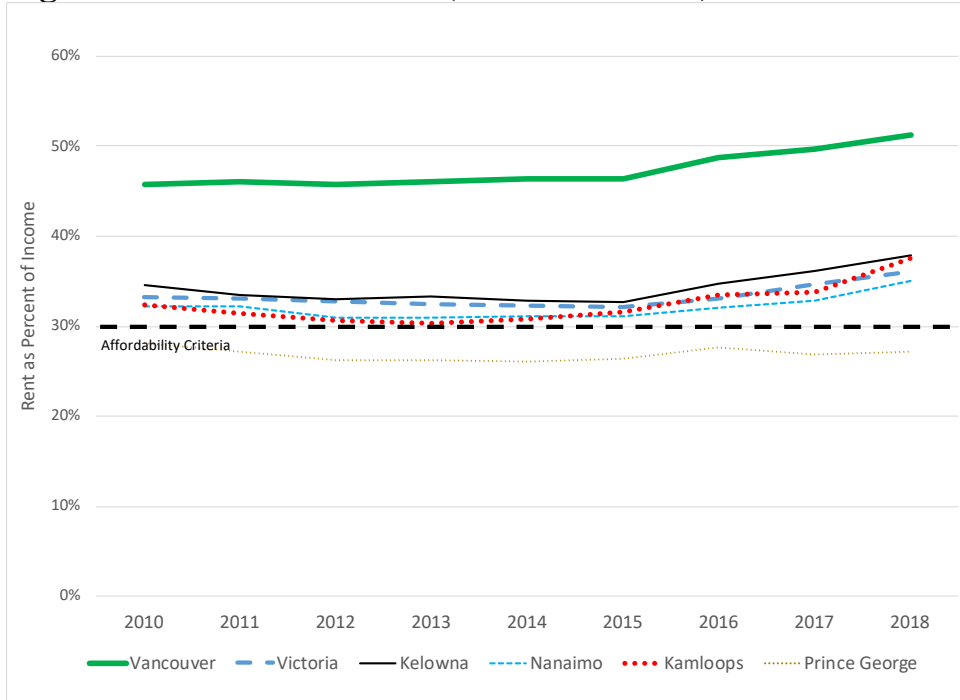


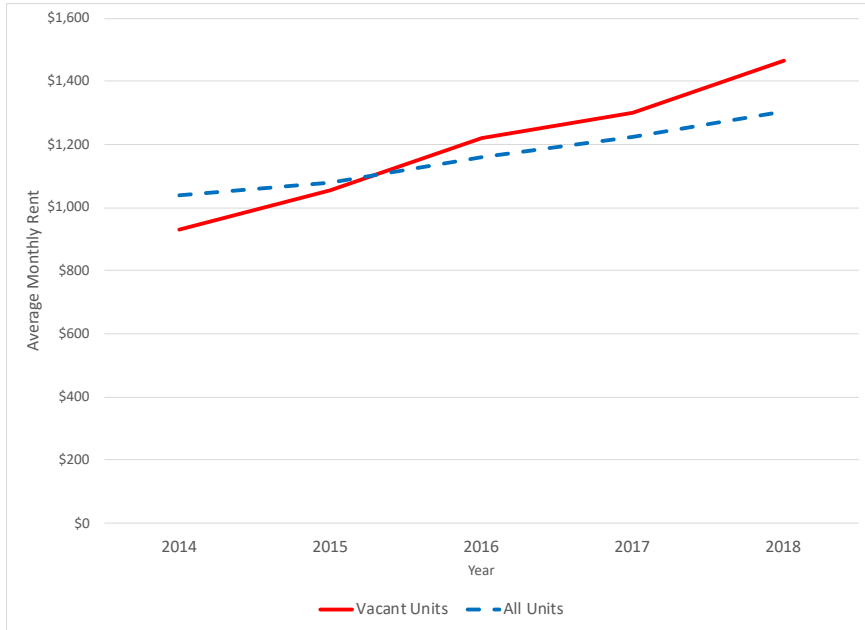
Figure 3E Rental Burden (Rent to Income): BC Select CMAs and CAs



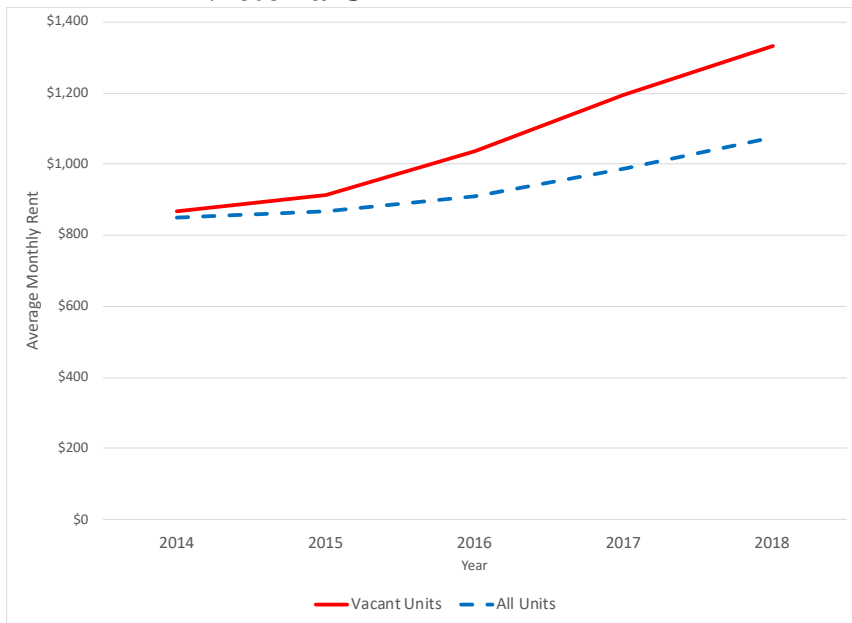
Source for Figures 3A-3E: Rents, average 1-bedroom rents, CMHC rental market surveys, Cansim Table 34100133. Income measure, Cansim Table 11100009, Median employment income of persons not in Census families (Dollars)

These burdens are likely to be understated for individuals and households looking for rental accommodation. The rent data uses average rents, which with rent control and lengthy tenure can cause average rents paid in occupied units to deviate from the rents charged to new tenants for currently vacant or available for lease units. Beginning in 2014, CMHC started to report rents for vacant units. These rents are available for a smaller number of metropolitan areas than the average rent series. Below we compare the average rent series with the rent series for vacant units among one-bedroom units to highlight the differences over the 2014-2018 period. For Vancouver and Victoria, rents for vacant units, i.e., market rents, increased faster than average rents, indicating worsening affordability (See Figures 4A and 4B). The pattern holds for nearly all metropolitan areas where average rents are increase faster than inflation, but are particularly acute in BC cities, so that using average rents for all units understates the degree to which rental affordability is worsening.

**Figure 4A Average 1-Bedroom Rents: Vacant vs All Units
Vancouver CMA**



**Figure 4B Average 1-Bedroom Rents: Vacant vs All Units
Victoria CMA**



Source: CMHC Monthly Rental Market Survey reports: <https://www.cmhc-schl.gc.ca/en/professionals/housing-markets-data-and-research/housing-data/data-tables/rental-market/average-apartment-rents-vacant-occupied>

2A. Housing Vacancy in the Specified Areas Prior to 2018

The data do not allow a specific measure of the ownership patterns targeted by the SVTA. The SVTA has several targets among property owners, including:

- Owners of residential properties that could be occupied by full-time residents but are not.
- Owners who have household members occupying their residential property but for whom a majority of the household's income is earned outside Canada by someone whose tax home is not Canada (the statute's "untaxed worldwide earner" concept).
- Owners who occupy their property, but who are neither Canadian citizens nor permanent residents and who do not qualify for an exemption (such as the general principal residence exemption, which is unavailable to foreign owners) or lack sufficient BC income declared for tax purposes to offset the SVT.

Available data from Statistics Canada from the Canadian Census or CMHC Rental Market Reports do not measure these categories. Understanding the extent of vacancy and ownership in ways consistent with the objectives of the SVTA requires making inferences from these available data. Comparing data from these two sources suggests that BC urbanized areas that include municipalities that are specified areas in the SVTA had vacancy patterns prior to the SVTA consistent with a higher percentage of units that could be rented out being left vacant and not being occupied by local residents than is the case for other cities, while at the same time having extremely low vacancy rates among rental properties. This would be a very problematic combination of not enough supply available to renters with units that could be available not being made available. The data do not show the extent of housing that was purposely kept vacant prior to the passing of the SVTA, but the patterns highlight the concern that this is occurring at levels higher than in most other localities.

Multi-Family Rental Property Vacancy Rates

CMHC annual market reports for individual metropolitan areas provide summary statistics for vacancy rates for rental units in rental apartment buildings and rented condos.³¹ These data do not measure units kept vacant. They measure units available for rent, but vacant for lack of tenants at prevailing rents. For the purposes of the lead-up to the SVTA these data are useful for measuring the extent of a rental unit shortage. Low vacancy rates in rental apartment buildings as surveyed by CMHC highlight a necessary, though not sufficient condition, for units kept vacant to worsen rental affordability. If rental vacancy rates are high, then units kept vacant on purpose should not have a negative effect on housing affordability for current and prospective residents, as the supply of available units already more than exceeds demand.³² It is when the vacancy rate is low, so units are unavailable and there is upward pressure on rents, that units kept vacant or not housing existing residents will have a negative and exacerbating effect on housing affordability.

On a quinquennial basis the Canadian Census identifies units not occupied by usual residents. This includes vacant units along with units occupied by non-Canadian residents and by Canadian residents whose primary place of residence is elsewhere, for instance many students. The Census measure does not distinguish between units purposely kept vacant and those available for lease or sale. Using estimates of the number of these units that are vacant, later in this section we will introduce the concept of a “vacancy gap” as the difference between the Census and CMHC vacancy measures to attempt to identify when observed vacancy is likely to be because of units purposely kept vacant rather than market conditions.

In Figures 5A-5E we show the reported vacancy rates for the period prior to the SVTA. The pre-SVTA period for the vacancy rate data is 2010-2017. The CMHC rental surveys describe conditions in October 2018. As this is after the passage of the SVTA by the BC Legislature, though prior to it obtaining royal assent, it is possible that 2018 numbers may reflect some

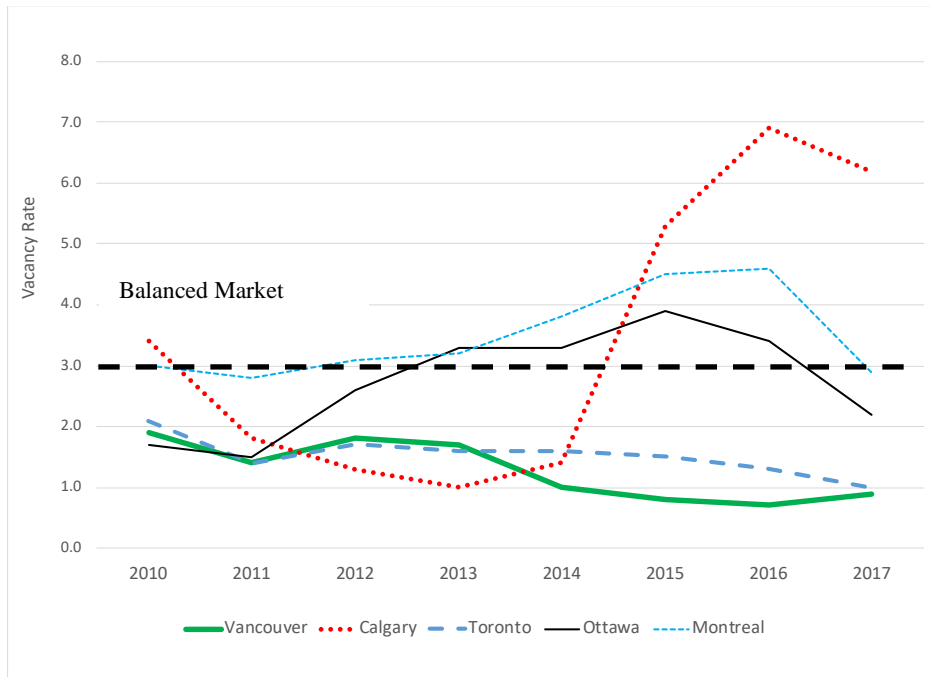
³¹ <https://www.cmhc-schl.gc.ca/en/data-and-research/data-tables/rental-market> and <https://www.cmhc-schl.gc.ca/en/data-and-research/data-tables/secondary-rental-market-selected-metropolitan-areas>

³² One measure of the balanced level of vacancy is the “natural rate of vacancy”, which would be the level at which real market rents are stable. Simple calculations by the authors find these rates to be above four percent.

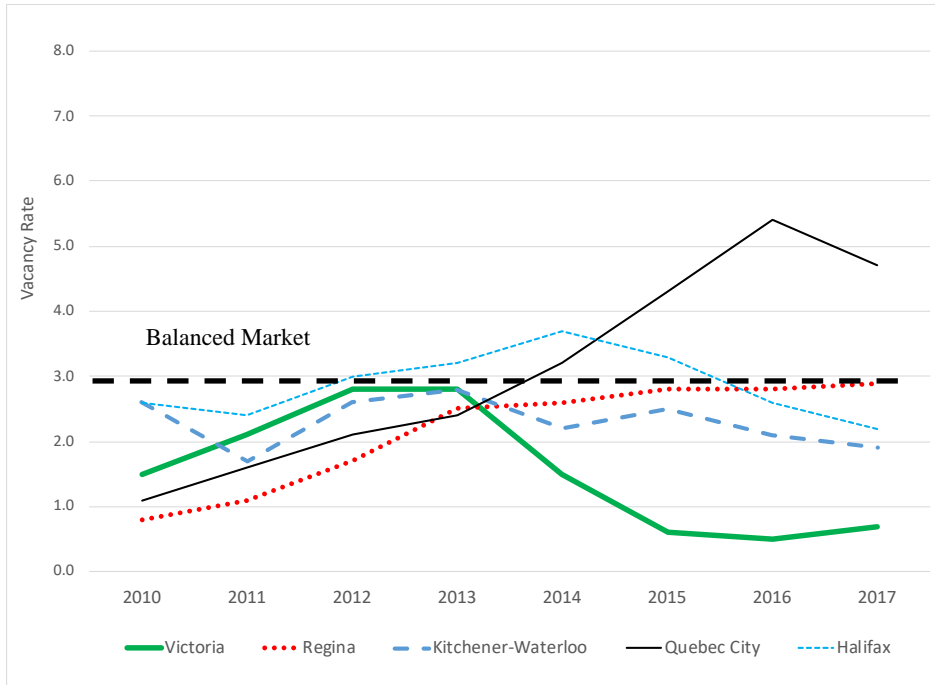
response to the Act. Additionally, the vacancy data below are for all units (bedroom sizes) in structures with at least six rental units.

In general, vacancy rates are lower in the BC specified areas compared to their respective reference groups and below the 3 percent level often used as a simple rule of thumb for a “a balanced” rental market. The exception is Nanaimo, which in the comparison to the non-specified areas within BC in Figure 5E has a consistently higher vacancy rate than the Peterborough CA. The vacancy rates tighten in the CMAs and CAs that are specified areas over the period compared to most, but not all, other areas in Canada. These figures show compelling trends for tight and worsening rental markets for tenants over the decade preceding the passage of the SVTA.

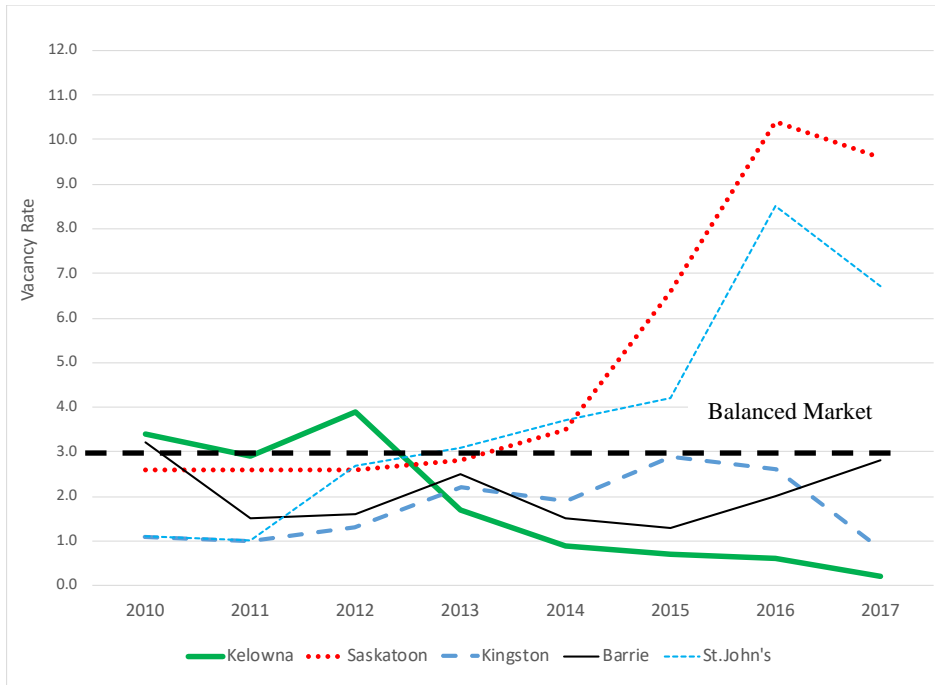
**Figure 5A Average Vacancy Rate – Structures with 6 or More Units
Large CMAs**



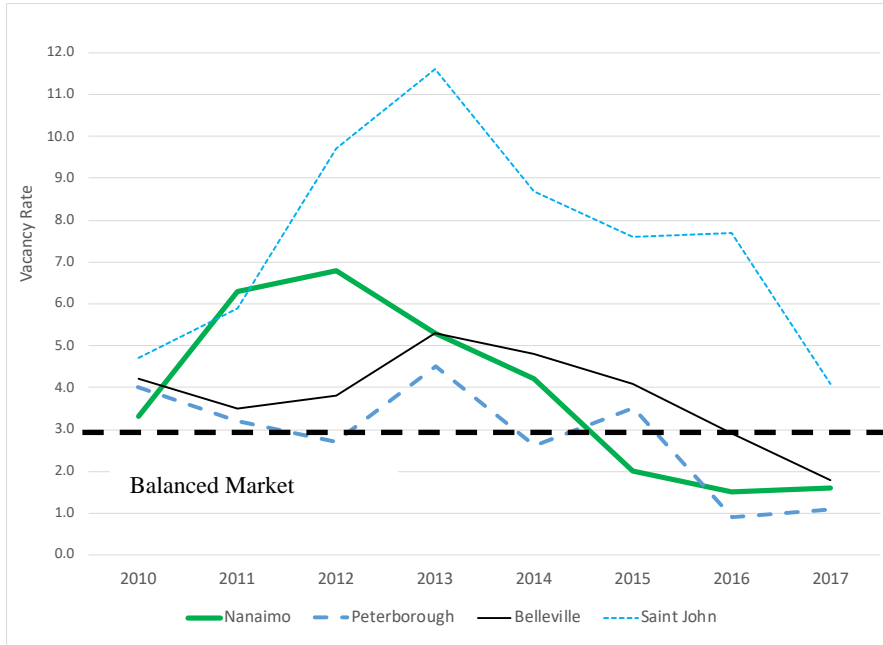
**Figure 5B Average Vacancy Rate – Structures with 6 or More Units
Mid-size CMAs**



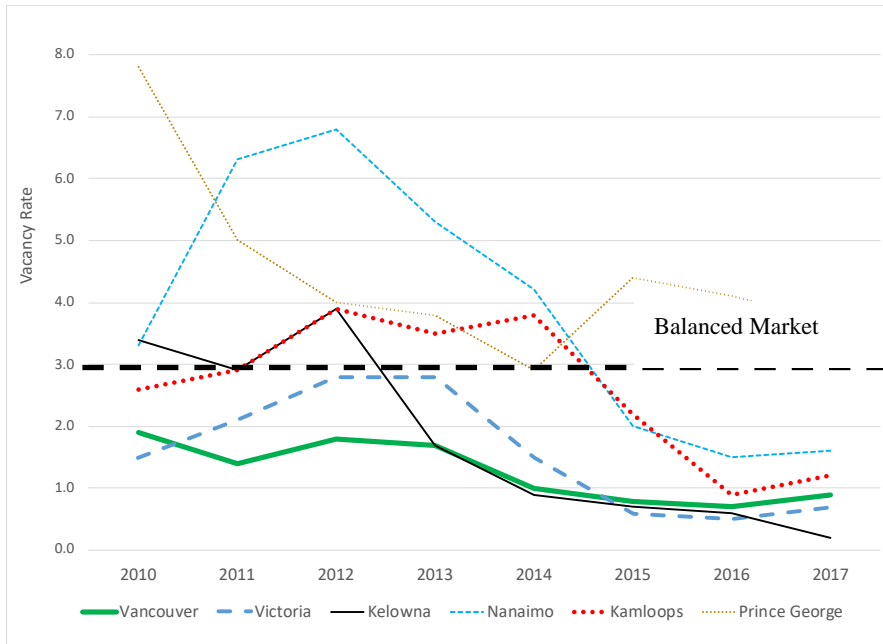
**Figure 5C Average Vacancy Rate – Structures with 6 or More Units
Small CMAs**



**Figure 5D Average Vacancy Rate – Structures with 6 or More Units
Select CAs**



**Figure 5E Average Vacancy Rate – Structures with 6 or More Units
British Columbia CMA's and CAs**



Sources for Figures 5A-5E: CMHC Rental Market Surveys. Available in Cansim Tables 34100127 and 34100128. Vacancy rates, apartment structures of six units and over, privately initiated in CMA's, annually. Based on surveys in October.

Vacancy Gap

The focus of the CMHC data is rental market conditions as faced by tenants using purpose built rental structures, where all units are rented. To estimate the share of units purposely left vacant across Canadian cities, we use the 2016 Census and look at the difference between the share of units in the Census estimated to be vacant and the vacancy rate measured by CMHC, which we term the “vacancy gap”. Statistics Canada reports the total number of dwelling units, the number occupied by “usual residents” and the number of units “not occupied by usual residents” as part of the Census data. Usual residents would be Canadian residents for whom the dwelling unit is their primary residence, so the “not occupied by usual residents” category includes both vacant units and dwelling units occupied by Canadian residents whose primary residences are elsewhere (often students) or non-Canadian persons. Recently CMHC and Statistics Canada have contracted with MountainMath, which has enabled an on-line data visualization tool that separates not occupied by usual residents into two groups: i) unoccupied and ii) “occupied solely by foreign residents and/or temporarily present persons.”³³ We scrape these data to identify explicitly vacant units in CMAs and CAs from the Census data.

The two different data sets generate a percentage of vacant units with different meanings. With the CMHC rental apartment vacancy, used to highlight rental market shortages in Figures 5A-5E above, property owners are assumed to own these units for cash flow, so vacancy rates among these rental units reflect market conditions that renters face, with lower vacancy rates describing tighter markets. For units in the Census, vacancy can reflect a variety of factors present at the time of the Census, some of which would still qualify a unit as “exempt” under the SVTA. Broadly a unit may be vacant for the following reasons: i) a unit held vacant as an investment, ii) a second or vacation home vacant at the time of the Census, iii) a unit on the short-term rental (like Airbnb) market, iv) a unit available for rent but currently unoccupied, v) a unit pre- or post-sale for which the owners have already left or not yet moved into, vi) a unit in the renovation or repair process and thus unoccupied, independent of the length of time, as well as vii) units not habitable.³⁴ The count of vacant units captures the type of vacant unit targeted by the SVTA (i -

³³ The website is <https://censusmapper.ca/>

³⁴ S. 41 of the SVTA provides an exemption for a calendar year in which a residential property is vacant by reason of construction or renovation

iii), but also vacant units available for rent (iv), part of the normal life-cycle of a property with transactions, renovations and repairs (v and vi). These differences, where the data is not broken down in the Census by reason for vacancy, mean that when we observe a high vacancy rate in the Census data, it does not necessarily mean that a larger share of units not available to house local residents (i-iii) and a target of the SVTA.

We propose using the difference between the two measures of vacancy as an indicator of likely vacant but not available to local residents in the period prior to the SVTA. This measure is equal to the Census vacant unit percentage minus the CMHC rental apartment vacancy rate. High values of this difference, which we are labelling the “vacancy gap”, reflect a market where the apartment vacancy rate is low, but the stock of vacant properties is high. This is consistent with a larger percentage of units purposely withheld from being available to local residents for full-time occupancy. If the two are close, so the difference is low, then vacancy conditions in the rental market are similar to those more generally among all housing units. In the latter a tax on vacant units would be less likely to benefit renters.

Whether the difference between the measures is consistent with and proof of vacant units not being available for local residents depends on the accuracy of three assumptions.

- The first is that vacancy rates in units on the rental market are highly correlated between rental apartment buildings and other types of units on the rental markets (condos, townhouses, duplexes, or single family homes) that are not in the CMHC measure. This presumes connectivity between rental sub-markets for different property types, so if apartment vacancy rates in a market are low, then there is likely to also be similar tightness in the rental stock of other types of rental properties.
- The second is that the percentage of units vacant because of renovation and repair or in the sales process is similar across cities.
- The third is that the mix of apartment rental, non-apartment units for rent, and ownership units is fairly constant across cities, which is clearly not the case as some cities

(Vancouver) are more condo heavy and ownership rates vary significantly across the country.³⁵

When these assumptions do not hold, the vacancy gap measure will vary because of reasons of composition and not underlying differences in vacancy between rental apartments and other properties kept out of the rental stock. Resolving these issues is beyond the scope of this report, and as such the difference measure should be best understood as consistent with a larger share of the stock being vacant and not available for occupancy by local residents rather than as an accurate measure of this percentage. As a test, we performed a panel regression analysis of these two measures. They are positively correlated, and the relationship is statistically different from zero suggesting a natural framework where if one measure is high, the other will be as well. The variation in the vacancy gap should then reflect underlying factors such as the vacant properties issue the SVTA is trying to address.

Tables 1A-1C show the vacancy gap measure using two different measures of the percentage of units vacant. The three tables are groups of CMAs and CAs by size and ordered within each table from rent as largest percentage of income to smallest (as per the data used in Figures 3A-3C). We present two Census measures of the percent of units vacant at the May 10, 2016, reference day for the 2016 Census measures: i) all residential units except “apartments in duplexes”, and ii) vacant units in larger multi-unit buildings (5 or more floors). The first is to correct for the Census designation of basement suites as apartments in duplexes as the SVTA does not apply to these units and they occupy a concept of property between a distinct unit and a household’s own space. The second vacant units measure limits the count to rental apartments and condo buildings with units that would be well suited for the rental market. These two are then compared with the CMHC apartment vacancy rate for one-bedroom units in buildings with three or more units for 2016.

The results in Tables 1A-1C highlight a clear difference between the CMHC apartment market rental vacancy data and vacant units in the housing stock in the BC CMAs and CAs with SVTA specified areas when compared with other metropolitan areas. While the BC urban areas have

³⁵ For example, 2016 ownership rates among CMAs varied between 55.7 percent in Montreal to 77.8 percent in Oshawa. Statistics Canada, 2016 Census, <https://www150.statcan.gc.ca/n1/daily-quotidien/171025/cg-c003-eng.htm>.

much lower rental apartment building vacancy rates than their comparison groups, their overall vacancy rates for the entire stock (excluding basement suites) or for taller multi-unit buildings are the same or even higher, so that the difference between these two, i.e., the “vacancy gap”, is 75 percent or more higher than for the other CMAs and CAs. For the reasons noted above this cannot be treated as proof of a large pool of vacant units that could be used to supply local housing needs but is very much consistent with this assumption.

Table 1A Vacancy Gap: Large CMAs

Metro Area	(1) CMHC Apartment Vacancy Rate	(2) % of Dwellings Vacant (excl'd Apt in Duplex)	(3) % of Units Vacant in 5+Story Bldgs	Difference: (2) - (1)	Difference: (3) - (1)
Vancouver	0.7	4.6	8	3.9	7.3
Toronto	1.3	3.4	4.6	2.1	3.3
Hamilton	3.8	3.3	5	-0.5	1.2
Kitchener - Cambridge - Waterloo	2.6	3.2	8.1	0.6	5.5
Edmonton	7.1	5.8	12.4	-1.3	5.3
Calgary	6.9	3.9	12.8	-3	5.9
Montreal	4.6	4.4	8.4	-0.2	3.8
Winnipeg	2.8	4	7.5	1.2	4.7
Ottawa - Gatineau	3.4	4.9	8.7	1.5	5.3
Quebec City	5.4	4.1	7.5	-1.3	2.1
Mean: Non-SVT CMAs	4.2	4.1	8.3	-0.1	4.1

Sources: Vacancy Rate is CMHC Apartment Vacancy rate from Cansim Table 34100131 for row and apartment structures three units and over. Dwellings Vacant is from 2016 Canadian Census as reported in Censumapper.ca. Metro areas are CMAs with 2016 population greater than 500,000.

Table 1B Vacancy Data Gap: Medium Sized CMAs

Metro Area	(1) CMHC Apartment Vacancy Rate	(2) % of Dwellings Vacant (excl'd Apt in Duplex)	(3) % of Units Vacant in 5+Story Bldgs	Difference: (2) - (1)	Difference: (3) - (1)
Victoria	0.5	4.1	11	3.6	10.5
Halifax	2.6	6.3	9.7	3.7	7.1
St. Catharines - Niagara	2	4.5	5.5	2.5	3.5
Oshawa	1.7	2	2.8	0.3	1.1
London	2	5	8.7	3	6.7
Saskatoon	10.4	6.6	12.6	-3.8	2.2
Regina	5.4	5.8	9.3	0.4	3.9
St. John's	8.5	5	13	-3.5	4.5
Sherbrooke	6.9	7.9	13.4	1	6.5
Windsor	2.2	4.3	6.5	2.1	4.3
Mean: Non-SVT CMAs	4.6	5.3	9.1	0.6	4.4

Sources: Vacancy Rate is CMHC Apartment Vacancy rate from Cansim Table 34100131 for row and apartment structures three units and over. Dwellings Vacant is from 2016 Canadian Census as reported in Censusmapper.ca. Metro areas are CMAs with 2016 population between 200,000 and 500,000.

Table 1C Vacancy Data Gap: Small CMAs and CAs

Metro Area	(1) CMHC Apartment Vacancy Rate	(2) % of Dwellings Vacant (excl Apt in Duplex)	(3) % of Units Vacant in 5+Story Bldgs	Difference: (3) - (1)	Difference: (4) - (1)
Kelowna	0.4	6.8	23.2	6.4	22.8
Chilliwack	1.4	5.7	8.6	4.3	7.2
Barrie	2	4	4.2	2	2.2
Nanaimo	1.5	3.2	9.7	1.7	8.2
Peterborough	0.9	7.8	4.5	6.9	3.6
Abbotsford-Mission	0.4	3.1	2.3	2.7	1.9
Kamloops	0.9	7.6	26.9	6.7	26
Belleville	2.9	4	3.4	1.1	0.5
Kingston	5.3	9.2	9.1	3.9	3.8
Brantford	2	3	6.6	1	4.6
Lethbridge	8.8	4.2	11.2	-4.6	2.4
Red Deer	13.6	4.8	7	-8.8	-6.6
Guelph	0.9	4.4	5.7	3.5	4.8
Greater Sudbury	4.7	6.7	9.5	2	4.8
Moncton	5.6	6.6	6.4	1	0.8
Fredericton	4.1	6.7	18.3	2.6	14.2
Prince George	4.1	5.4	13.9	1.3	9.8
Granby	3.5	5.4	3.6	1.9	0.1
Sarnia	3.7	4.4	4.5	0.7	0.8
Thunder Bay	5	6.6	13	1.6	8
Saint John	7.7	8.7	8.5	1	0.8
Drummondville	4.1	3.8	3.9	-0.3	-0.2
Trois-Rivières	6.4	5.8	10.7	-0.6	4.3
Saguenay	7.9	6.5	3.3	-1.4	-4.6
Mean: Mon-SVT areas	4.7	5.8	8.7	1.1	4.0
Mean: SVT areas	0.9	4.7	11.0	3.8	10.0

2B. Foreign Ownership & Investment in the Specified Areas Prior to the Introduction of the SVTA

Historically, government statistical agencies in Canada and private real estate groups have not collected data on foreign ownership or investment. Until recently, land title information on property ownership did not indicate beneficial ownership or require the citizenship or place of residence of property owners. The most comprehensive public source for data on ownership of residential properties by non-residents of Canada across Canadian cities comes from the Canadian Housing Statistics Program of Statistics Canada, which links administrative data from immigration, labour, the Census, and financial federal, provincial, and private databases.³⁶ We show their calculations of non-resident ownership share among areas in BC, NS, and ON below in Table 2.³⁷ The data are for CMAs in these provinces, highlighting overall non-resident ownership share, and then for all properties and condos separately the share among more recently constructed units.³⁸

Among the CMAs in BC, NS, and ON, the rate of non-resident ownership is highest among metropolitan areas that are SVTA designated areas. While the Abbotsford-Mission CMA and the Chilliwack CA have both the lowest rate among CMAs and CAs that include specified areas and lower non-resident ownership shares than do the Halifax, Kingston, St. Catharines-Niagara, and Toronto CMAs, they are still above the average for the other CMAs and CAs in BC, NS and ON. Particularly striking is how for Vancouver, Nanaimo, Victoria, and Kelowna the non-resident ownership share increases both in absolute terms and even more relative to other CMAs when the analysis is limited to more recently constructed properties. For housing affordability, this is particularly worrisome as it indicates a larger share (nearly 16 percent for Vancouver CMA condos built 2016-17) of the new supply that would normally help improve affordability is being bought by those who are extremely unlikely to have their housing demand determined by local incomes. This problem is undoubtedly graver as these data do not include Canadian citizens who own property but for whom a majority of their income is untaxed world-wide income.

³⁶ <https://www.statcan.gc.ca/eng/subjects-start/housing>.

³⁷ The Canadian Housing Statistics Program only released data for these provinces for the time period of interest.

³⁸ These data differ from the standard conceptualization of “foreign” ownership as Canadian citizens residing outside of Canada are considered “non-resident”, and non-Canadians without permanent residence status residing in Canada are not included as “non-resident,” and it is likely that a popular perception is that the former are not foreign while the latter are.

Table 2 Non-Resident Ownership

Area	Pct Non-Resident All Types	Pct Non-Resident - All Types - Built 2011-15	Pct Non-Resident - All Types - Built 2016-17	Pct Non-Resident Condos - Built 2011-15	Pct Non-Resident Condos - Built 2016-17
Vancouver CMA	5.0	8.4	11.6	11.1	15.7
Nanaimo CA	3.1	5.4	8.2	3.2	0.0
Victoria CMA	3.0	4.6	5.6	6.9	8.3
Kelowna CMA	2.7	3.3	5.0	6.1	9.6
Kingston CMA	2.7	1.6	2.3	0.0	0.0
Toronto CMA	2.6	4.3	4.5	6.6	7.4
Halifax CMA	2.5	2.3	3.6	5.1	5.7
St. Catharines-Niagara CMA	2.2	1.3	1.3	0.0	4.3
Chilliwack CSD	1.9	1.3	3.3	2.1	4.0
Windsor CMA	1.8	0.8	1.9		0.0
Abbotsford-Mission CMA	1.7	2.0	2.7	1.2	2.4
Ottawa-Gatineau (ON part) CMA	1.4	1.8	1.8	3.7	3.6
Peterborough CMA	1.3	1.3	2.7	8.3	
Thunder Bay CMA	1.3	0.8	1.9	0.0	
Kamloops CA	1.2	1.4	1.9	1.8	4.1
Prince George CA	1.2	0.8	0.0	0.0	0.0
Hamilton CMA	1.1	1.2	1.5	0.9	1.1
Barrie CMA	1.0	1.2	2.4	0.0	2.6
Kitchener-Cambridge-Waterloo CMA	1.0	1.2	2.0	2.9	3.1
London CMA	1.0	1.0	1.8	0.3	0.0
Guelph CMA	1.0	1.0	1.3	1.6	1.4
Belleville CMA	1.0	0.6	1.0		
Oshawa CMA	0.9	0.9	1.6	3.4	2.0
Greater Sudbury CMA	0.9	0.6	1.4	0.0	
Brantford CMA	0.7	0.8	1.0		
SVT City Mean (unweighted)	2.9	4.2	6.1	5.1	6.7
All Other Areas (unweighted)	1.4	1.3	1.9	2.2	2.5

Source: Canadian House Statistics Program Table 46100018. Non-resident measures owners who are not full-time residents of Canada, regardless of citizenship.

3. Housing Vacancy and Foreign Ownership: Theoretical Models and Existing Research

There is limited theoretical and empirical literature on the effect of foreign investment and property owners leaving otherwise viable units vacant on housing affordability. The most studied

issue is the effect of foreign source demand on local housing prices. Here there is a clear consensus that foreign demand or demand for second houses raises local house prices. This makes ownership more difficult for prospective first-time buyers. This effect is larger if the wealth used to acquire these properties is from outside the local market. While existing property owners benefit from the higher prices, it makes home ownership more expensive for first time buyers who experience a worsening in ownership affordability. Rental affordability is negatively affected through two mechanisms. First, on the demand side, households that normally would transition from rental to ownership but are priced out of home ownership because of affordability challenges remain in the rental sector. This shifts demand among local residents from the ownership to the rental market, increasing rents and lowering vacancy in the rental market. Second, if these units would otherwise be rented out, but are not, then there is a reduction in the supply of rental housing that has an additional negative effect on rental affordability. Empirical research such as Segu (2020) finds that taxes on vacancy reduce the number of vacant units in areas where low-income households face supply shortages, thus serving as a means to increase the supply of rental housing.³⁹

Local Incomes and House Prices and Rents

In the basic model of urban economics, households choose where to live (location) and how much housing and non-housing goods to consume. The share of their income given to commuting costs and the price of housing they face depends on the location choice.⁴⁰ In this literature, a city is a unified housing and labour market and may best be understood as a metropolitan area. In the simplest form there is no migration between cities and all households are identical in size and ability. Housing in the city is fully occupied by local residents and housing rents are in line with local incomes, which are a function of the city's productivity. This approach assumes no local challenges in supplying housing beyond location, i.e., housing can be

³⁹ Segu, M. (2020). The impact of taxing vacancy on housing markets: Evidence from France. *Journal of Public Economics*, 185.

⁴⁰ Formally the choice depends on preferences, income, commuting costs, land rent, the cost of housing structure, interest rates, and the price of other goods. See O'Sullivan, A. 2019. *Urban Economics*. McGraw Hill, 9th Edition for a comprehensive presentation of basic urban economics models of land, housing, and rents. House prices are just the sum of capitalized land rents and construction cost, so the convention is to focus on rents as the per period measure.

built out (suburbanization and urban growth) or up (increased density) as household preferences demand, limited only by normal construction costs and technology. If the city becomes more productive or prices of its exports rise, incomes increase and part of this becomes an increase in housing demand that drives up rents. Housing is always “affordable” because local residents are the only source of demand for land and their demand is governed by their labour income. Cities differ mainly on residents’ welfare, or standard of living, which is a function of their labour productivity.

Once population and capital can flow between locations and local residents can differ by wealth or ability, there becomes the possibility of stratification and differences in affordability (moving from a “closed” to an “open” city model). Roback (1982) presents the seminal model with migration and variation in cities by amenities available to their residents.⁴¹ Allowing population to flow between urban areas then leads rents and wages to adjust based on the relative attractiveness of different cities such that consumers are equally well-off in all cities. High amenity cities have higher house rents and lower wages than low amenity cities as residents “pay” for the city amenities through less affordable housing and less non-housing private consumption than households in lower amenity cities are able to afford. In this case, variation in affordability as measured by rent to income is not a problem but a feature that is necessary to ensure that household welfare is equalized across cities.

The basic urban literature does not address vacant homes or foreign investment as they were never considered fundamental problems to be explained through the pattern of urban land rents and a system of cities. As long as housing is not perfectly elastically supplied, so prices must rise if the supply is to increase, demand for houses to be held vacant will have an unambiguous effect of increasing local prices. Local residents would have to pay more for housing without a matching increase in income from higher productivity, making them unambiguously worse off. Assumptions about who owns land sold to the buyers affects the aggregate welfare calculations as when house prices rise, local existing owners benefit. In the urban model it is always better if

⁴¹ Roback, J. 1982. Wages, Rents, and the Quality of Life. *Journal of Political Economy*, 90 (6), 1257-1278.

land is owned by locals as some of their earnings are spent locally, increasing the level of activity, i.e., increasing wages, instead of flowing out of the market.

The effects of properties intentionally kept vacant, rather than being leased at prevailing rents or sold to occupiers, and foreign capital inflows will also depend on two characteristics of local economies: the housing supply elasticity and the costs associated with the movement of people between urban areas. If housing supply is perfectly elastic, i.e., there is a flat supply curve such that additional units are added as demanded without increasing units' costs, then neither capital inflows nor demand to hold units vacant affects local prices or the availability of units for occupancy. However, generally housing supply is not perfectly elastic and in the specified areas topography and land use regulation conspire to make the specified areas particularly challenged in increasing supply in response to increased demand.⁴² If households move easily between urban areas without any financial or personal costs (a perfectly “open city” model), then in a large country, a housing market shock in one area will redistribute the population across markets without any reductions in individual welfare. While useful as a theoretical conceptualization, the simplifying assumption of zero moving costs is not reflective of reality, where the question is the extent rather than existence of these frictions. The greater these frictions, i.e., the higher the financial and personal costs, or difficulties in moving to a more affordable city, the greater the harm caused by housing units held vacant and capital inflows.

The inflow effect of capital into a local housing market can have a multiplier effect. First, the target neighborhoods for this capital will have higher rates of price appreciation than the market overall. This raises the amount that subsequent purchasers must spend, resulting in an even higher capital inflow. Second, when these purchasers buy homes from existing residents, those local residents receive a financial windfall, which enables them or their children to put additional

⁴² More detail on supply elasticities can be found in Mayer and Somerville. (2000). Residential Construction: Using the Urban Growth Model to Estimate Housing Supply. *Journal of Urban Economics*. 48 (1), 85-109. The report of the Canada-BC Expert Panel on the Future of Housing Supply and Affordability, https://engage.gov.bc.ca/app/uploads/sites/588/2021/06/Opening-Doors_BC-Expert-Panel_Final-Report_Jun16.pdf, provides background on supply challenges in BC. CMHC. (2018) *Examining Escalating House Prices in Large Canadian Metropolitan Centres*, highlights the differences in supply elasticity across Canadian cities.

resources into local real estate. Finally, the price increases in target areas may raise price expectations among local residents, leading them to commit a larger share of their wealth and income to real estate than they otherwise would have.

The standard urban models of prices and rents do not differentiate between rental and ownership sectors. In equilibrium these are treated as a preference, because in an asset market equilibrium rent is just the per period cost of ownership. Models of tenure choice such as Henderson and Ioannides (1983) do separate the two, relying on the real world inability of households to borrow against future income, mortgage underwriting that is based on current income, and lending frictions so that household current income and access to wealth act as constraints on the ability of some households to become owners and create a tenure choice or investment portfolio decision for others.⁴³ With financial and income constraints limiting some households from becoming owners, there can exist two distinct but related sub-markets – the ownership market and the rental market. On the supply side there will also be separation if some properties, such as multifamily properties without strata title, cannot be owner-occupied. In this case, units cannot move instantly between the two segments to keep conditions balanced between them. With these distinctions on both the supply and demand side, we can speak explicitly of how policies affect the owner and rental markets separately.

Buying property and leaving it vacant unambiguously hurts local households trying to purchase housing and also renters. If the unit would normally be rented and is not, then there is a clear decline in rental housing supply which decreases vacancies and increase rents. If the unit would normally be owner-occupied and is not, then households are shut out of the ownership market by higher prices. This puts more households in the rental sector than there would be otherwise, increasing rents and lowering vacancies in that sub-market. To a lesser extent, just the phenomenon of capital inflow distorts the market, even without vacancy, as demand driven by foreign income and wealth accumulation (rather than reflecting local incomes) increases prices above where they would otherwise be. Local residents pay more to purchase than they would

⁴³ Henderson, J. V., and Y. M. Ioannides. (1983). A Model of Housing Tenure Choice. *The American Economic Review*, 73 (1), 98-113.

otherwise, or some do not make or delay the transition to ownership, increasing demand in the rental market.

Research on Foreign Investment and Vacant Housing

The lion's share of the research relevant to the SVTA has addressed the effects of foreign investment on local housing markets. This work uniformly finds that such capital flows result in higher local house prices. Theoretical work by Chao and Yu (2015), and Tai, Chao, and Wang (2017) demonstrate under different assumptions about the characteristics of the local housing market how foreign capital inflows can raise the price of housing for locals, with the former suggesting what approaches might best offset this (taxes on foreign investment that are then directed to low income households for housing) or the effects on the international terms of trade and the macroeconomy effects for a small open economy for the latter.⁴⁴

The empirical research supports the connection between foreign capital inflows and higher house prices. Using macroeconomic data and estimating approaches, Sá, Towbin and Wieladek (2014) and Sá and Wieladek (2015) find that aggregate country level capital flows, not specifically real estate investment, are associated with higher house prices both in Organisation for Economic Co-operation and Development (OECD) countries and separately for the regions of the US.⁴⁵ The causal effect of capital inflows on housing prices is identified in two papers that use the “home bias effect” approach, where increased risk in country A leads to an inflow of capital to areas of country B with residents with links through immigration and ethnicity to country A. Badarinza and Ramadorai (2018) is the seminal paper using this approach, where they tie home country risk to house price movements in neighbourhoods with specific ethnic concentrations in London: house prices rise more in a neighbourhood after an increase in political risk and stability in the home country of the ethnic group concentrated in that neighbourhood when compared to other

⁴⁴ Chao, C.C., and E.S.H. Yu. 2015. Housing Markets with Foreign Buyers. *Journal of Real Estate Finance and Economics*, 50, 207–218. Tsi, M.Y., Hu, S.W., Chao, C.C., and V. Wang. 2017. Foreign buyers and housing price dynamics. *International Review of Economics and Finance*, 52 (2), 368–379.

⁴⁵ Sá, F., Towbin, P. and T. Wieladek. (2014), Capital Inflows, Financial Structure and Housing Booms. *Journal of European Economic Association*, 12(2):522–546. Sá, F. and T. Wieladek (2015), Capital Inflows and the U.S. Housing Boom. *Journal of Money, Credit and Banking*, 47: 221–256.

London neighbourhoods.⁴⁶ Ari, Puy, and Shi (2020) use the same approach and find similar effects between estimated capital inflow and house price appreciation in the US.⁴⁷ Sa (2016) looks at purchases of UK residential real estate by foreign registered corporations, finding that a 1 percent increase in the volume of their purchases in a region raises local house prices by 2.1 percent.⁴⁸ Pavlov and Somerville (2020) show how the cessation of Canada's investor immigrant program led to modest declines in relative house prices in neighbourhoods most likely to be the destination of these higher wealth immigrants.⁴⁹

One paper that attempts to model the explicit effect of foreign purchases of real estate that are then left vacant is Favilukis and Van Nieuwerburgh's (2017) theoretical paper with a simulation model calibrated to New York and Vancouver.⁵⁰ They find that when capital flows into a market and purchases high value properties in an urban core, then renters and prospective homebuyers are hurt, as the capital inflow and subsequent vacant units result in renters paying higher rents and being forced to live further from the urban core than they might otherwise. In their model these negative effects can outweigh the benefits to existing landowners from higher house prices, so that they get aggregate welfare losses from foreign capital inflows *when* these units are then left vacant.

The closest work that examines a tax like that in the SVTA is Suher's 2016 working paper on New York City property taxes. His research estimates the effects of increases in the property tax rate paid by non-resident owners of condominium and co-operative apartment buildings in New York City.⁵¹ He finds that the removal of the 20 percent abatement on property taxes in 2013 resulted in a 1.8 percentage point drop in the share of these properties for which the property was

⁴⁶ Badarinza, C. and T. Ramadorai. (2018). Home away from home? Foreign demand and London house prices. *Journal of Financial Economics*, 130(3).

⁴⁷ Ari, A., Puy, D., and Y. Shi. (2020). Foreign Demand and Local House Prices: Evidence from the US. IMF Working Paper WP/20/43.

⁴⁸ Sa, F. (2016). "The Effect of Foreign Investors on Local Housing Markets: Evidence from the UK," Discussion Papers 1639, Centre for Macroeconomics (CFM).

⁴⁹ Pavlov, A. and T. Somerville. (2020). Immigration, Capital Flows and Housing Prices. *Real Estate Economics*, 48 (3), 915-949: <https://doi.org/10.1111/1540-6229.12267>.

⁵⁰ Favilukis, J.Y. and S. Van Nieuwerburgh, Stijn. 2021. Out-of-Town Home Buyers and City Welfare. *Journal of Finance*, published on-line May 2021: <https://doi.org/10.1111/jofi.13057>.

⁵¹ Suher, M. 2016. Is Anybody Home? The Impact and Taxation of Non-Resident Buyers. [https://en-coller.tau.ac.il/sites/nihul.tau.ac.il/files/media_server/Recanati/management/elrov/Conf_Housing/Suher-TAU%20paper%20\(1\).pdf](https://en-coller.tau.ac.il/sites/nihul.tau.ac.il/files/media_server/Recanati/management/elrov/Conf_Housing/Suher-TAU%20paper%20(1).pdf)

not the owner's principal residence. This effect was higher, an over 4 percentage point decline, in the share of properties owned by non-residents for properties with an assessed value of over \$5M. From this he extracts an elasticity on the probability of ownership relative to the tax amount of -0.6, so that a 10 percent increase in the property tax charged would result in a 6 percent decline in non-resident ownership.

Other evidence on the ability of taxes on vacant units to reduce vacancy comes from France. Segu (2020) estimates the effect of the French *taxe sur les logements vacants (TLV)* that targets vacant properties in areas where low-income housing is in short supply, but there are a large number of vacant units, so vacancy in general is high.⁵² Comparing urbanized regions with the tax to those without that the tax, she finds that between 1997 and 2001 the tax is responsible for a 13 percent drop in vacancy rates, with the effect concentrated in areas with more long-term vacancy prior to the tax. The decline in vacancy benefits local households because units that were vacant but not available for rent become part of the rental stock, or are sold to owner-occupiers who also occupy them, rather than being left vacant for occasional use

Restrictions on home purchases are a related area because these mostly target non-residents. Hilber and Schoni (2016) study the effects of the Swiss Second Home Initiative.⁵³ Their analysis, exploiting differences in the intensity of law enforcement across Swiss cantons, estimates both the effects on house prices and economic activity from these policies. They find that the restrictions on second home construction had no effect on second home prices but caused the prices of primary residences to decline by 12 percent.

There are two other areas of research that provide insight on how the SVTA might affect housing affordability. The first is the literature on filtering, i.e., how changes in the supply-demand balance in the higher quality housing sub-market affect conditions over time in lower quality sub-markets. Recent empirical work by Mast (2019) demonstrates how increases in supply of

⁵² See Segu, M. (2020). The impact of taxing vacancy on housing markets: Evidence from France. *Journal of Public Economics*, 185.

⁵³ Hilber, C.A.L. and O. Schoni. 2016. The Housing Market Impacts of Constraining Second Home Investments. LSE Centre for Economic Working Performance Paper No. SERCDP0204. <http://www.spatialeconomics.ac.uk/textonly/SERC/publications/download/sercdp0204.pdf>

higher end housing bring affordability benefits to the low-income sector.⁵⁴ Using data on the residents of newly constructed higher end apartments, he examines the chain of their previous addresses, and who occupied those addresses and how quickly after they left. He finds that households move up in housing quality from lower priced neighbourhoods, freeing up units in those areas. This suggests that even if units left vacant by investors or occasionally used as second homes are higher end, removing these units from the housing stock affects all local residents across the income spectrum. The second area is work estimating effects of short-term rentals like Airbnb on housing markets. There is considerable research on this topic, but Garcia-López, et.al. (2020) is representative.⁵⁵ They show how as the share of short-term rentals in areas of Barcelona (where Airbnb listings are an estimated 7 percent of the rental stock) increases, so do rents and house prices. The estimated impact on rents of Airbnb activity is substantial: on average it raises rents by 2 percent, while in neighborhoods in the highest decile of Airbnb activity, rents are 7 percent higher than they would be in the absence of Airbnb. For the purposes of evaluating vacant units, both Airbnb and units left vacant are functionally removed from the stock so they should have similar effects on the rental market for local residents.

⁵⁴ Mast, E. (2019). The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market Income Housing Market. Upjohn Institute working paper, 19-307.

https://research.upjohn.org/cgi/viewcontent.cgi?article=1325&context=up_workingpapers

⁵⁵ Garcia-Lopez, M.A., et. al. (2020). Do short-term rental platforms affect housing markets? Evidence from Airbnb in Barcelona. *Journal of Urban Economics*, 119. <https://doi.org/10.1016/j.jue.2020.103278>

4. Preliminary Effects of the SVTA

If effective, the SVTA should reduce housing demand from those who are not local residents and do not occupy the units they own and at the same time increase housing supply available to both prospective buyers and renters by releasing those units to these segments. As discussed in the theory review, these changes should lead to lower house prices and rents. There has been relatively little time since the passage of the SVTA and before the disruption from COVID-19 to comprehensively assess the effects of the SVTA on improving affordability. A concern is that observed outcomes after 2019 may be a result of COVID-19's effect on incomes, the economy, housing and locational preferences rather than the effects of the SVTA.⁵⁶ As well, restrictions on foreign travel may have had an outsized effect on housing demand in Canada by non-Canadians. This caveat should provide more than the usual dose of caution in ascribing observed effects to the SVTA because of COVID-19's dramatic effect on all aspects of economic life.

We find that the SVTA, and particularly the increase of the tax from 0.5 to 2.0 percent on foreign owners and satellite families, has moved housing into rental tenancy and increased the number of units in primary residences. Among foreign owners, this change has come more from the renting of formerly vacant homes, especially single-family houses, while for satellite families more of their properties have transitioned to SVT-exempt principal residence status.⁵⁷ Aggregate data by CMHC shows a dramatic uptick in the growth in number of condominium (strata) apartments being rented on a long-term basis in the Lower Mainland. The resulting increase in the stock of rental housing in the Lower Mainland is well above that attributable to purpose-built rental housing coming from a very large movement in strata apartment units into the rental pool and has a timeline consistent with the financial incentives to do so that the SVTA has created for owners of vacant condos.

⁵⁶ Economic dislocation and disruption because of COVID-19 have led to a large decline and then rebound in residential transactions across the province (BC transactions were down 50 percent year-over-year in April 2020, then up 43 percent in August 2020, for a net year to date year-over-year change through August of up 4 percent). Also, there appears to be little effect on residential real estate prices. Developers privately report large drops in pre-sales for high-rise condos but strong sales for more family-oriented properties targeting local residents. Informal conversations with industry professionals suggest challenges renting vacant units in the rental market because of economic and regulatory uncertainties.

⁵⁷ This does not mean that the house was sold in an arm's length manner, as the same household may be occupying the unit but with a change in their status.

House prices rose less after the passage of the SVTA in neighbourhoods with higher concentrations of SVTA non-exempt units than in neighbourhoods with lower concentrations. Finally, aggregate metro area data suggests that the affordability has improved somewhat more in the SVTA specified areas in British Columbia than elsewhere in BC or Canada, though these findings are especially sensitive to the pattern of emergency economic measures meant to address COVID-19, as measured by their effects on estimated 2020 median incomes, and household responses to these and changes in their preferences resulting from changes in workplace patterns.

COVID-19 and Housing Market Analysis

The effects of the COVID-19 pandemic on the economy in general and housing markets in particular complicate the analysis of any housing market data from after February 2020. The variety of income supports (Canada Emergency Response Benefit (CERB), Canada Emergency Student Benefit (CESB), Canada Emergency Wage Subsidy (CEWS), Canada Recovery Benefit (CRB), and changes to employment insurance (EI)) along with direct housing market interventions such as the Canada Emergency Rent Subsidy (CERS), deferral of mortgage payments, and provincial eviction moratorium and tenant protection all may have resulted in atypical market conditions. As well, there is growing research showing that COVID-19 led to changes in the location and type of housing and affected mobility decisions of all household types.⁵⁸ Whether these changes are permanent or transitory remains to be seen. For the purposes of this report, the concern is that 2020 housing market data, especially for income and rental markets, may not be indicative of patterns after the pandemic subsides. For example, from 2017-19, annual growth in provincial weekly earnings averaged 2.73%, 1.35%, 2.54%, and 3.14% in BC, AB, ON, and PQ respectively, but for 2020 these rates were 8.50%, 3.27%, 7.44%, and 7.90% respectively. And for BC, ON, and PQ the 2020 growth was nearly double the growth in any of the previous two decades. We use these data to estimate 2020 median income for

⁵⁸ Liu, S., and Y. Su. (2020). The Impact of the COVID-19 Pandemic on the Demand for Density: Evidence from the U.S. Housing Market. Working Paper.

homeowners and renters. Consequently, we may overestimate income growth in BC, ON, and PQ, leading to downward bias in our owner payment to income and rent to income measures.

To try to control for these policies, in our summaries of the results we compare the average among the specified areas with the averages for the set of ON metro areas included here. We believe that this comparison both better controls for unique COVID-19 policy effects on incomes, which in the aggregate seem similar between BC and ON, but also reflects the belief that select markets in both provinces had similar exposure to foreign and investment demand for residential real estate.

Early in the pandemic, Liu and Su (2020) show that households relocated from central cities to more suburban locations, particularly where remote work was more likely. This raises concerns in the rental data, specifically that changes from 2019 to 2020 in rents and vacancy rates may vary within and across cities in different ways because of renter responses to changes in where they work and the attractiveness of core urban areas because of COVID-19 rather than policies such as the SVTA. The main implication for this study is that there is less certainty in what 2020 data indicates about markets, especially for renters.

Patterns of Changes in Number of Non-Exempt Properties 2018-20 SVTA

To assess the aggregate effects of the SVTA on the number of properties held vacant, not-rented in an arms-length tenancy, or occupied by “satellite families”, we break down residential properties into four categories: single, row/duplex, condo, and other.⁵⁹ Our data methodology for the analysis of SVTA exempt and non-exempt properties, the characteristics of owners of those properties and the properties themselves, and data on housing transactions is described in Appendix C. Ideally, we would have a count of the number of properties in 2017 that would have been designated as non-exempt. This would allow us to see changes between 2017 and 2018

⁵⁹ Single includes properties with BC Assessment actual use codes 000 (single family dwelling), 032 (residential dwelling with suite), and 060 (2 acres or more, single family dwelling). Row includes row housing with single unit ownership (039), duplexes (033-036 and 040), triplexes (047), and quadplexes (049). Condo is strata lot residences (030). All other uses subject to the SVT are in the “Other” category. Total properties by type for the 2020 filing period in the specified areas are 563,219 single family properties (50.6 percent), 175,933 row or townhouse, duplex, triplex, and quadplex houses (15.6 percent), 328,672 condos (29.6 percent), and 46,473 other (4.2 percent).

when property owners would have become aware of the tax. Lacking this, we cannot assess the full effect of the SVTA on the number of non-exempt properties as we miss those that were tenanted or sold in 2018 and those not declared as non-exempt from the 2018 filing period.

Table 3 shows the annual counts of the number of non-exempt properties by type, along with year-to-year changes. In all tables we use “row” to refer to all row (townhouse), duplex, triplex and quadplex properties.⁶⁰ At an aggregate level, the number of properties identified as not exempt from the SVT declined 37 percent between the 2018 and 2019 filing periods and then rose 16 percent rose from 2019 to 2020. The increase is an artifact of the increase in “other” properties declared as non-exempt, which rose by 1,351 properties. Of these 1,351 “other” properties, 1,067 (81 percent) had an exemption in 2019 as a “property with no residence”, which ceased to be an exemption in 2020.⁶¹ In all further analysis, we exclude “other” properties as these include properties without a structure or those that most would consider to not be part of the general housing market.⁶² Limiting the assessment to single, row/duplex, and condo properties, the number of non-exempt properties fell by 8 percent between the 2019 and 2020 filing periods, instead of rising.

The largest absolute and percentage decline in non-exempt properties was for single family properties. The total decline from 2018 to 2020 was 52 percent for single family properties, 43 percent for row/duplexes, and 35 percent for condos. The largest variation across property types in declines was between 2018 and 2019, from a 30 percent decline for condos to a 47 percent decline for single family properties. In comparison, between 2019 and 2020, the range was only

⁶⁰ For 2018, townhouses were 83.7 percent of the total of 165,080 properties in the class in the specified areas; duplexes were 25,945 units (15.7 percent); triplexes totaled 621 units (0.4 percent); and quadplexes numbered 340 units (0.20 percent).

⁶¹ Of the properties classified as “other” in 2020, 29 percent have a BC Assessment actual use that is not primarily residential, 28 percent are stratified residential apartments, and 24 percent are properties classified as vacant by BC Assessment as their primary use. Of the 4,058 properties that claimed an exemption as a “property with no residence” in 2019 and remained exempt in 2020, 42 percent claimed an exemption as “construction or renovation”, 12 percent as “principal residence”, 8 percent as “vacant new inventory”, and another 8 percent as “Phased development.”

⁶² A vacant single-family use for BC Assessment would be a vacant lot with single family zoning, not a vacant structure. Of the category “other” without an exemption, 70 percent do not have a structure and 21 percent are considered primarily a non-residential land use by BC Assessment. Excluding these allows the focus here to be on units that fully part of standard housing market analysis.

5 percentage points between the 7-percent decline in the number of non-exempt single-family properties to the 12 percent decline for row/duplex units.

Table 3 – SVT Non-Exempt Properties

Filing Period	Excluding "Other"					
	Non-Exempt Total	Non-Exempt Total	Non-Exempt Single	Non-Exempt Row/Duplex	Non-Exempt Condo	Non-Exempt Other
2018	8,920	8,803	3,288	1,185	4,330	117
2019	5,651	5,535	1,733	767	3,035	116
2020	6,556	5,089	1,610	676	2,803	1,467
Change						
2018-19	(3,269)	(3,268)	(1,555)	(418)	(1,295)	(1)
2019-20	905	(446)	(123)	(91)	(232)	1,351
Pct Change						
2018-19	-37%	-37%	-47%	-35%	-30%	-1%
2019-20	16%	-8%	-7%	-12%	-8%	1165%

Notes: Single includes properties with BC Assessment actual use codes 000 (single family dwelling), 032 (residential dwelling with suite), and 060 (2 acres or more, single family dwelling). Row includes row housing with single unit ownership (039), duplexes (033-036 and 040), triplexes (047), and quadplexes (049). Condo is strata lot residences (030). Properties with all other BC Assessment actual use codes uses subject to the SVT are in other.

In Table 4, we assess the change over time in the number of non-exempt properties by owner type. If at least one owner of the property was not a Canadian citizen or permanent resident, a property is identified as having a foreign owner. The same approach applies for satellite families, a BC owner, or other Canadian owner, where to be classified as such, at least one owner of the property must be a member of a satellite family, a BC resident, or a Canadian citizen or permanent resident who resides elsewhere in Canada. For “All BC”, the property has this designation if all owners are BC permanent residents.⁶³ Because the designation only requires one owner to have a given designation, a single property could show up in multiple designations, with the exception of “All BC” which is a singular category.

⁶³ Our excluded group is corporations, both domestic and foreign registered, which are a small share of the total and of the non-exempt group and reflect a decision round tax liability in general rather than having a connection to the SVTA. Among single, row/duplex, and condo, the non-exempt rate for the 2018 filing period for corporate owned units, was 1.1 percent, compared with 0.8 percent overall. Only 3.8 percent of non-exempt properties in 2018 had at least one corporate owner.

Table 4 – SVT Non-Exempt Properties by Owner Type

Filing Period	Non-Exempt Total	Non-Exempt Foreign	Non-Exempt Satellite	Non-Exempt BC	Non-Exempt All-BC	Non-Exempt Other Canada
2018	8,803	3,906	2,325	2,544	1,634	1,038
2019	5,535	1,741	1,259	2,154	1,608	977
2020	5,089	1,274	1,287	2,201	1,675	953
Change						
2018-19	(3,268)	(2,165)	(1,066)	(390)	(26)	(61)
2019-20	(446)	(467)	28	47	67	(24)
Pct Change						
2018-19	-37%	-55%	-46%	-15%	-2%	-6%
2019-20	-8%	-27%	2%	2%	4%	-2%

Note: Properties that are not single family, row, or condos (defined by BC Assessment actual use codes 000, 030, 032-036, 039, 040, 047 and 049) are excluded from this table. A property is designated as having a foreign, satellite, BC, or other Canadian owner if at least one owner has this designation; for “All BC”, all owners must be BC residents and not foreign or satellite.

The largest changes resulting from the SVTA appear to be coming from the increase in the tax rate on foreign and satellite owners from 0.5 to 2.0 percent between the 2018 and 2019 filing periods. During this period, the drop in the number of non-exempt properties with these types of owners is 3-4 times that of the reduction for other owner types. After 2019, the change in non-exempt properties with at least one satellite owner was similar to that for BC owners, while the number of properties with foreign owners that were non-exempt continued to decline at a significantly higher rate, over three times the overall rate of decline.

A challenge in assessing the effect of the SVTA is that there is no detailed measurement of properties that might have been subject to the tax prior to 2018 had the tax been in place. We would expect that the Feb. 2018 budget announcement of the plans for the tax would influence owner decision to avoid the SVT. Thus, the 2018 count of the number of non-exempt units would already reflect a decline from 2017 as some property owners who would be subject to the SVT in 2018 acted to avoid it prior to the reporting date in 2019. Using the effects of the increase in the tax from 0.5 to 2.0 percent on those affected, we can get a sense of the possible magnitude of this unobserved pre-2019 change in ownership and occupancy. We speculate that the passage of the SVTA in 2018 led to a 15 to 18 percent decline between 2017 and 2018 in the number of properties that would have been non-exempt. The increase in the tax from 0.5 to 2.0 percent on foreign and satellite owners is triple the magnitude of the introduction of the tax, the

increase from 0 to 0.5 percent. So as a simple benchmark, we might expect 0 to 0.5 to yield one-third the magnitude of the 0.5 to 2.0 increase.⁶⁴ This would suggest the number of non-exempt properties among single, row, and condo uses prior to the tax as between 10,000 and 10,350 with rounding, and thus an aggregate decline between 2017 and 2020 in the number of non-exempt units of 4,900 - 5,250 units or approximately 50 percent, again all with rounding to reflect the extrapolatory nature of these calculations.⁶⁵

Next, we examine the transition from non-exempt to exempt and by owner type. The numbers in these tables reflect the gross change from non-exempt to exempt, and do not account for properties that move from exempt to non-exempt. The two data periods are the 2018 to 2019 transition, where the count is units that were non-exempt in 2018 and then exempt in 2019, and the same for the 2019 to 2020 period.

In Table 5, we show the total number of properties that move from non-exempt to exempt by reason for exemption, among single family, row/duplex, and condo properties.⁶⁶ The preponderance of properties that transition claim principal residence or tenanted as the reason for the exemption. Of note is the substantial decline in the tenanted share from the 2018-19 period to the 2019-20 period. The share for other exemptions rose, but the stability of the aggregate number in this category does suggest there may be a stable process of units moving in and out of exemption status for idiosyncratic property and owner reasons.

⁶⁴ This approach assumes that the marginal effects of the tax are linear and the same across owner groups.

⁶⁵ The decline in the non-exempt count from increasing the tax rate from 0.5 to 2.0 percent ranges from a 55 percent decline for foreign owners to a 46 percent decline for satellite-family owners. In contrast, over the same period the non-exempt count declined only 2 percent for All BC owners, a group for whom the tax rate did not change. If we assign the difference between the foreign and satellite owner percentage change and the All BC owner percentage change to the increase in the tax rate, then this increase led to a 44 to 53 percent decline in the non-exempt count. If the effect of the initial tax was one-third of this, then we get an estimate of the announcement effect of a 15 to 18 percent decline in the number of non-exempt properties in advance of the tax (one-third of 44 and 53 percent respectively). Converting this to magnitudes yields the estimate of 4,900 – 5,250 properties.

⁶⁶ A property may have more than one exemption. When there is more than one exemption listed, Ministry staff determined the “primary” reason based on ownership shares and provided this reason, so that in our data there is only one reason provided.

Table 5 – Changing from Non-Exempt to Exempt: Properties by Type of Exemption

Filing Period	Total	Principal Residence	Tenanted	Other
2018 to 2019	5,635	1,961	3,236	438
2019 to 2020	2,637	976	1,192	469
Share (percent)				
2018 to 2019		34.8	57.4	7.8
2019 to 2020		37.0	45.2	17.8

Note: Properties that are not single family, row, or condos (defined by BC Assessment actual use codes 000, 030, 032-036, 039, 040, 047 and 049) are excluded from this table. A property is designated as having a foreign, satellite, BC, or other Canadian owner if at least one owner has this designation; for “All BC”, all owners must be BC residents.

In Tables 6A and 6B, we present the breakdown by property type for units that transition from non-exempt to exempt by becoming eligible for an exemption, either principal residence or tenanted. Among principal residences in Table 6A, the dominant property type is split evenly between single family and condo, even though single family is the primary type among all properties. In addition, shares by property type do not vary between periods. In contrast, for properties where tenanted is the stated reason for their exempt status, condo has the largest share. While in Table 6B the drop in the number of units becoming non-exempt by reason of rental tenancy is significant for all properties, the proportionately larger decline for single family properties highlights how unusual are the 2018-2019 figures. Across all filing periods, the percentage of condos that are exempt because they are tenanted is twice that of single-family properties. The 2019-20 figures roughly are consistent with this; it is the high relative number of single-family properties that became tenanted between 2018 and 2019 that is in stark contrast to the broader patterns among properties.

Table 6A – Changing from Non-Exempt to Principal Residence Exemption

Filing Period	Total	Single	Row/Duplex	Condo
2018 to 2019	1,961	835	334	792
2019 to 2020	976	415	168	393
Share (percent)				
2018 to 2019		42.6	17.0	40.4
2019 to 2020		42.5	17.2	40.3

Note: Properties that are not single family, row, or condos (defined by BC Assessment actual use codes 000, 030, 032-036, 039, 040, 047 and 049) are excluded from this table. A property is designated as having a foreign, satellite, BC, or other Canadian owner if at least one owner has this designation; for “All BC”, all owners must be BC residents.

Table 6B – Changing from Non-Exempt to Tenanted Exemption

Filing Period	Total	Single	Row/Duplex	Condo
2018 to 2019	3,236	1,340	398	1,498
2019 to 2020	1,192	316	172	704
Share (percent)				
2018 to 2019		41.4	12.3	46.3
2019 to 2020		26.5	14.4	59.1

Note: Properties that are not single family, row, or condos (defined by BC Assessment actual use codes 000, 030, 032-036, 039, 040, 047 and 049) are excluded from this table. A property is designated as having a foreign, satellite, BC, or other Canadian owner if at least one owner has this designation; for “All BC”, all owners must be BC residents.

For our last comparison we examine the breakdown among properties that transition to exempt status and become principal residences (Table 7A) or tenanted (Table 7B) by the type of owner in the previous period when they were non-exempt. As is the case throughout this analysis, with the exception of “All BC”, where all property owners must be BC residents, only one owner of the property need meet the definition for the property to be classified in our analysis. The breakdown of shares in Table 7A shows the large relative decline in foreign and satellite shares in the principal residence category between 2018 to 2019 and then 2019 to 2020, with the decline

for foreign twice that for satellite. This drop is even more striking for properties that use tenancy as the reason for their exemption, shown in Table 7B. There is a nearly 20 percentage point drop in share for properties that in the previous period had at least one foreign owner and then became tenanted, as compared to only a four-percentage point decline in share for properties with satellite family owners. The shares of the other categories rose, even though all three had a decline in the absolute number of properties that became exempt because they were tenanted between 2018-19 and 2019-20.

**Table 7A – Previous Owner Type:
For Properties Non-Exempt to Exempt by Principal Residence**

Filing Period	Total	Foreign	Satellite	BC	All-BC	Other Canada
2018 to 2019	1,961	653	645	967	431	210
2019 to 2020	976	239	279	545	294	141
Share (percent)						
2018 to 2019		33.3	32.9	49.3	22.0	10.7
2019 to 2020		24.5	28.6	55.8	30.1	14.4

Note: Properties that are not single family, row, or condos (defined by BC Assessment actual use codes 000, 030, 032-036, 039, 040, 047 and 049) are excluded from this table. A property is designated as having a foreign, satellite, BC, or other Canadian owner if at least one owner has this designation; for “All BC”, all owners must be BC residents.

**Table 7B – Previous Owner Type:
For Properties Non-Exempt to Exempt by Tenanted**

Filing Period	Total	Foreign	Satellite	BC	All-BC	Other Canada
2018 to 2019	3,236	1,859	739	782	451	197
2019 to 2020	1,192	453	224	504	363	151
Share (percent)						
2018 to 2019		57.4	22.8	24.2	13.9	6.1
2019 to 2020		38.0	18.8	42.3	30.5	12.7

Note: Properties that are not single family, row, or condos (defined by BC Assessment actual use codes 000, 030, 032-036, 039, 040, 047 and 049) are excluded from this table. A property is designated as having a foreign, satellite, BC, or other Canadian owner if at least one owner has this designation; for “All BC”, all owners must be BC residents.

Characteristics of Properties That Move from Non-Exempt to Exempt

In Appendix E we present a series of regressions that inform the discussion here of what correlates with a property transitioning from non-exempt to exempt. As noted previously, we do not have data on owner types prior to those reported in 2019 for 2018. Thus we cannot explicitly identify the effect of the impending levying of the SVT on changes between 2017 and 2018 in ownership type and property use. Consequently, our inferences of the quantitative effect of the tax come affected patterns of ownership and use. The empirical identification rests on the difference between the responses of these owner types and the changes in ownership and use of properties subject to the tax but owned by Canadian residents, so that the tax rate did not change.

There is systematic variation in the characteristics of areas where a higher percentage of properties that were non-exempt in a prior period become exempt in a subsequent period. The regressions in Appendix Table E-1 show the percentage of non-exempt properties that change to exempt was higher in sub-Census tract level neighbourhoods where the average property was newer and had a higher assessed value. This pattern was dramatically stronger between 2018 and 2019 than between 2019 and 2020, likely reflecting the increase of the SVT for foreign and satellite family owners from 0.5 to 2.0 percent between 2018 and 2019, as compared to no change in the tax rate between 2019 and 2020.

When we look at individual properties, we see clear differences across these two periods and among property types and owner types for properties that are non-exempt in one period becoming exempt in the next period. The regressions and a full description of the methodology and results are in Appendix E in Appendix Tables E-2A to E-2C. For properties with at least one foreign or satellite family owner, the odds (ratio of the probability a property changed divided by the probability it does not) of a non-exempt property becoming exempt are dramatically higher compared to properties owned by non-satellite family BC residents for the 2018 to 2019 transition than for the latter 2019 to 2020 transition. This again is consistent with the effect of the 300 percent increase in the tax rate compared with keeping it constant. Non-exempt properties with at least one satellite family owner had notably higher odds of transitioning to being exempt by reason of being a primary residence, for both row/duplex and condo properties,

again compared to the odds for a property owned by non-satellite family BC residents. For foreign owners, both for single family and condos properties, the odds the units become non-exempted by being rented out was double the odds for non-satellite family BC resident owners. Overall, the clear results are the dramatic effect of the tax increase on foreign and satellite owners, and then for foreign owners to rent properties out to gain an exemption, while for satellite families the exemption is more likely to be gained through claiming the principal residence exemption.

Changes in Ownership Costs Post-SVTA

Movements in house prices in the specified areas described above following the introduction of the SVTA suggest some combination of reduced demand and increased supply that led to relatively slower price growth in these areas following the enactment of SVTA. Figures 6A-6E compare average 2018-20 house price appreciation to the 2015-18 rates. They nearly uniformly show there is a shift from having faster house price growth to lower growth rates that are more consistent and larger for the BC CMAs and CAs with SVTA designated municipalities compared both with other CMAs and CAs in Canada and within BC.

Figure 6A Annual House Price Growth: Pre- vs. Post- SVTA Larger CMAs

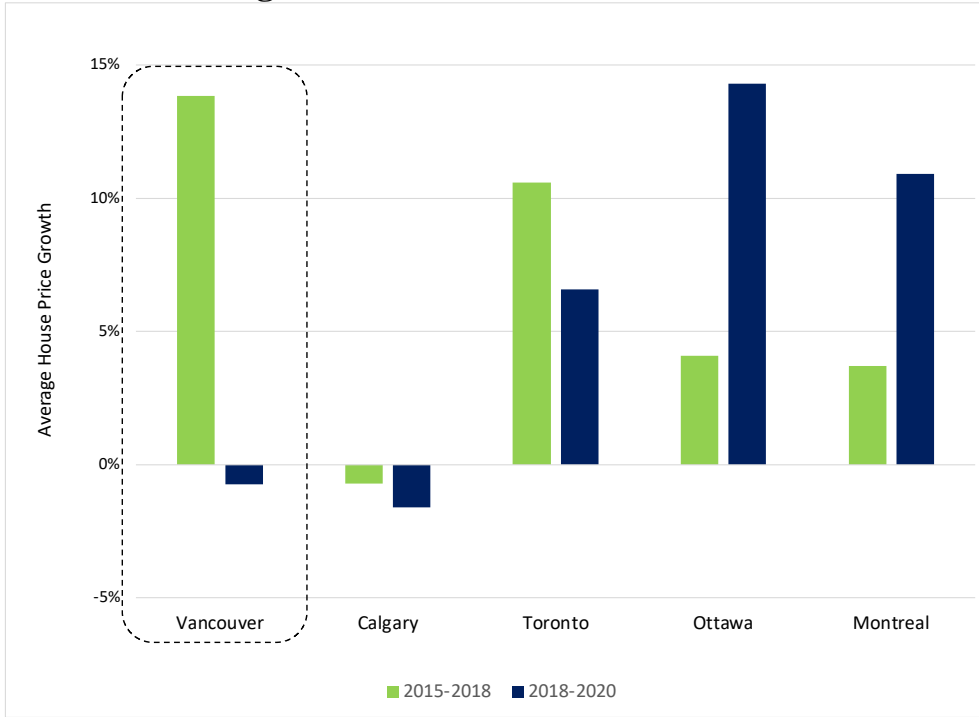


Figure 6B Annual House Price Growth: Pre- vs. Post- SVTA Mid-Size CMAs



Figure 6C Annual House Price Growth: Pre- vs. Post- SVTA Smaller CMAs

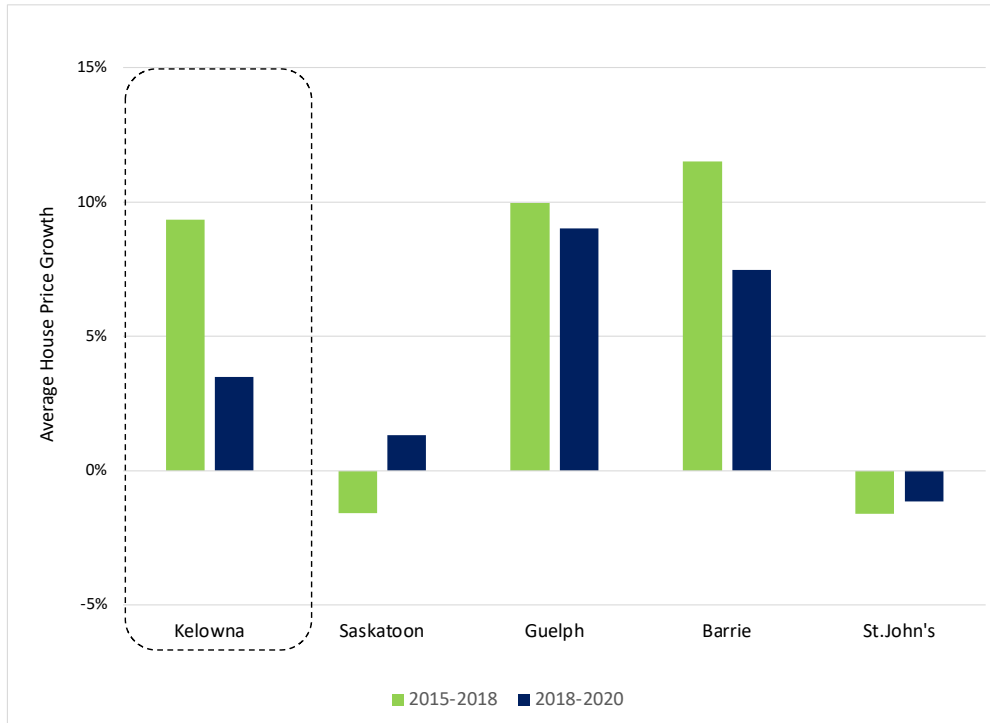
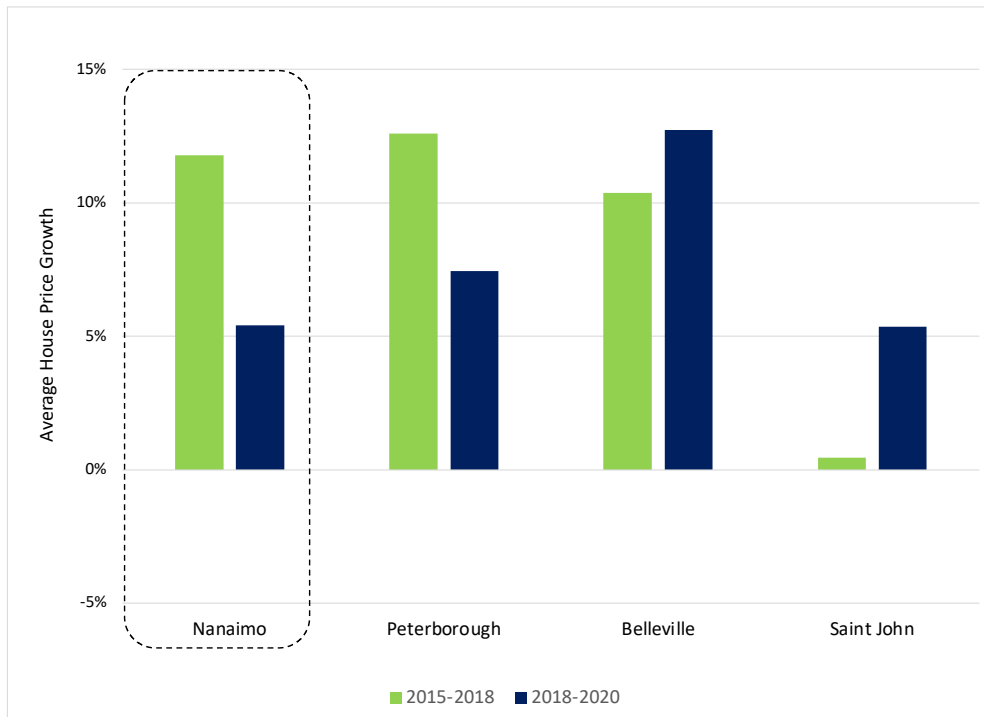
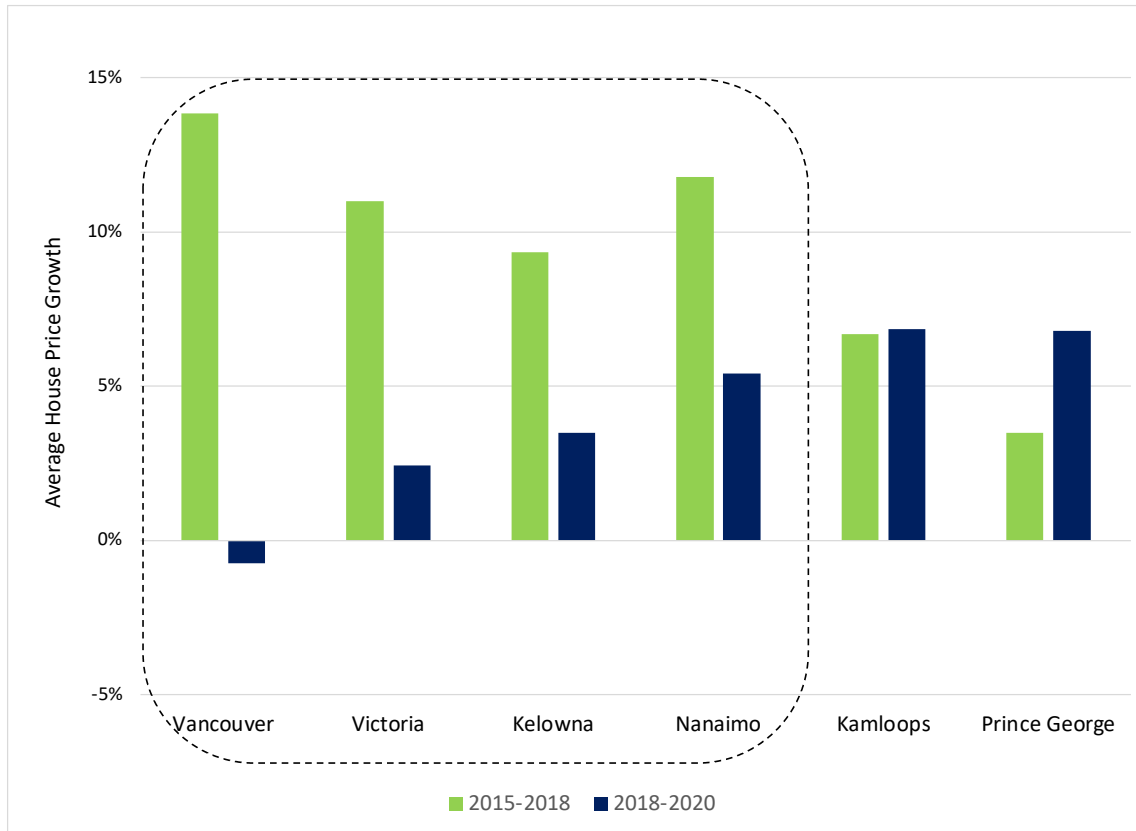


Figure 6D Annual House Price Growth: Pre- vs. Post- SVTA Select CAs



**Figure 6E Annual House Price Growth: Pre- vs. Post- SVTA
British Columbia CMAs and CAs**



Sources: Figures 6A-6E. CREA (single family benchmark), Brookfield RPS for Halifax and BCREA median price for Prince George.

To quantify the changes shown in Figures 6A-6E we calculate the difference in average house appreciation pre- and post-SVTA. This is presented as average house price growth for 2018-20 minus the average growth for 2015-18, and then these values for the CMAs and CAs covered here are averaged to generate average changes in the rate of house price appreciation for the specified areas, the BC CAs that are not part of the specified areas, the ON metropolitan areas, and all non-BC metropolitan areas presented here. As shown in Table 8, for the CMAs and CAs in the specified areas, the average house price growth rate is 8.5 percentage points lower for 2018-20 then for 2015-18. For the other areas, the average difference in house price appreciation ranges from a decline in average house price growth rates of 0.3 percentage points for the Ontario metropolitan areas to an increase of 1.7 percentage points in the BC metro areas covered

here that are completely outside of the specified areas. The difference across areas is striking: the decline in the average price appreciation rate pre- and post-SVTA in the specified areas is 10.5 percentage points lower than non-specified areas in British Columbia, 10.2 percentage points lower than markets outside BC, and 8.5 percentage points lower than markets in ON.

Table 8 Average Percentage Point Difference between Annual House Price Growth: Pre and Post SVTA, 2015-18 vs 2018-2020

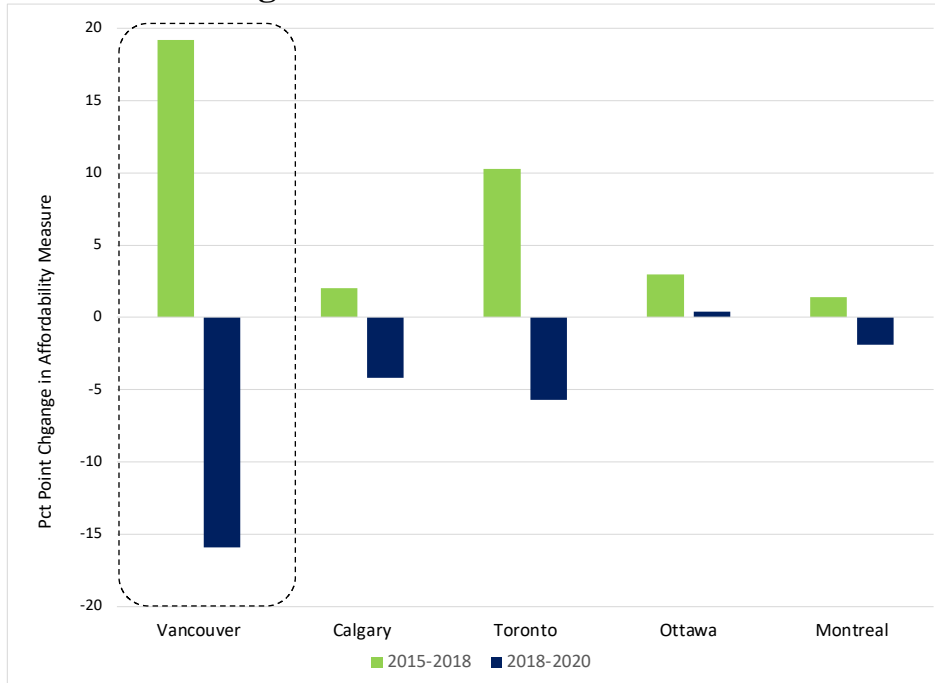
Specified Areas	-8.8
Non-Specified areas	1.7
Non-BC	1.4
Ontario	-0.3

Notes: Unweighted averages of CMA and CA price rate appreciation from selected CMAs and CAs. Specified areas are Vancouver, Victoria, and Kelowna CMAs and Nanaimo CAs. Unspecified areas are Kamloops and Prince George CAs. Ontario includes Barrie, Guelph, Kitchener-Cambridge-Waterloo, Ottawa, and Toronto CMAs, and Belleville and Peterborough CAs. Other Canadian areas are Calgary, Edmonton, Halifax, Montreal, Quebec City, Regina, Saint John, Saskatoon, and St. John’s CMAs. House prices are from CREA (single family benchmark), Brookfield RPS for Halifax and BCREA median price for Prince George.

In Figures 7A-7E, the same methodology is applied to changes in the home ownership burden (annual cost of ownership to income) pre- and post-SVTA. These figures show the percentage point change in the burden rather than the average growth rate in prices highlighted above. In these figures, the two measures are the change in estimated annual owner payments as a percentage of median income (the affordability measure is a percentage, so this is a percentage point change) from 2015-18 and the change compared to 2019-20. If the latter is negative, then the burden is decreasing, and if it is positive, but lower than 2015-18 value, the rate of increase is slower. For Vancouver 2015-18 in Figure 7A, annual owner expenses as a percentage of income rose by 19 percentage points, and then fell by 16 percentage points 2018-2020. Figures 7A-7E present these data by groups of CMAs and CAs. The specified areas have both greater declines

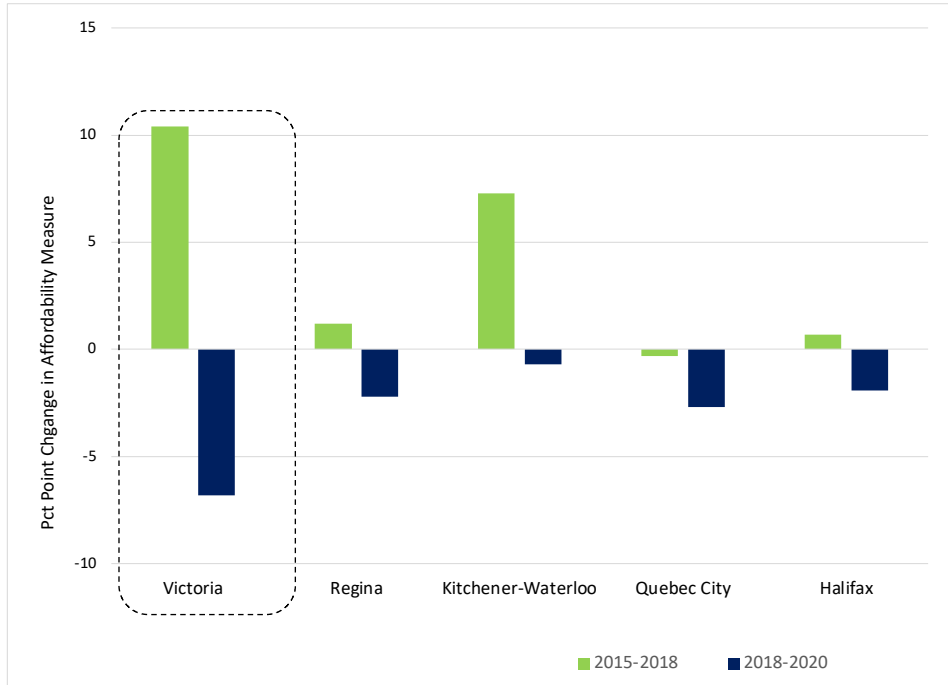
in affordability (larger increase in owner cost as a percentage of median income) prior to the approval of the SVTA and decreases after.⁶⁷

**Figure 7A Change in Ownership Burden: Pre- vs. Post- SVTA
Larger CMAs**

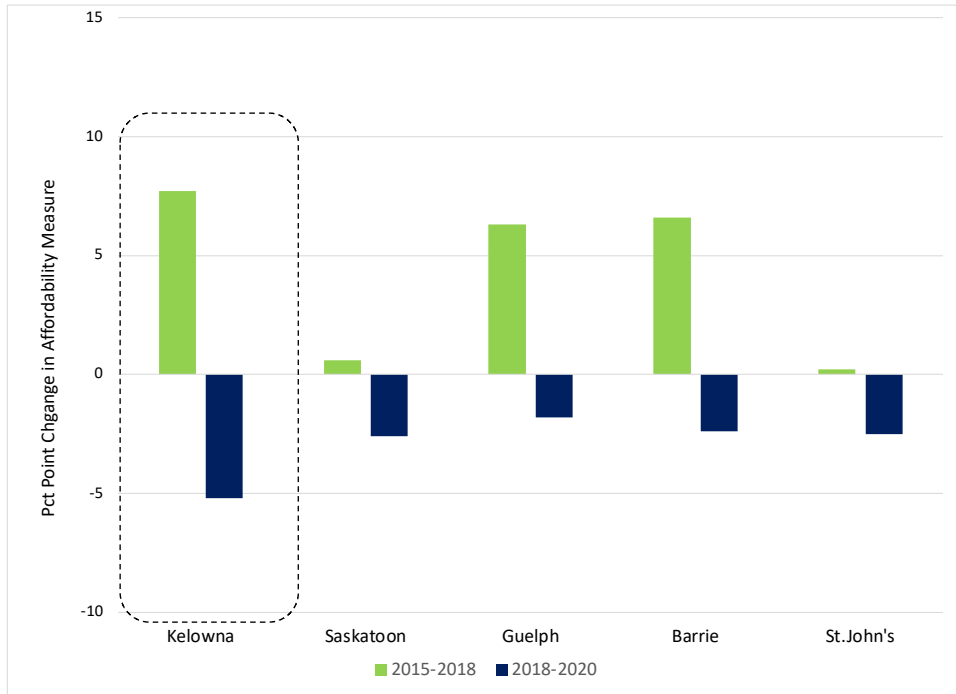


⁶⁷ The 2019 to 2020 growth in median income is estimated from provincial average weekly earnings data that had unusually high growth in BC, ON, and PQ leading to possible bias in the payment to income measure for CMAs and CAs in these provinces. Any bias would be similar within a province and to a lesser extent among these provinces, allowing for relative comparisons between them to be less subject to bias from estimating 2020 median income.

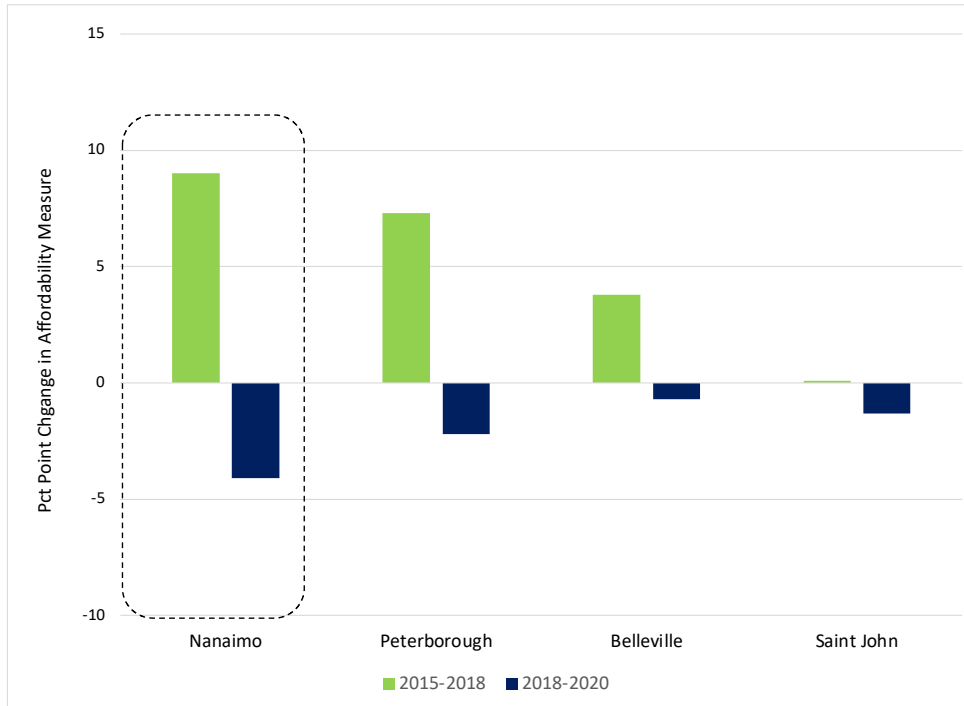
**Figure 7B Change in Ownership Burden: Pre- vs. Post- SVTA
Mid-Size CMAs**



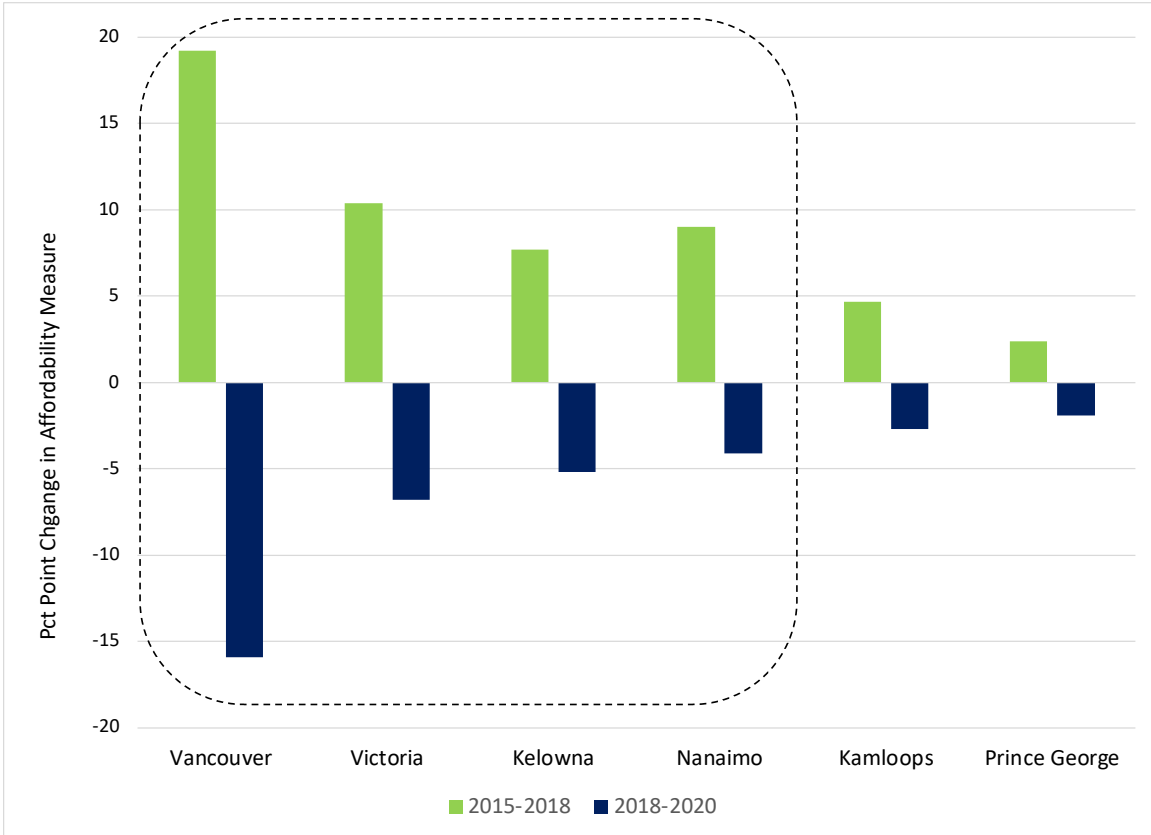
**Figure 7C Change in Ownership Burden: Pre- vs. Post- SVTA
Smaller CMAs**



**Figure 7D Change in Ownership Burden: Pre- vs. Post- SVTA
Select CAs**



**Figure 7E Change in Ownership Burden: Pre- vs. Post- SVTA
British Columbia CMAAs and CA**



Sources for Figures 7A-7E: Author calculations of the ratio of mortgage and operating costs to median family income. Data sources include CREA (single family benchmark), Brookfield RPS, and BCREA for house price series. StatsCan Cansim Tables 1110009 for median total income, Census families, 10100006 for mortgage rates, and 11100222 and 18100005 for owner operating costs.

As above, we summarize the unweighted differences in changes. In Table 9, we highlight the difference between the 2015-18 change in the ownership burden as measured in owner payments as a percent of income compared to the 2018-20 change. This table shows the difference across areas. The change falls dramatically more for the specified areas than for any of the other groupings.

Table 9 Average Percentage Point Difference between Change in Owner Payment to Income Percentage: Pre and Post SVTA, 2015-18 vs 2018-2020

Specified Areas	-19.6
Non-Specified areas	-5.9
Non-BC	-5.5
Ontario	-8.2

Notes: Author calculations of the ratio of mortgage and operating costs to median family income. Data sources include CREA (single family benchmark), Brookfield RPS, and BCREA for house price series. StatsCan Cansim Tables 1110009 for median total income, Census families, 10100006 for mortgage rates, and 11100222 and 18100005 for owner operating costs. Calculation details are in the appendix.

Changes in Rental Burdens Post-SVTA

The same descriptive approach used above for house price appreciation and the annual owner burden (payments as a percent of income) to highlight differences pre- and post-SVTA are used here to compare renter market conditions and affordability over this period. As described above, the renter data is more sensitive to timing because rental data is collected by CMHC in October, which was after the approval by the legislature of the SVTA but before royal assent in November 2018. The pre-period for analysis of rental data is capped with 2017 data. Additionally, average rents adjust slowly to market conditions compared to rents for vacant units, or spot rents, for the reasons described above. To shed light on how the SVTA may have affected renter affordability, the vacant rent series is a more accurate measure of rental market conditions than is the broader average rent data. While the rents for the vacant unit series does not begin until 2014, this is an appropriate time frame for comparing rental market conditions immediately pre- and post-SVTA. This series is not available for as many areas as the broader rent data, so some of what is gained in accuracy of market conditions is lost to having fewer areas to study.⁶⁸

⁶⁸ The vacant rental data is not available for the Nanaimo, Kamloops, and Prince George CAs, nor for the Belleville CA for 2014-2016.

Figures 8A-8C present the growth rate in average rents for vacant units for the period leading up to the introduction and passage of the SVTA (2014-17), and the 2018-2020 period, with the data for October of each year. For the most part, rent growth after the passage of the SVTA is lower in the cities in the specified areas (Vancouver, Victoria, and Kelowna CMAs) in comparison to pre-2018 growth relative to this comparison for the other areas outside of BC.

**Figure 8A Change in Rents: Pre- vs. Post- SVTA
Larger CMAs**

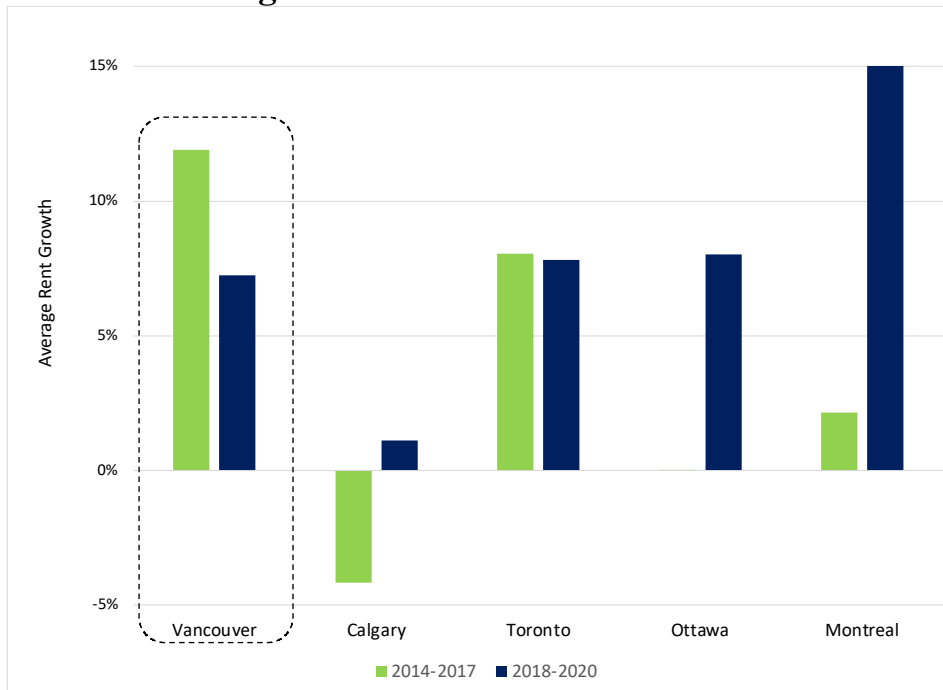


Figure 8B Change in Rents: Pre- vs. Post- SVTA: Mid-Size CMAs

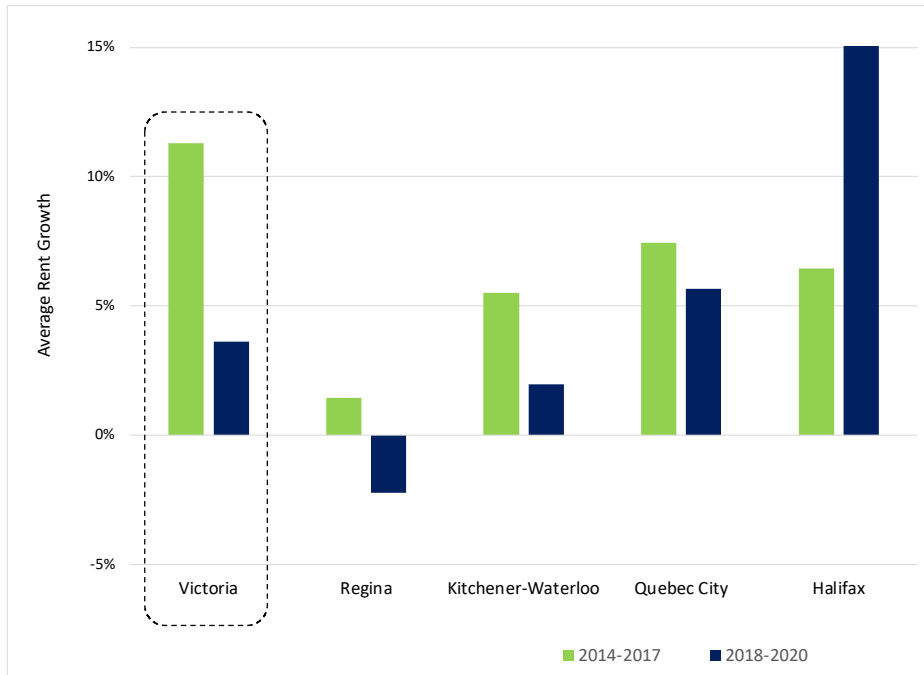
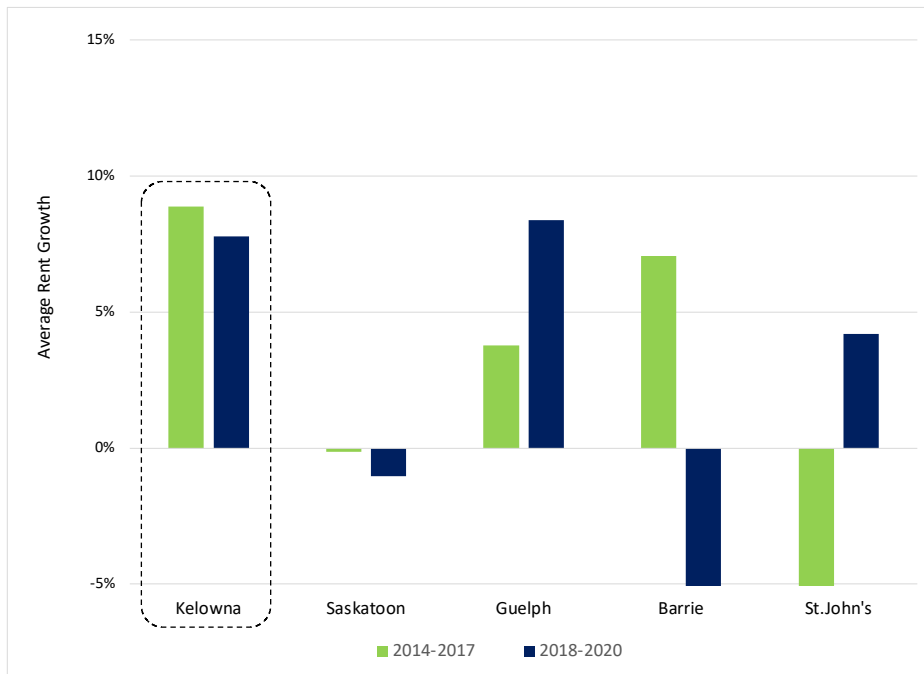


Figure 8C Change in Rents: Pre- vs. Post- SVTA: Smaller CMAs



Source: CMHC annual rental market survey. <https://www.cmhc-schl.gc.ca/en/professionals/housing-markets-data-and-research/housing-data/data-tables/rental-market/average-apartment-rents-vacant-occupied>. 2017 rent for Kelowna is extrapolated using 2016-18 rent growth and 2016-17 vs 2017-18 growth rate ratio for Victoria.

Table 10 summarizes this relative change, subtracting the 2014-17 average growth rate from the same measure for 2018-2020. A negative value in Table 10 indicates a decline in the appreciation in average rents for vacant units. The unweighted average for the metropolitan areas in specified areas is negative, and lower than those for all other cities and for those in ON.

Table 10 Average Difference Between Annual Rent Inflation: Pre and Post SVTA, 2014-17 vs 2018-2020

Specified Areas	-4.5
Non-Specified areas	N/A
Non-BC	3.4
Ontario	1.1

Notes: Annual rent inflation 2018-2020 minus inflation 2014-17. Unweighted averages of CMHC average one-bedroom apartment rents for vacant units. Specified areas are Vancouver, Victoria, and Kelowna Ontario areas are Barrie, Guelph, Kitchener-Cambridge-Waterloo, Ottawa, and Toronto CMAs, and Peterborough CA. Other Canadian areas are Calgary, Edmonton, Halifax, Montreal, Quebec City, Regina, Saint John, Saskatoon, and St. John’s CMAs. House prices are CREA (single family benchmark),

Next, we extend the analysis to the renter burden. Here the burden is the ratio of the average rent for vacant one-bedroom units to median total income for persons not in Census families. The comparison is not the absolute level of this measure, but its change. In Figures 9A-9C, the two measures are change in the burden (the burden is measured as a percentage, so this is a percentage point change) for 2014-17 and the change for 2018-2020. If the latter is negative, then the burden is decreasing, and if it is positive, but lower than 2014-17 value, the rate of increase is slower. While median income for areas in BC, ON, and PQ may be biased upward for 2020, leading to lower renter burdens, this should still allow for comparisons across these areas.

Figure 9A Change in Renter Burden: Pre- vs. Post- SVTA Larger CMAs

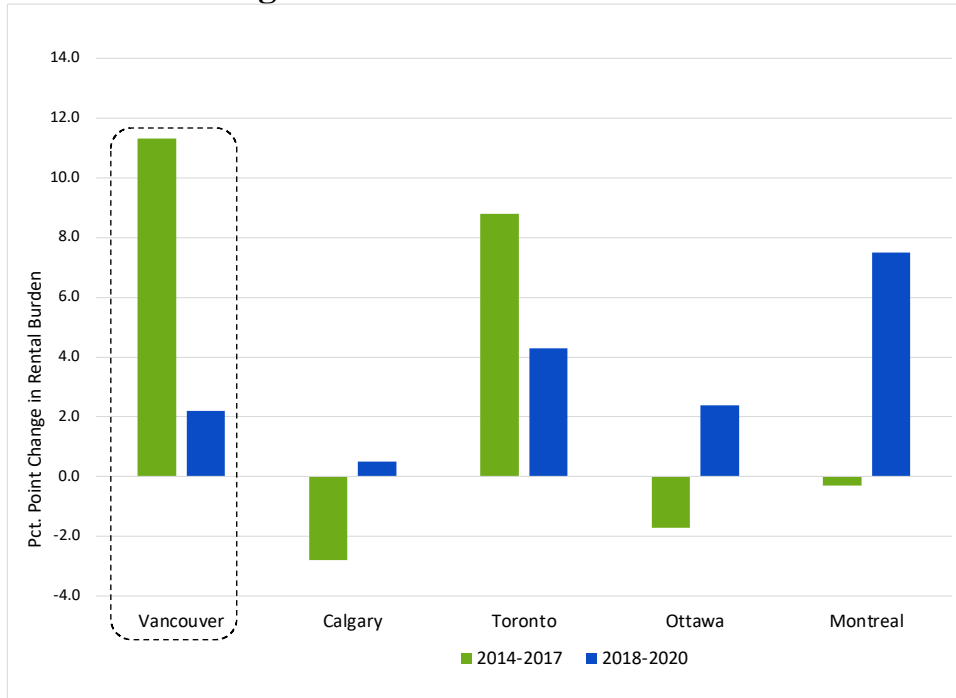
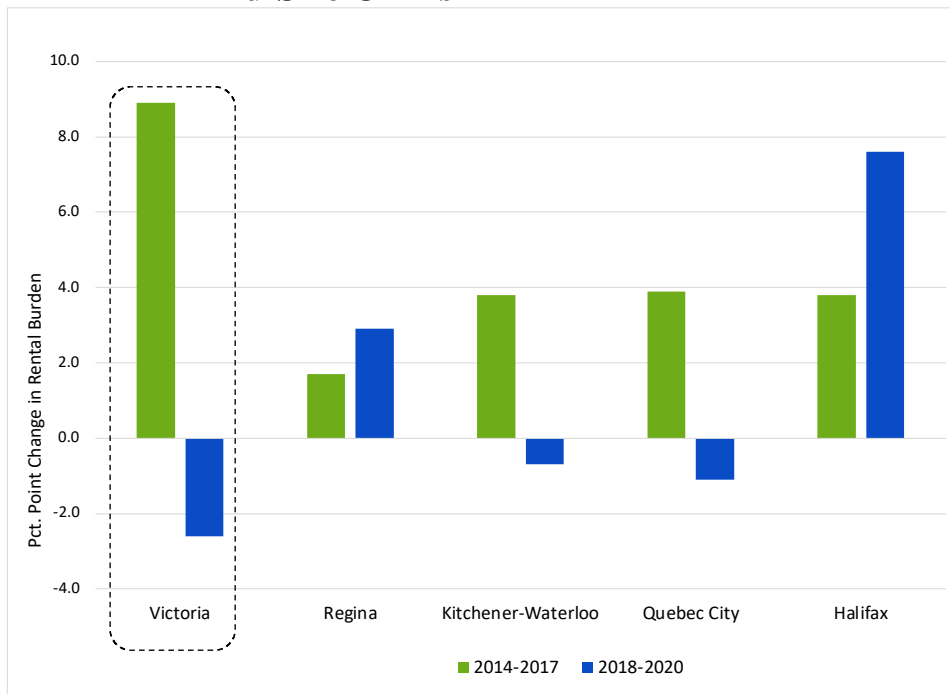
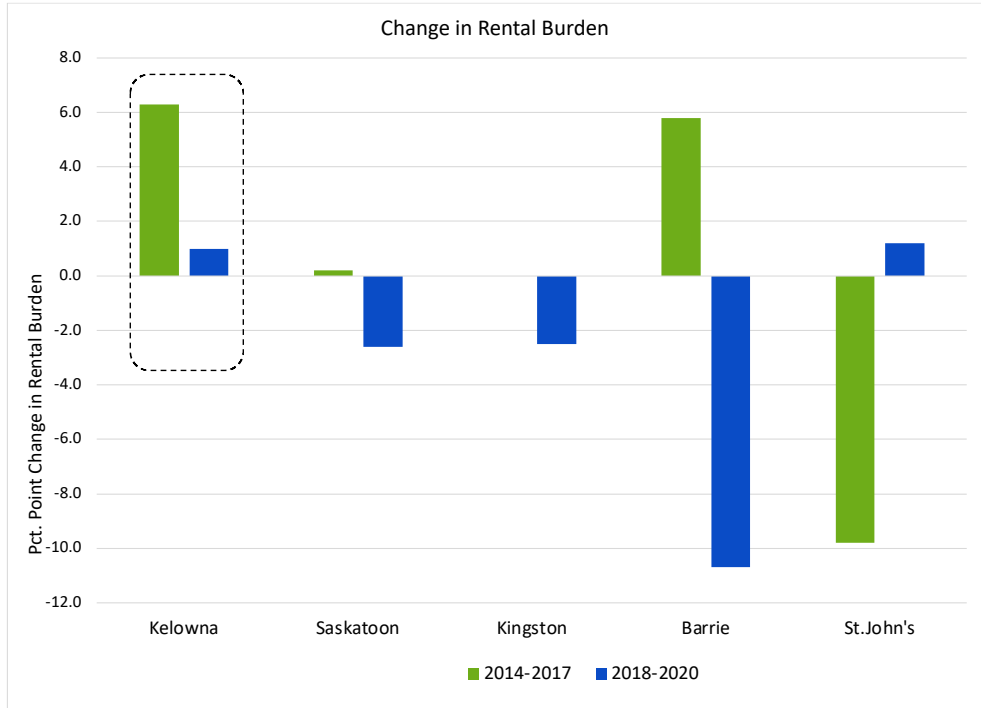


Figure 9B Change in Renter Burden: Pre- vs. Post- SVTA Mid-Size CMAs



**Figure 9C Change in Renter Burden: Pre- vs. Post- SVTA
Smaller CMAs**



Source: CMHC annual rental market survey. 2017 rent for Kelowna is extrapolated using 2016-18 rent growth and 2016-17 vs 2017-18 growth rate ratio for Victoria. Income measure, Cansim Table 11100009, Median employment income of persons not in Census families (Dollars)

Renter burdens increase less quickly or even decline in Vancouver and Victoria when compared to their reference cities. For Kelowna, this is less clear as there is a very large swing in the data for its reference, the Barrie CMA. Averaging the difference between these two measures in Table 11 and comparing the specified areas with the ON CMAs and more broadly with the other included CMAs across Canada, the post-SVTA growth in renter burdens is notably lower in the specified areas.

Table 11 Average Percentage Point Change in Renter Burden (Rent to Income): Pre and Post SVTA, 2014-17 vs 2018-2020

Specified Areas	-11.5
Non-Specified areas	N/A
Non-BC	-0.4
Ontario	-4.8

Notes: Difference between change in renter burden 2018-2020 minus change 2014-17. Unweighted averages. Using CMHC average one-bedroom apartment rents for vacant units. Specified areas are Vancouver, Victoria, and Kelowna CMAs. Ontario includes the Barrie, Guelph, Kitchener-Cambridge-Waterloo, Ottawa, and Toronto CMAs and Peterborough CA. Other Canadian areas are Calgary, Edmonton, Halifax, Montreal, Quebec City, Regina, Saint John, Saskatoon, and St. John’s CMAs. House prices are CREA (single family benchmark),

Effect of SVTA on Vacancy Rates

The final pre-post SVTA comparison of growth rate uses the previous presentation approach and applies it to overall apartment vacancy rates. The analysis uses changes in vacancy rates pre-versus post-SVTA. Using survey data and the actual change in the vacancy rates leads us to have the change from 2014-17 as the pre-SVTA measure and the change from 2017-20 as the post-SVTA measure, as the October 2018 survey of vacancy rates will already capture effects of the SVTA on the supply of rental accommodations in the specified areas. Thus, the 2017 vacancy rates are the preferred starting point to measure changes in vacancy rates because of the SVTA. In Figures 10A-10E, a negative value indicates tightening rental markets as vacancy rates are falling and a positive value the reverse. A swing from negative 2014-17 values to positive 2017-20 values suggests a reversal in market conditions favourable to renters. The 2020 value is from October 2020, and its higher vacancy rates may well be a COVID-19 pandemic effect on mobility patterns.

Figure 10A Change in Vacancy Rates: Pre- vs. Post- SVTA Larger CMAs

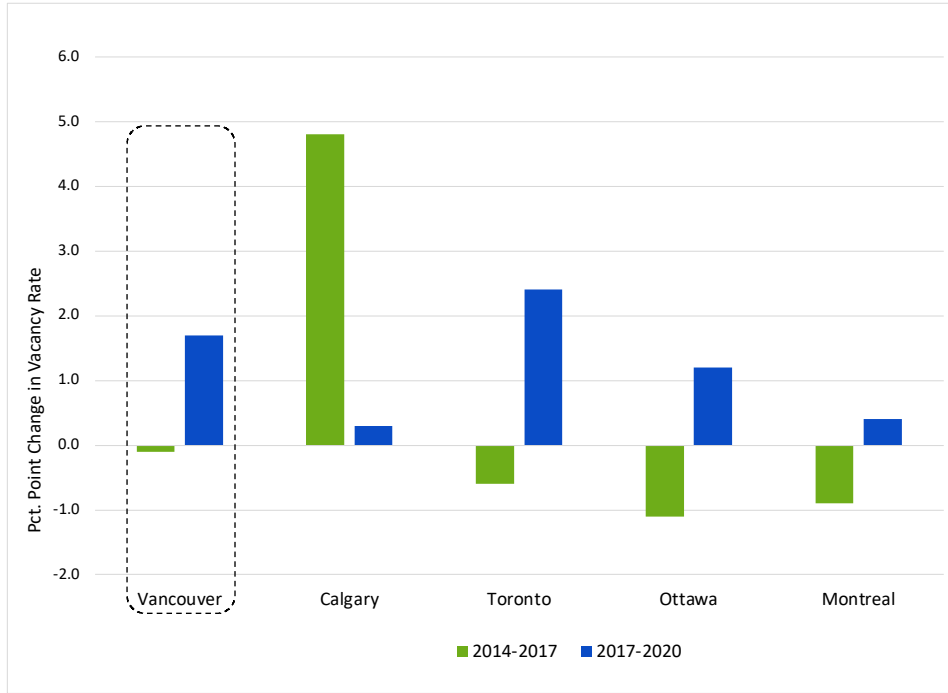
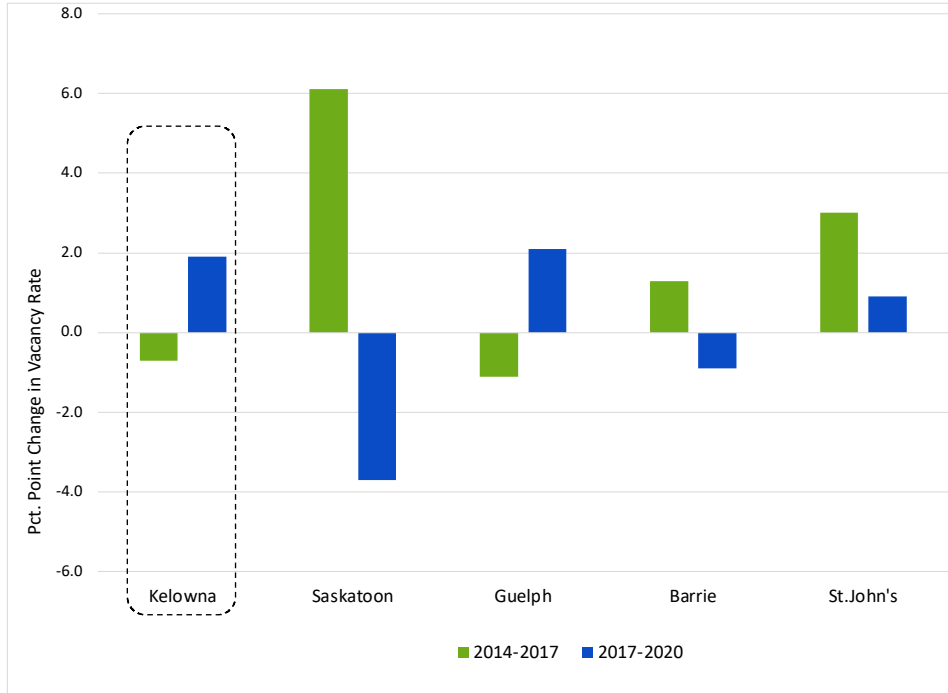


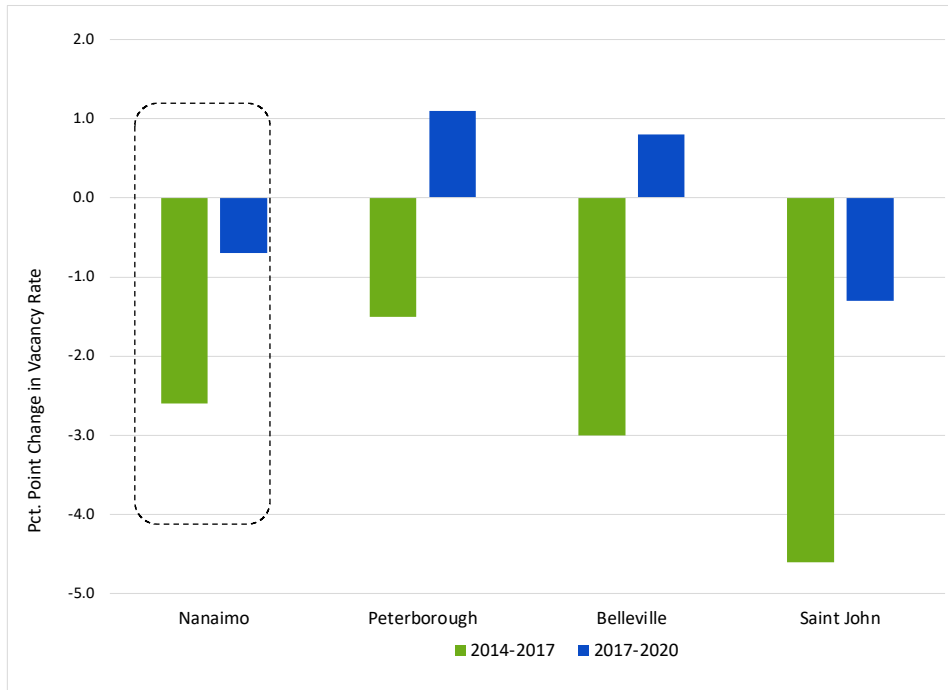
Figure 10B Change in Vacancy Rates: Pre- vs. Post- SVTA Mid-Size CMAs



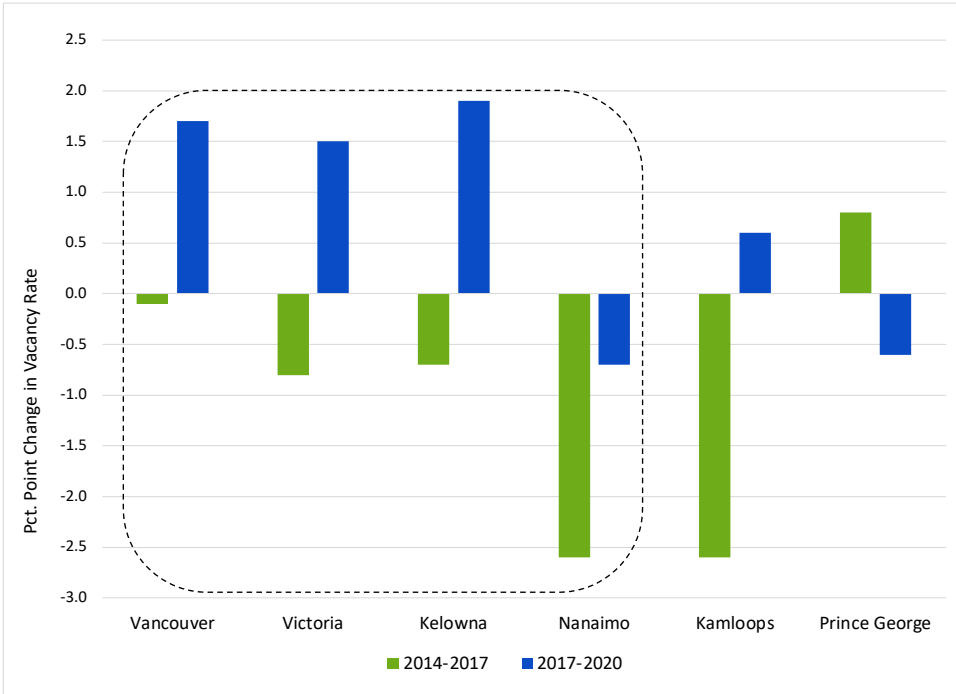
**Figure 10C Change in Vacancy Rates: Pre- vs. Post- SVTA
Smaller CMAs**



**Figure 10D Change in Vacancy Rates: Pre- vs. Post- SVTA
Select CAs**



**Figure 10E Change in Vacancy Rates: Pre- vs. Post- SVTA
British Columbia CMA and CAs**



The vacancy results are less clear than movements in rents or affordability. Across most cities, vacancy rates are rising or rising more from 2017-20 than they did from 2014-17, with the Alberta and Saskatchewan cities as the exceptions. Table 12 provides averages by our groups of interest. The measure here is the 2017-20 change in vacancy rates minus the 2014-17 change. A positive value indicates a larger rise post-SVTA than pre-SVTA, or alternatively a smaller decline. For the specified areas there is an average difference in the change in vacancy rates of 2.2 percentage points, which is consistent with markets becoming looser for renters after the SVTA took effect. This is larger than for the non-specified areas in BC and non-BC areas, but essentially identical to the average across included ON CMA and CAs.

Table 12 Average Percentage Point Difference in Vacancy Rate Change Pre and Post SVTA, 2014-17 vs 2017-2020

Specified Areas	2.2
Non-Specified areas	0.9
Non-BC	0.0
Ontario	1.9

Notes: Unweighted averages of changes in CMHC average vacancy rates: one-bedroom apartment rents for vacant units. The values are the change in vacancy rate between 2017-2020 minus the change in the vacancy rate between 2014 to 2017, so that a larger value indicates that vacancy is growing more in the three years after 2017 than it is growing in the three years before 2017. Specified areas are Vancouver, Victoria, and Kelowna CMAs and Nanaimo CA. Non-specified areas are Kamloops and Prince George CAs. Ontario areas are Barrie, Guelph, Kitchener-Cambridge-Waterloo, Ottawa, and Toronto CMAs and Belleville and Peterborough CA. Other Canadian areas are Calgary, Edmonton, Halifax, Montreal, Quebec City, Regina, Saint John, Saskatoon, and St. John’s CMAs.

Effect of SVTA on House Prices: Detailed Analysis of British Columbia Transactions

To assess the effects of the SVTA on house prices, we analyze individual transactions as a function of owner SVTA status before and after the introduction of the SVTA. The full regression tables and methodologies for these regressions are presented in Appendix E. Our question is whether properties with owners subject to higher tax rates of the SVT, i.e., foreign owners or satellite families, sell for lower prices than properties owned by those not paying the tax or those taxed at a lower rate: primarily Canadian owners. Our second analysis examines whether the difference in prices between before the SVTA is announced and after the SVTA received royal assent is lower in neighbourhoods with more properties that were non-exempt. The underlying conceptual model is that owners subject to the additional holding cost of the tax are more likely to sell, and if they do so have a lower reservation price, so they are more likely to sell for a lower price. Aggregated up to the neighbourhood level, if different neighbourhoods are not perfect substitutes for each other, then neighbourhoods with more owners subject to the tax should have more supply of units for sale, or those that are more willing to be sold for slightly lower prices, than in neighbourhoods where fewer owners are facing the higher holding costs. These effects should be most noticeable when there are changes in holding costs, i.e., when the SVTA was first introduced and when the tax rate was increased for certain owners.

Our first test of this approach is whether owners subject to the higher tax rate after 2018 sell for a lower price than do other owners. These regressions are presented in Appendix Table E-3, where we regress a property's transaction price against owner status as it relates to paying the SVT.

The regressions include controls for property characteristics, time, and location. Across property types, we find that transactions where one of the owners of the property being sold is foreign sell for a 1.2 to 2.7 percent discount. If one of the owners was a satellite family, the discount ranges from 0.7 to 4.0 percent. Discounts at the low end of each range are for condos and the high end is for single family properties.

The second set of tests analyzes the effect of neighbourhood conditions, the presence of non-exempt homes in a neighbourhood, on prices rather than how the status of the property owner affects prices. These regressions test whether increases in the tax rate have a differential effect on neighbourhood house prices depending on whether there is a higher or lower than average percentage of properties that are non-exempt. We compare the change in property transaction prices between pre-SVTA (the 12 month period leading up to Feb. 20, 2018) and post-SVTA (the 12 month period after Nov. 28, 2018) by whether the change in prices in neighbourhoods with a high percentage of non-exempt properties is different from the change in neighbourhoods with a low percentage, hence the name of the methodology as difference in differences (DiD). We have to make the assumption that the pattern of the percentage of properties that are not exempt in the pre-SVTA period can be approximated by the pattern of non-exempt properties as declared for the 2018 filing period. Our definition of neighbourhood is the four-character postal code (X0X0 of the X0X0X0 code), which has on average 2,300 properties in the specified areas.

The results in Appendix Table E-4 are quite consistent and robust: house prices in neighborhoods with a greater share of properties paying the SVT declined following the introduction of the SVTA relative to prices where a smaller percentage of properties had owners who paid the SVT. Strictly, this means they rose by a smaller percentage. When "high vs. low" is defined as below or above the median percentage of non-exempt units by property type in the neighborhood, the price change for the high non-exempt percentage neighborhoods, i.e., more sensitive to the SVT, is 3.0 to 5.1 percentage points lower than the change for the low non-exempt percentage areas. When we raise the definition of "high" to those above the 75th percentile, so the mean percentage

in the group is higher, this range rises to 4.2 to 9.1 percent higher. This is consistent with the increased supply of houses for sale conjecture. Across property types, the negative relative change is largest for single family properties and lowest for condominium apartments.

Increased Rental Supply from SVTA

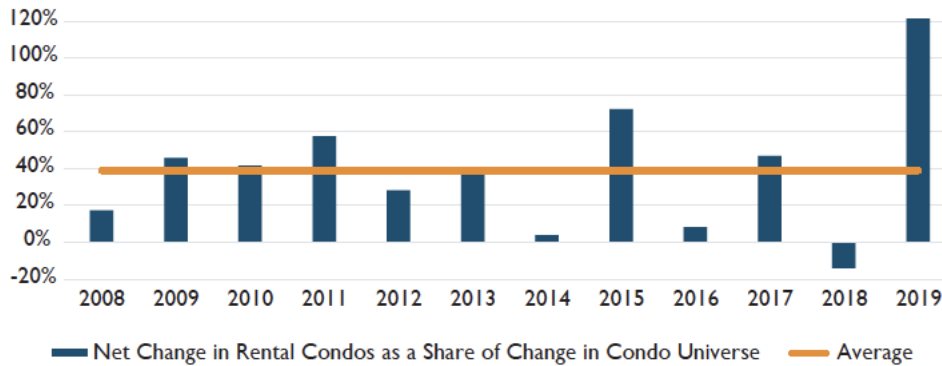
In their 2020 and 2021 *Rental Market Report* for the Vancouver CMA, CMHC reported data consistent with the SVTA encouraging owners of strata units to bring their units to the rental market.⁶⁹ Between 2018 and 2019, CMHC estimated that there was an 18.9 percent increase in the rental housing stock from strata condominium units as over 11,000 strata units were brought into the rental market by new construction and conversion to tenancy of existing units. For 2019 to 2020, they identify a further 10.2 percent increase, or 7,137 units, resulting in a total increase of over 18,000 units. This increase in the rental housing supply substantially exceeds 2018 completions of 2,741 purpose-built rental housing units in row housing and apartment buildings and is large relative to the 2018 stock of 109,289 purpose built rental units.⁷⁰ It is approximately 5 percent of the total number of 2016 renter households. Using a one percent rental demand elasticity, this would result in rents being 5 percent lower than they would otherwise be.⁷¹ In their assessment, the large jump in the number of additions to the rental stock from strata condo units shown in Figure 12 below is at least in part because of the 2018 policies.

⁶⁹ CMHC Rental Market Report, Vancouver CMA. Released 2020. <https://www.cmhc-schl.gc.ca/en/data-and-research/publications-and-reports/rental-market-reports-major-centres>

⁷⁰ Purpose built rental housing from Metro Vancouver Housing Data Book, September 2019. <http://www.metrovancouver.org/services/regional-planning/data-statistics/housing-data-book/Pages/default.aspx>

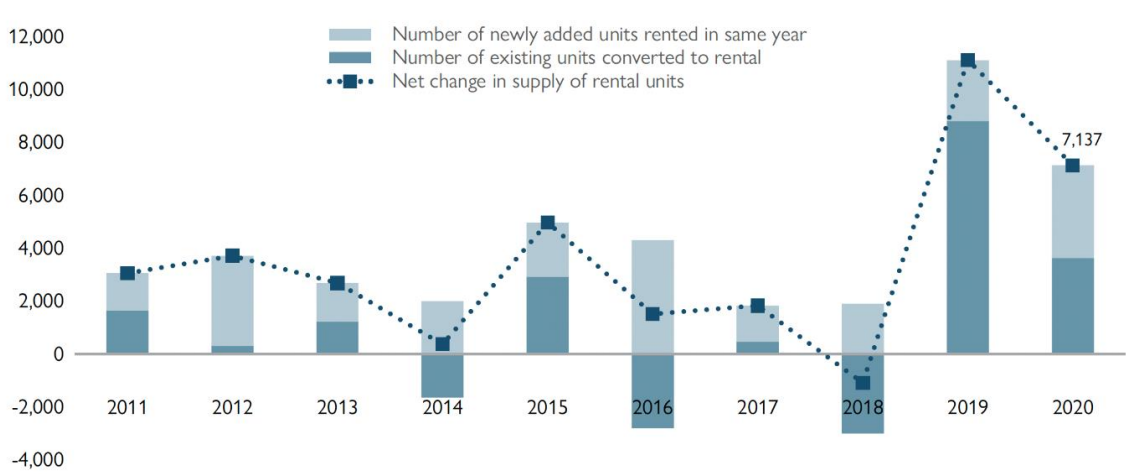
⁷¹ See Hanushek. E.A. and J. M. Quigley. 1980. What is the price elasticity of housing demand? *The Review of Economics and Statistics*, 62:449–454 for rental housing demand. 348,700 rental households in 2016, 2016-2020 population growth of 120,800, average household size of 2.5, and renter share of households of 36.3%, and an overall 2020 vacancy rate across all unit types of 2% yields the additional units as a 4.8% increase in the estimated 2020 supply.

Figure 11 Change in Rental Condos as Share of Change in Condo Stock



Source: CMHC Rental Market Report, Vancouver CMA. Released 2020. <https://www.cmhc-schl.gc.ca/en/data-and-research/publications-and-reports/rental-market-reports-major-centres>

Figure 12 Change in Rental Condos



Source: CMHC Rental Market Report, Vancouver CMA. Released 2021. <https://www.cmhc-schl.gc.ca/en/data-and-research/publications-and-reports/rental-market-reports-major-centres>

Effect of SVTA on Foreign Ownership

The SVTA targets foreign owners and satellite families with a higher tax rate than for Canadian citizens. As discussed in the theory section, foreign capital inflows can have a larger negative effect on affordability than domestic behaviour as the demand is less connected to local incomes. Two sources of data are suggestive of changes in foreign purchases and ownership of housing in the specified areas following the introduction of the SVTA. Table 9 uses property transfer tax

data to track the share of transactions where there is a purchaser identified as a non-Canadian person and subject to the additional tax in the designated areas. Across all three property types, the foreign share prior to the announcement of the plans for the SVT is 65 to 100 percent higher in the specified areas than elsewhere in the province. The share drops more in the specified areas than elsewhere in the province after the announcement and after the increase in the SVT tax rate for foreign buyers. Across all three property types, the average decline in foreign buyer share in the specified areas is at least three times that of the change in other areas in the province.

Table 9 Foreign Buyer Share of Transactions

Period	Single	Single	Row	Row	Condo	Condo
	SVTA Specified Areas	Remainder of Province	SVTA Specified Areas	Remainder of Province	SVTA Specified Areas	Remainder of Province
Pre-SVTA Dec 17 - Feb 18	4.2	2.3	3.8	1.9	5.3	3.2
2018 - Post SVTA Announcement	2.3	1.8	2.2	1.6	3.4	2.9
2019	1.2	1.5	1.6	2.6	2.5	2.4
2020	0.8	1.3	1.2	1.6	2.1	2.2
2021	0.8	1.1	1.4	1.6	1.3	2.0
Change						
Pre to Post 2018	-1.9	-0.5	-1.6	-0.3	-1.9	-0.3
Post 2018 to 2019	-1.1	-0.3	-0.6	1.0	-0.9	-0.5
Pre-SVTA - 2021	-3.4	-1.2	-2.4	-0.3	-4.0	-1.2
Average Change	SVTA Specified Areas	Remainder of Province				
Pre to Post 2018	-1.8	-0.4				
Post 2018 to 2019	-0.9	0.1				
Pre-SVTA - 2021	-3.3	-0.9				

Source: BC Ministry of Finance, property transfer tax records. “Remainder of the Province” excludes Whistler. As an international resort destination, foreign ownership levels in the Resort Municipality of Whistler are extremely high. Including Whistler changes the values for the “Remainder of the Province” substantially in a way that obfuscates the effects of the SVTA.

The second data source is CMHC’s Condominium Apartment Survey. This survey includes data on whether condominium apartments are owned by non-residents. Table 10 shows the evolution of this ownership share for select CMAs comparing the average for 2016-17 to the average for 2019-20. The BC CMAs in the specified areas have higher non-resident ownership shares when compared to their reference cities in 2016-17, except for the Toronto CMA, which has the highest share in both periods. Following the introduction of the SVTA, the foreign ownership

share fell in the BC CMAs. In contrast, in the other metro areas, other than Saskatoon, the non-resident ownership share for 2019-20 is higher than it is for 2016-17. Table 11 summarizes the difference between these two values, averaging across city groups.

Table 10 Average of Non-Resident Share of Condominium Apartments

Year	Vancouver	Calgary	Toronto	Ottawa	Montreal
2016-2017	2.2	0.9	2.4	0.7	1.4
2019-2020	1.2	1.2	2.8	1.1	1.8
Year	Victoria	Regina	Kitchener-Waterloo	Quebec City	Halifax
2016-2017	1.0	0.4	0.6	0.5	1.2
2019-2020	0.8	0.5	0.8	0.6	1.6
Year	Kelowna	Saskatoon			
2016-2017	0.5	0.3			
2019-2020	0.3	0.2			

Source: CMHC Condominium Apartment Survey

Table 11 Average Percentage Point Change in Non-Resident Share Pre and Post SVTA: Apartment Condominium Ownership

Specified Areas	-0.5
Non-Specified areas	NA
Non-BC	0.2
Ontario	0.3

Source: CMHC Condominium Apartment Survey. Pre- is 2016-17 and post- is 2019-20.

Appendices

Appendix A - Comparing SVTA Specified Area with BC Census Metropolitan Areas and Census Agglomerations⁷²

Vancouver CMA		
Jurisdiction	Specified Area	2016 Population
Village of Anmore	Yes	2,210
Village of Belcarra	Yes	643
Bowen Island Municipality	No	3,680
City of Burnaby	Yes	232,755
City of Coquitlam	Yes	139,284
City of Delta	Yes	102,238
Electoral Area A	Partial	16,133
City of Langley	Yes	25,888
Township of Langley	Yes	117,285
Village of Lions Bay	No	1,334
City of Maple Ridge	Yes	82,256
City of New Westminster	Yes	70,996
City of North Vancouver	Yes	52,898
District of North Vancouver	Yes	85,935
City of Pitt Meadows	Yes	18,573
City of Port Coquitlam	Yes	58,612
City of Port Moody	Yes	33,551
City of Richmond	Yes	198,309
City of Surrey	Yes	517,887
City of Vancouver	Yes	631,486
District of West Vancouver	Yes	42,473
City of White Rock	Yes	19,952
<u>First Nations' Reserves</u>	<u>No</u>	<u>9,053</u>
Total		2,463,431
Pct in Specified areas		99.4%

⁷² All data are from the 2016 Canadian Census, using <https://www12.statcan.gc.ca/Census-recensement/2016/as-sa/fogs-spg/Index-eng.cfm>. The Capital District list of municipalities can be found https://en.wikipedia.org/wiki/Capital_Regional_District. The list for Metro Vancouver is <http://www.metrovancouver.org/about/municipalities/Pages/default.aspx>. 15,890 of the 16,133 residents of Electoral Area A are at UBC or in the University Endowment Lands and thus in the specified area.

Victoria CMA		
Jurisdiction	Specified Area	2016 Population
City of Victoria	Yes	85,792
District of Saanich	Yes	114,148
Township of Esquimalt	Yes	17,655
District of Central Saanich	Yes	16,184
District of North Saanich	Yes	11,249
City of Langford	Yes	35,342
District of Sooke	Yes	13,001
District of Oak Bay	Yes	18,094
Town of Sidney	Yes	11,672
Town of View Royal	Yes	10,408
City of Colwood	Yes	16,859
District of Highlands	Yes	2,225
District of Metchosin	Yes	4,708
Juan de Fuca EA (1)	<u>No</u>	4,860
<u>First Nations' Reserves</u>	<u>No</u>	<u>5,133</u>
Total		367,770
Pct in Specified areas		97.3%

Kelowna CMA		
Jurisdiction	Specified Area	2016 Population
City of Kelowna	Yes	127,380
City of West Kelowna	Yes	32,655
Lake Country	No	12,922
Peachland	No	5,428
Central Okanagan	No	3,824
Central Okanagan J	No	1,981
<u>First Nations' Reserves</u>	<u>No</u>	<u>10,692</u>
Total		194,882
Pct in Specified areas		82.1%

Abbotsford CMA		
Jurisdiction	Specified Area	2016 Population
City of Abbotsford	Yes	141,397
District of Mission	Yes	38,833
<u>First Nations' Reserves</u>	<u>No</u>	<u>288</u>
Total		180,518
Pct in Specified areas		99.8%

Chilliwack CA		
Jurisdiction	Specified Area	2016 Population
City of Chilliwack	Yes	83,788
Unaffected jurisdictions	No	12,451
Kent	No	6,067
Fraser Valley H	No	1,847
Fraser Valley E	No	1,540
Fraser Valley D	No	1,529
Harrison Hot Springs		1,468
<u>First Nations' Reserves</u>	<u>No</u>	<u>5,273</u>
Total		113,963
Pct in Specified areas		84.4%

Nanaimo CA		
Jurisdiction	Designated Area	2016 Population
City of Nanaimo	Yes	90,504
District of Lantzville	Yes	3,605
Nanaimo A	No	7,058
Nanaimo CA	No	2,808
Other jurisdictions	No	9,866
<u>First Nations' Reserves</u>	<u>No</u>	<u>961</u>
Total		114,802
Pct in Specified areas		90.6%

Appendix B - Defining Affordability

Measuring access to home ownership is the identification of the joint problem of the set of appropriate housing units to which a household has access and the extent to which a household's income is sufficient to make the periodic payments to live in that unit while still consuming society's normal bundle of other goods. For renter households it is matching their income to unit rents, where the unit is appropriate in size and location for the household and the unit meets societal quality standards. For owner households there is a similar matching of periodic payments, in this case mortgage payments, property insurance, property tax and heating costs, to household income. As well, the household must have access to enough wealth to make a down payment of a property's purchase price, with minimum size (currently 5%) from most mortgage lending sources dependent on Office of the Superintendent of Financial Institutions (OSFI) policy regarding mortgage insurance.

There is an interdependence between wealth and income in affordability measures. More wealth allows a higher down payment, which then reduces the mortgage amount and the size of the mortgage payment, making the latter more "affordable". This affordability is only for those with sufficient initial wealth. This creates two affordability hurdles that must be jointly cleared. For a given loan size, the mortgage payment will depend on the interest rate charged and the loan's amortization period. Underlying both the down payment and the mortgage costs is the price of housing. The level of these variables and those that determine them (unit rents, heating costs, property tax and insurance, house prices, interest rates, mortgage underwriting criteria, household wealth and household income) vary over time and locations and determine the variation in housing affordability and access to home ownership in a location at a given point in time.

The share of income to be spent on housing, and how much housing of what quality is appropriate, designates whether housing is considered affordable or not. The current benchmarks are 30 percent of income for renters and 32 percent for owners.⁷³ As Hulchanski (1995) presents,

⁷³ With other debt included this is 36 percent. The owner percentage reflects the underwriting for a loan with *National Housing Act* (NHA) backed mortgage insurance, which is necessary for any mortgage with a loan to value

these “rules of thumb” have evolved and changed over time and do not express a scientific determination as much as a societal one.⁷⁴ Stone (1990) is notable for trying to define a benchmark for shelter poverty based on the residual income after paying for a basket of non-housing goods relative to rents.⁷⁵ For Canada, a recent CMHC (2019) report uses a variant of Stone’s methodological approach with Statistics Canada’s Market Basket Measure for the non-housing bundle to see what rents as a percentage of income would be for different types of households in different cities.⁷⁶ The report finds that this definition of affordability yields rent to income percentages that are higher and lower than the 30 percent mark depending on household type and location. For convenience, this report uses the 30 percent for renters and 32 percent for owner affordability benchmarks, but it is important to recognize their limitations and that they reflect assumptions about non-housing consumption and housing type.

The type of housing considered as appropriate will have an outsize effect on a standard of affordability. A one-bedroom condo might be “affordable” to family of four but would not be considered appropriate. Our use of one- and two-bedroom apartments for renter affordability analysis matches renter conditions: in 2018, 79 percent of Canadian renters in metropolitan areas lived in an apartment.⁷⁷ For owners, the exercise is more complicated. Nationwide, 74 percent of owners are in a detached or semi-detached single-family home, but for first-time buyers this drops to 60 percent. In the Vancouver Census Metropolitan Area (CMA), the latter is 21 percent, with many more first-time buyers in condominium and townhouse units than elsewhere. The percentage of first-time buyers in single family houses rises to 43 percent for other BC Census metropolitan areas, and 71 percent in BC Census agglomerations (CAs).⁷⁸ In order to compare affordability across Canadian cities and over time, single family detached units are the most

ratio of 80% or higher issued by a federally chartered lending institution, which includes all of the major Canadian banks.

⁷⁴ Hulchanski, J. D. 1995. The Concept of Housing Affordability: Six Contemporary Uses of the Housing Expenditure-to-income Ratio. *Housing Studies*, 10 (4),471-491

⁷⁵ Stone, M. E. 1990. *One-Third of a Nation: A New Look at Housing Affordability in America*. Washington, DC: Economic Policy Institute.

⁷⁶ CMHC, Jan. 2019, Research Insight: Defining the Affordability of Housing in Canada, downloaded at <https://assets.cmhc-schl.gc.ca/sf/project/cmhc/pubsandreports/research-insights/2019/research-insight-defining-affordability-housing-canada-69468-en.pdf?rev=365474b3-823c-4a54-b18d-5b138c0215f9>

⁷⁷ Statistics Canada. Canadian Housing Survey 2020. Table 46-10-0036-01

⁷⁸ *Ibid.* BC CMAs are Abbotsford-Mission, Kelowna, Vancouver, and Victoria. Chilliwack and Nanaimo are the two CAs where there are SVTA specified areas.

consistent ownership form. The principal reason why the share of owner households in Vancouver occupying this structure type is much lower than elsewhere in Canada is the high cost of housing, which leads more households in Vancouver to purchase less expensive and smaller condominium and townhouse units. So, the choice of smaller units without land is both a solution to the affordability challenges and a result of them. For ease of comparison, this report uses single family detached house prices to price home ownership. It is important to remember that this will yield results for Vancouver and other cities with a larger share of strata units that are higher than what households are paying compared to other cities where more homeowners are in single family units.

Appendix C - Data Sources and Methodology for Report & Appendix Figures / Tables

House Prices. Single Family House Prices - House prices are derived from monthly Canadian Real Estate Association (CREA), Brookfield Real Property Solutions (Brookfield RPS), and British Columbia Real Estate Association (BCREA) house price series. We use the CREA single family benchmark home price where possible, adding Halifax from the Brookfield RPS. Prince George is derived from BCREA median house prices for BC. Northern series median values are scaled by the difference between the CREA benchmark price and the BCREA median for 2019 for Nanaimo, which has a similar mix of housing. All monthly values are averaged to derive the annual value.⁷⁹

House Price: Income Ratio. The ratio of the house price and income series House price series is described above. Income measure is derived from Stats Canada Cansim data table 11100009 for median total income for economic families. Data is available through 2019. For 2020 income is estimated using the percentage increase in the provincial median weekly wages for full time employees (Cansim Table 2820072). The increase in the weekly wage rate is scaled by the spread between 2017-19 median total income growth and the 2017-19 provincial weekly wage rate.

Owner Occupied Housing Affordability. House price and income data as described above. Mortgage payments are calculated assuming a 5-year term uninsured rate with an 80% loan to value ratio (LTV), using the uninsured series from above, with the estimated values for 2010-2012 calculated as a spread to the average bank rate. The spread is the average spread between these two measures from 2013-2017 when both series are available. The amortization period is fixed at 30 years. Other expenses included in housing costs are property taxes, property insurance, and heating. Property taxes are estimated using a series of websites that report mill rates by city and then applied to the benchmark price.⁸⁰ Property insurance and heating expenses

⁷⁹ Canadian Real Estate Association (CREA) - <https://www.crea.ca/housing-market-stats/mls-home-price-index/>. Brookfield RPS <https://www.rpsrealsolutions.com/house-price-index/house-price-index> . British Columbia Real Estate Association (BCREA) <https://www.bcrea.bc.ca/what-we-do/economics/#statistical-releases>

⁸⁰ <https://www.altusgroup.com/wp-content/uploads/2019/08/Canadian-Property-Tax-Rate-Benchmark-Report-2018.pdf> , <https://wowa.ca/calculators/property-tax> , <https://www.zocasa.com/blog/how-property-tax-differs-across-canada-infographic/> , <https://www.zocasa.com/blog/ontario-property-tax-rates-2019> ,

are calculated using provincial average expenditure per household for insurance and utility expenses by type (Statistics Canada Survey of Household Spending per Cansim Tables 11100222 and 1810005). The property taxes, insurance and heating are indexed using provincial series from Cansim Table 18100005.

One Bedroom Average Apartment Rent. Using annual rents from CMHC as reported in Cansim Table 34100133 Canada Mortgage and Housing Corporation, average rents for areas with a population of 10,000 and over, annually (Dollars). We use the 1-Bedroom rent for row and apartment structures of three units and over.

Rental Burden: Avg 1-Bedroom Rent to Income. Ratio of rents from above with median total income for those not in a Census family (Stats Canada Cansim Table 11100009) for 2010-2019. As above income for 2020 is estimated from provincial weekly wage rates.

Average Rents – 1-Bedroom Vacant Units - Vacancy Gap. Vacancy Rate is CMHC 1-Bedroom Vacancy rate for units in buildings with at least three units as reported in Cansim Table 34100131 Dwellings Vacant is from 2016 Canadian Census as reported in Censusmapper.ca. Census tract data scrapped is aggregated to CMA and CA level for selected areas.

Foreign Ownership. Data taken from Statistics Canada. Canadian House Statistics Program Table 46100018.

Change in Rental Condos as Share of Change in Condo Stock. Figure taken from CMHC Rental Market Report, Vancouver CMA. Released 2020. <https://www.cmhc-schl.gc.ca/en/data-and-research/publications-and-reports/rental-market-reports-major-centres>

Select Mortgage Rates – Canada - 5-Year Fixed Rate Mortgage. Canada: 5-Year Fixed Rate Mortgage - Bank of Canada, Cansim Table 17600689. The average rate was discontinued in 2018. Prior to 2013 the insured and uninsured rates are not reported. For the affordability series

below these are estimated for 2010-2012 using their mean spread to the average chartered bank rate from 2013-2017.⁸¹

⁸¹ Bank of Canada: http://www.bankofcanada.ca/rates/?page_moved=1 .

Appendix D - Dataset Construction for SVTA and PTT Data

SVTA Data

SVTA data was obtained from the Ministry of Finance. The dataset provided includes detailed information on each property that was subject to the SVTA between 2018 and 2020. In each filing year, every owner of a property in the SVTA specified areas was required to submit a form to the Ministry of Finance detailing the geographic description of the property, the ownership of the property and its current use. Based on the filing, the Ministry would then determine if the property was assessed the SVTA. The data provided was thus a combination of the property owners filing(s) and the internal determination of the employees of the Ministry enforcing the SVTA.

The geographic description includes the roll number, area id, jurisdiction id, neighborhood id, postal code, its BC Assessment actual use code, and physical address. The data on the owners of the property describes the number of owners, their citizenship status and the family structure. There are indicator functions for properties where at least one owner is foreign or not the family is a satellite family. Canadian citizens are distinguished between BC residents and other Canadians.

To identify properties that were non-exempt from the SVT, we use the variable "Exempt Status" which takes the value "non-exempt". This captures all properties where at least one owner of the property was required to pay the SVT during the filing year. For exempt properties, where all owners are exempt from the tax, the Ministry provided the declared reason for the exemption as declared by the owner with the largest ownership share, or primary residence if one of the owners with equal shares declared this reason, otherwise the first listed. The exemption reason is typically consistent across owners declaring an exemption.

Using the actual use code, we then categorize properties into four categories: Single family, row houses, condominiums and "Other." 51 percent of observations are single family detached properties; 29 percent are strata condominium apartments; 16 percent are row houses; and the remaining 4 percent are other. Over 80 percent of the properties we classify as row housing are

townhouses, with the remainder other attached dwelling types such as duplexes, triplexes, and fourplexes. “Other” contains all remaining properties subject to the SVTA. Over 70 percent of the properties in this category have a residential land use designation by BC Assessment, but without a main residential structure. Another 21 percent are considered primarily a non-residential land use by BC Assessment.

For the purposes of identifying the properties that are in the SVTA we determine which CMA or CA each property is located by merging the jurisdiction id with CMA identification provided by Statistics Canada (<https://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates>). From this, we verify that all observations are in the SVTA area.

With this data we can then construct variables detailing the percentage of properties within a specified geographic area that are non-exempt payers of the SVTA. We do this at the 4-digit postal code level.

PTT Data

The Ministry of Finance also provided us with data on the Property Transfer Tax (PTT). When a property is sold, the purchasers are subject to the PTT and must fill out a form that provides detailed information on the transaction. The data thus provides a log of the property transactions and information on the purchasers involved in the transaction. The PTT data provided by the Ministry of Finance also includes the BC Assessment property characteristics.

The primary objective of using the PTT data is to link the transaction history, date, transaction price and housing characteristics with the SVTA data. To do this, we merge the PTT data with the SVTA on jurisdiction id and roll number. When merging these data sets, some observations are lost due to inability to identify (changing roll numbers) multiple transactions and other incompatibilities between the PTT and SVTA data sets.

BC Assessment Data

The roll and transactions data sourced from BC Assessment through the Ministry of Finance and UBC Data Library includes the date of sale, transaction price, actual use of the property, and the property characteristics associated with each transaction. The property characteristics include information on the geographic location and size of the property, the use of property and the physical characteristics of the primary structure located on the property. The physical characteristics of the structure include the finished floor area, the number of bedrooms, the number of bathrooms, the effective age of the structure, number of stories, and the type of covered parking. The actual use of the property distinguishes between single family, duplex, townhouse, condominium, and other property uses such as farmland. The geographic information provided also details the address of the property, city, neighborhood, and jurisdiction.

To match BC Assessment transactions with Census tract identifiers we use Statistics Canada Postal Code OM Conversion File (PCCF), June 2017 version (<https://www150.statcan.gc.ca/n1/en/catalogue/92-154-X>). For those without a match using postal codes we use the given street address to identify the postal codes and Census tracts based on latitude and longitude derived from and BC Address Geocoder API, and ArcGIS software.

Appendix E - Regression Output

Moving from Exempt to Non-Exempt: Neighbourhood Characteristics

Appendix Table E-1 shows regressions that estimate possible causal factors in explaining the variation across four-character postal code neighbourhoods in the percentage of non-exempt properties in one period that become exempt in the next period. The dependent variable is the percentage of non-exempt units in the previous period that transitioned to exempt in the current period. The regressions are in sets of two and run separately for single family units (columns (1)-(2)), row and townhouse units (columns (3)-(4)), and condominium apartment units (columns (5)-(6)). For each property type, there is a different regression for 2019 (change from 2018 to 2019 filing periods) and 2020 (the change from 2019 to 2020), which are the odd and even numbered column in each property type pair respectively. The right-hand side explanatory variables are the average values by type in each four-character postal code area. All regressions include Census tract fixed effects, so the identification comes from the variation within Census tracts by four-character postal code neighbourhood values. In general, more properties move from non-exempt to exempt in neighbourhoods where properties are newer and higher value on average. The magnitude of this effect is three to five times larger for value in 2019 than 2020, and twice as high for age in the earlier period.

Appendix Table E-1 Determinants of Neighbourhood Rates of Transition: From Non-Exempt to Exempt

Dependent Variable : pct of non-exempt units in previous period that transition to exempt	(1)	(2)	(3)	(4)	(5)	(6)
avg assessed value by type in area (\$000000)	0.4244*** (0.1101)	0.0889 (0.0581)	0.9557*** (0.2697)	0.3638** (0.1468)	2.4697*** (0.3629)	0.7617*** (0.1995)
avg lot size for single detached in area (000) sq ft	0.0013 (0.0041)	0.0012 (0.0022)				
avg finished floor area by type in area (000) sq ft	0.1311* (0.0719)	0.0684* (0.0379)	-0.4628** (0.1790)	-0.2486** (0.0973)	-1.6874*** (0.4719)	-0.7712*** (0.2582)
avg property age by type in area	-0.0065** (0.0028)	-0.0034** (0.0015)	-0.0229*** (0.0033)	-0.0103*** (0.0018)	-0.0193*** (0.0053)	-0.0107*** (0.0029)
Constant	-0.3655 (0.2407)	0.1540 (0.1268)	1.3979*** (0.3486)	1.0105*** (0.1900)	1.7662** (0.6996)	1.2459*** (0.3856)
Year	2019	2020	2019	2020	2019	2020
Property Type	Single	Single	Row	Row	Condo	Condo
Adj. R-square	0.758	0.443	0.574	0.304	0.684	0.548
Number of Cases	715	715	642	643	699	700

Statistical significance is as follows: *<0.10, **<0.05, ***<0.01. All regressions include census tract fixed effects. Obs are aggregate values at the 4 character postal code level. Regressions are weighted by the number of properties by type in the neighbourhood.

Discrete Choice Regression: Logit and Odds Ratio

Appendix Tables E-2A through E-2C show logit regressions for the probability a unit transitions from non-exempt to exempt based on owner and unit characteristics. Owner characteristics are those for the owner in the prior period. These regressions all include BC Assessment neighbourhood fixed effects. The dependent variable is binary 0-1. For non-exempt vs. exempt, it is 1 for properties that become exempt and 0 for those that remain non-exempt. For units that change to exempt by becoming tenanted, the values are 1 for these properties and 0 for all others, even if they become exempt through other means – the same for properties that become exempt by becoming a principal residence. Results are presented as odds-ratios, where the odds are the probability within a group, and the ratio is measuring the marginal probability effect of the right-hand side variable over the same without. A coefficient above one is an increase in the ratio and below one is a decrease. A coefficient estimate of 1.7 on “owner previous period was foreign” indicates that having an owner the previous period who was foreign increases the probability of the outcome 70 percent more compared to the probability if the owner and property in the previous period had all the same other characteristics, but the owner was not foreign. These are not absolute probability effects, but relative effects.

The logistic regression of the type used is for explanatory variables X where there is a binary outcome variable Y . The probability $Y=1$ is characterized as p and has the form of the odds ratio:

$$\frac{p}{1-p} = e^{\beta_0 + \beta_1 X}$$

The regression on probability p is then

$$p = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X)}}$$

The parameter of interest β is the derivative of the ln of the odds ratio $p/1-p$, with respect to X . It describes the effect of the explanatory variable on the log of odds of the occurrence of $Y=1$ over $Y=0$. The typical presentation of β is in an exponentiated form, i.e., e^β . A null effect is then where the coefficient is equal to one. In this specification, X includes dummy variables for owner

type in the initial period, assessed value in lieu of structure and lot attributes to control for property characteristics, and a large number of fixed effects for neighbourhood, using the BC Assessment neighbourhood definitions.

Regression Results: Probability of Transition from Non-Exempt to Exempt

The data in Appendix Table E-2A is for single family homes, E-2B is for row houses, and E-2C is for condo properties. All tables have three groups of regressions: i) a property becomes exempt vs. remains non-exempt, ii) a property becomes exempt and is designated as a principal residence vs. all other (remains non-exempt or becomes exempt for another reason), and iii) a property becomes exempt and is designated as tenanted vs. all other (remains non-exempt or becomes exempt for another reason). Within each group, the first regression is for the 2018 to 2019 transition, labelled as “2019”, and the second is for the 2019 to 2020 transition, labelled as “2020”. Our variables of interest are the dummy variables on initial period owner year, where the excluded types, i.e. the control category, are properties owned entirely by BC residents, accounting for over 90 percent are properties.⁸² Statistically significant coefficients greater than one for these variables would indicate that odds of moving from non-exempt to exempt is higher than the odds those for all others, subject to the controls, with less than one being the inverse.

The increase in the tax rate from 0.5 to 2.0 percent for foreign and satellite family owners had a clear effect of increasing the relative odds that a property with at least one foreign or satellite family owner would transition from non-exempt to exempt. For regression (1) for the 2018 to 2019, where the dependent variable is 1 for units that switched to exempt and 0 for those that remained non-exempt, in each of the three tables, the estimated coefficient for foreign or satellite is greater than 1 and statistically different from 1 in five of six cases (the estimated coefficients are exponentiated, so $\beta=0$ is a coefficient where $e^0 = 1$). Having at least one foreign owner in 2018 increased the ratio of the odds a property became non-exempt in 2019 relative to the odds for a property with all BC owners by 26 to 75 percent. For satellite owners, this increase in the

⁸² For the 2018 filing period this category had among the non-exempt single, row/duplex, and condo property types 1,651 properties with all BC owners, 118 with Canadian registered corporate owners, 21 with foreign registered corporate owners, and 14 with at least one but not all BC owners and 7 not otherwise identified.

odds relative to the odds for properties with all BC owners ranged from 47 to 85 percent. The tax did not increase between 2019 and 2020, and this shows up with a lower effect on the effect on the relative odds ratio, where for 2020 only three of the six-point estimates are statistically different from one, and overall, the marginal effect on the odds ratio of moving to exempt increases by -24 to 60 percent.

The transition from not-exempt to principal residence (regressions (3) and (4) in each table) is varied. Having at least one foreign owner lowers the odds of transitioning to exempt because of a principal residence compared to the odds for the properties with all BC owners, with a decline in the ratio of the odds in the range of 34 to 52 percent in five of the six cases. This difference is statistically significant in two of the six cases over the two periods and three property types with no consistent difference between the 2018-19 and 2019-20 samples. In contrast, for properties that had at least one satellite family owner in the initial year, the ratio of the odds a property with a satellite owner becomes exempt as a principal residence relative to the odds for the excluded owner categories increased in five of the six cases, two of which are statistically significant and with a range of 3 to 36 percent.

The odds of transitioning to an exemption by being tenanted is dramatically higher for properties where at least one owner in the initial period was foreign than for the “All BC” owner control category. The effect of the increased SVT rate is notable here: for 2018 to 2019, if the property was a single-family unit owned by a foreigner, the odds that it transitioned to exempt by tenancy was 117 percent higher than the odds for the “All BC” category, and for condos this increase in relative odds was 93 percent. For single family units, the increase in relative odds for 2019-20 was slightly lower at 87 percent, but for condos it dropped to a not statistically different than estimated increase of 14 percent. In contrast, properties with at least one satellite family owner had a statistically significant decline in the relative odds of their non-exempt properties transitioning to an exemption by rental tenancy compared with properties with all BC owners.

For properties with other Canadian owners, the odds of transition was only statically different than that for all BC owners in a few cases. These cases varied by property type in category, but in all cases where the difference was statistically significant, the odds a property transitioned

were lower for all properties with at least one other Canadian owner than for the properties owned by all BC residents.

**Table E-2A Determinants of individual Property Transition:
From Non-Exempt to Exempt by Reason for Single Family Units**

Dependent variable :	(1)	(2)	(3)	(4)	(5)	(6)
Dummy, =1 if at least one owner previous period was foreign	1.7478*** (0.2056)	1.2851 (0.1974)	0.5351*** (0.0677)	0.9702 (0.1788)	2.1744*** (0.2467)	1.8712*** (0.3466)
Dummy, =1 if at least one owner previous period was satellite	1.4686*** (0.1755)	1.2311 (0.1834)	1.0324 (0.1284)	1.3621* (0.2310)	0.8057* (0.0940)	0.6316** (0.1271)
Dummy, =1 if at least one owner previous period was other canadian	0.5705*** (0.0920)	0.8113 (0.1517)	0.9946 (0.1833)	1.1855 (0.2726)	0.6390** (0.1159)	0.8270 (0.2023)
Property assessed value in \$000000	1.0556 (0.0395)	0.9689 (0.0544)	0.9261* (0.0391)	0.9490 (0.0734)	1.0809** (0.0351)	0.9649 (0.0706)
Year Comparison	2019 Non-exempt vs. exempt	2020 Non-exempt vs. exempt	2019 Exempt by princ. res	2020 Exempt by princ. res	2019 Exempt by tenanted	2020 Exempt by tenanted
Adj. R-square	0.123	0.091	0.097	0.105	0.124	0.077
Number of Cases	3062	1554	3017	1414	3059	1334

Statistical significance is as follows: * p<0.10, ** p<0.05, *** p<0.01. All regressions include BC Assessment neighbourhood fixed effects.

**Appendix Table E-2B Determinants of individual Property Transition:
From Non-Exempt to Exempt by Reason for Townhouse/Duplex Units**

	(1)	(2)	(3)	(4)	(5)	(6)
Dummy, =1 if at least one owner previous period was foreign	1.2666 (0.2361)	0.7600 (0.1735)	0.4810*** (0.0983)	0.5333** (0.1586)	1.2563 (0.2390)	1.2125 (0.3264)
Dummy, =1 if at least one owner previous period was satellite	1.8472*** (0.3872)	1.5937* (0.4052)	0.9732 (0.2129)	1.1737 (0.3616)	0.6501** (0.1406)	0.5556* (0.1824)
Dummy, =1 if at least one owner previous period was other canadian	1.0513 (0.3307)	0.8261 (0.2442)	0.5962 (0.2288)	1.8967 (0.7456)	0.6300 (0.2358)	0.9124 (0.3429)
Property assessed value in \$000000	0.8915 (0.1592)	0.8214 (0.1648)	0.9660 (0.1967)	0.5487 (0.2645)	0.7694 (0.1526)	0.6071 (0.2420)
Year Comparison	2019 Non-exempt vs. exempt	2020 Non-exempt vs. exempt	2019 Exempt by princ. res	2020 Exempt by princ. res	2019 Exempt by tenanted	2020 Exempt by tenanted
Adj. R-square	0.076	0.055	0.093	0.101	0.078	0.068
Number of Cases	1038	663	967	559	989	598

Statistical significance is as follows: * p<0.10, ** p<0.05, *** p<0.01. All regressions include BC Assessment neighbourhood fixed effects.

Appendix Table E-2C Determinants of individual Property Transition: From Non-Exempt to Exempt by Reason for Condo Apartment Units

Dependent variable :	(1)	(2)	(3)	(4)	(5)	(6)
Dummy, =1 if at least one owner previous period was foreign	1.6785*** (0.1400)	1.1962* (0.1192)	0.6595*** (0.0727)	0.6340*** (0.1002)	1.9272*** (0.1702)	1.1350 (0.1312)
Dummy, =1 if at least one owner previous period was satellite	1.6417*** (0.1589)	1.3938*** (0.1581)	1.3681*** (0.1645)	1.2047 (0.1976)	0.9947 (0.1035)	0.9188 (0.1236)
Dummy, =1 if at least one owner previous period was other canadian	1.0098 (0.1228)	0.7274** (0.0958)	1.3220* (0.2079)	0.7897 (0.1592)	0.8585 (0.1232)	0.6342*** (0.1044)
Property assessed value in \$000000	0.9792 (0.0340)	1.0317 (0.0463)	0.8383** (0.0658)	1.0178 (0.0763)	0.9765 (0.0373)	1.0746 (0.0527)
Year Comparison	2019 Non-exempt vs. exempt	2020 Non-exempt vs. exempt	2019 Exempt by princ. res	2020 Exempt by princ. res	2019 Exempt by tenanted	2020 Exempt by tenanted
Adj. R-square	0.061	0.039	0.074	0.073	0.063	0.037
Number of Cases	4235	2870	4076	2639	4155	2735

Statistical significance is as follows: * p<0.10, ** p<0.05, *** p<0.01. All regressions include BC Assessment neighbourhood fixed effects.

Price Effects of the SVTA

Owner Characteristics and Sales Price

These regressions see whether the SVTA pressured foreign and satellite owners to sell their properties by seeing whether they received lower prices for their homes after the increase in the SVT owed by these types of owners. Transactions are for 2019-2021 and we drop transactions identified by BC Assessment as not suitable for analysis and identified as vacant property sales or multi property sales. The data are winsorized at the top and bottom 0.10% by price and finished floor area, and by the bottom 0.10% for lot size, and we drop lots above 2 acres in size. All regressions have Census tract fixed effects and standard errors are clustered at the Census tract level.

The regressions indicate that after the increase in the tax, foreign and satellite owners sold their properties at a 1.2 to 4.0 percent discount compared to other sellers. This is consistent with the SVTA creating disincentives for these groups to own real estate in the specified areas, which should have overall beneficial effects, albeit small, on overall affordability. This is not related to their prior exemption status, suggesting that it reflects the risk of the tax or a future levy, rather than the tax itself. We cannot rule out that there are unobserved, in the data, differences in

housing or location quality where systematically this group had lower value houses or lower reservation prices.

Appendix Table E-3 – Owner Characteristics and House Prices, SVTA Effect
Dependent variable: Ln(House Price)

Dependent variable : Ln price	(1)	(2)	(3)	(4)	(5)	(6)
Previous year property was non-exempt	0.0145 (0.0135)		0.0134 (0.0086)		0.0062 (0.0043)	
Foreign owner	-0.0273*** (0.0077)	-0.0249*** (0.0073)	-0.0154** (0.0072)	-0.0126* (0.0067)	-0.0127*** (0.0032)	-0.0115*** (0.0034)
Satellite owner	-0.0402*** (0.0122)	-0.0386*** (0.0118)	-0.0157* (0.0082)	-0.0143* (0.0082)	-0.0074* (0.0038)	-0.0067* (0.0039)
Log Assessed Value	0.5034*** (0.0280)	0.5036*** (0.0280)	0.7616*** (0.0224)	0.7618*** (0.0224)	0.7076*** (0.0258)	0.7079*** (0.0257)
Finished floor area (000) sq ft	0.0938*** (0.0088)	0.0938*** (0.0088)	0.0822*** (0.0236)	0.0823*** (0.0236)	0.1842*** (0.0365)	0.1840*** (0.0364)
Finished floor area (000) sq ft- squared	-0.0059*** (0.0010)	-0.0059*** (0.0010)	-0.0098* (0.0054)	-0.0098* (0.0054)	0.0043 (0.0134)	0.0044 (0.0134)
Number of bedrooms	-0.0021* (0.0012)	-0.0021* (0.0012)	0.0079*** (0.0021)	0.0079*** (0.0021)	0.0156*** (0.0036)	0.0156*** (0.0036)
Number of full and partial bathrooms	-0.0019 (0.0019)	-0.0019 (0.0019)	-0.0005 (0.0019)	-0.0005 (0.0019)	-0.0018 (0.0029)	-0.0018 (0.0029)
Age of unit	-0.0062*** (0.0004)	-0.0062*** (0.0004)	-0.0012 (0.0008)	-0.0012 (0.0008)	-0.0047*** (0.0008)	-0.0047*** (0.0008)
Age of unit - squared	0.0001*** (0.0000)	0.0001*** (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000*** (0.0000)	0.0000*** (0.0000)
Lot size (000) sq ft	0.0079*** (0.0011)	0.0079*** (0.0011)				
Lot size (000) sq ft - squared	-0.0000** (0.0000)	-0.0000** (0.0000)				
Number of stories	-0.0058 (0.0042)	-0.0057 (0.0042)				
Dummy, =1 if has for carport	0.0116*** (0.0036)	0.0116*** (0.0036)				
Dummy, =1 if has single car garage	0.0137*** (0.0035)	0.0137*** (0.0035)				
Dummy, =1 if has multi-car garage	0.0276*** (0.0043)	0.0276*** (0.0043)				
Dummy, =1 if has full basement	-0.0055 (0.0035)	-0.0055 (0.0035)				
Dummy, =1 if detached with suite	0.0056* (0.0029)	0.0055* (0.0029)				
Dummy, =1 if duplex			0.0510*** (0.0065)	0.0510*** (0.0065)		
Dummy, =1 if triplex			0.0649 (0.0433)	0.0647 (0.0433)		
Constant	6.7287*** (0.3770)	6.7263*** (0.3773)	3.0637*** (0.2876)	3.0615*** (0.2875)	3.6981*** (0.3307)	3.6952*** (0.3302)
Property Type	Single	Single	Row	Row	Condo	Condo
Adj. R-square	0.855	0.855	0.934	0.934	0.955	0.955
Number of Cases	46972	46972	20797	20797	37205	37205

Statistical significance is as follows: * p<0.10, ** p<0.05, *** p<0.01 : All regressions include a monthly time trend, census tract dummies and are clustered at the 4 digit postal code level

Announcement of SVTA and High vs. Low Incidence Neighbourhoods

For a more refined assessment of the effects of the SVTA on house prices, we use a difference in differences (DiD) methodology to test whether sales prices in neighbourhoods with higher percentages of non-exempt properties fell after the introduction of the SVTA when compared to the change in prices in neighbourhoods with low percentages of non-exempt properties. We assume that the distribution of non-exempt properties in 2018 describes the distribution in 2017 before the announcement in Feb. 2018 of the plans for the SVTA.

Difference in Differences (DiD) Methodology

The theoretical arguments presented here suggest that the imposition of the SVT should reduce demand on real estate markets, leading to lower prices and rents and higher vacancies in the rental market. To empirically verify these arguments for prices, it is necessary to use actual transaction data in the affected real estate markets. Our analysis studies how the SVT impacts the evolution of property prices after the announcement of the tax. Specifically, we compare the difference in prices between Census tracts with a high and low concentration of speculation and vacancy taxpayers following the introduction of the tax. If the tax had no impact on prices, we would expect that prices in high concentration and low concentration Census tracts would be unchanged before and after the imposition of the tax. Conversely, if the tax had the expected negative impact on the real estate prices, price declines would be most pronounced in markets with a high concentration of payers. Therefore, prices in high concentration Census tracts would decline relative to low concentration Census tracts following the announcement of the tax.

Our empirical analysis uses the difference-in-differences framework, which is widely used in the econometric literature. Difference-in-differences allows for the comparison of prices across groups before and after an event. In this case we are measuring the difference in prices between high and low concentration Census tracts following the introduction of the speculation and vacancy tax. The approach does not measure changes in the overall price level during the period, which may remain unchanged, increase, or decrease due to other market factors. It captures the relative difference in price change between high and low concentration Census tracts that we are

interested in. The difference-in-differences approach is also ideal in that it allows us to control for variation in prices due to differences in the physical characteristics of each transacted property and study the remaining variation. The remaining variation in prices can be decomposed into explained variation due to the introduction of the tax and unexplained variation due to other market factors. In essence, the difference-in-differences methodology allows us to control for the observable characteristics that determine house prices and net out the unexplained changes, isolating the price changes due to the tax.

Consistent with the real estate valuation literature, we use the standard semi-log regression model. Specifically, the dependent variable is the log of the transaction price, and the independent (explanatory) variables are all in raw form. The explanatory variables in the hedonic pricing model are lot size, lot size squared, floor area, floor area squared, age of the home, age of the home squared, stories, number of bedrooms, number of bathrooms, single garage indicator and double garage indicator. Finally, we include the interaction between time and the percentage of non-exempt properties in a neighborhood through an indicator variable for high concentration and an indicator that takes the value of one if the transaction occurred after the introduction of the SVTA.

In this analysis, we use the four-character postal code as a definition of a neighborhood. A four-character postal code area is classified as "High Concentration" if it has greater than the median percentage of properties declared non-exempt under the SVTA, or in our stricter test above the 75th percentile in the percentage of non-exempt units by property type.

The specific model estimated is as follows:

$$\ln P_{ijt} = \beta_0 + \beta_1 * X_i + \beta_2 * \text{Above Median Pct SVT}_j * \text{After SVTA}_t \\ + \beta_3 \sum 1(\text{property in area } j) + \beta_4 \sum 1(\text{year} - \text{month } t)$$

where a property i is located in neighborhood j and transacts in the unique year-month t . The set of 0-1 dummy variables for each year-month t include the pre- and post-treatment identifier of time, identifying the period after treatment. To avoid problems determining when owners fully assimilated an expectation of the implications of the SVTA, we define "before" as the year prior

to the budget announcement of the plans for the SVTA in Feb. 2018, and “after” as the year after the SVTA received royal assent in Nov. 2018

The DiD estimation approach requires several assumptions to be fully valid. First, there must not be some event that occurred concurrent with the SVTA with effects on house prices that are correlated with the percentage of properties in a Census tract that have at least one owner paying the SVT. Second, the percentage of properties in a Census tract that have at least one owner paying the SVT must measure how likely owners are to sell because of the tax. Third, there must not be some pre-existing trend that is correlated with tax incidence. Fourth, the percentage of properties with at least one owner that paid SVT in 2018 must mirror the percentage in 2017 that would have had the SVTA been in place: i.e., the distributions across Census tracts are highly correlated.

We are primarily interested in the parameter β_2 , which captures the interaction between the high-concentration indicator variable and the post-event indicator variable. A negative parameter would indicate that prices in Census tracts with high concentrations of vacant homes declined more than Census tracts with low concentrations following the introduction of the tax.

Regression Results

For this analysis, we winsorize the data as above. In addition, as we are using the percentage non-exempt, which is sensitive to the number of properties in four-character postal code areas, we drop areas if there are fewer than 100 properties in the area or fewer than 100 transactions between 2017 and 2019 in the area. We have two measures of “treatment”, i.e., exposure to the SVTA. The first uses a threshold of 50%; if the percentage by property type of units that are non-exempt in the area exceeds the median across all areas, then it is a “treated” area. The second does the same but raises the bar to a 75% threshold. The results of the DiD regressions are shown below in Appendix Table E-4, with the standard hedonic controls for lot and structure characteristics. All regressions have Census tract fixed effects, year-month fixed effects, and

standard errors are clustered at the four-character postal code level. Identification comes from variation among four-character postal codes in the percentage non-exempt within Census tracts.

Across all three property types, the price change for properties in neighborhoods with a higher percentage of non-exempt units is lower between the pre- and post-SVTA than for neighborhoods with lower percentages of non-exempt units. This difference using the median percentage of non-exempt units in a neighborhood by type (the odd numbered regressions) ranges from 3 to 5 percent. Raising the threshold to 75 percent, so treatment is limited to a smaller number of neighborhoods with a higher concentration of non-exempt properties, yields a more intense difference: 4 to 9 percent lower price change in these areas relatively to the other 75 percent of neighborhoods with a lower percentage of non-exempt properties. These results support the argument that by reducing demand by property owners subject to the SVT and creating a financial pressure for them to sell, the SVTA reduced housing demand and lowered house prices compared to where they would have been otherwise.

Appendix Table E-4 – Effect of SVTA on House Prices

Dependent variable: Ln(House Price)

Dependent variable : Ln price	(1)	(2)	(3)	(4)	(5)	(6)
Interaction : Above Non-Exempt Threshold X Post SVTA	-0.0509*** (0.0141)	-0.0914*** (0.0230)	-0.0357*** (0.0092)	-0.0509*** (0.0097)	-0.0305** (0.0122)	-0.0424*** (0.0162)
Above Non-Exempt Threshold	0.0633*** (0.0097)	0.0634*** (0.0151)	0.0167 (0.0110)	0.0567*** (0.0144)	0.0252** (0.0114)	0.0421*** (0.0139)
Post SVTA	0.1222*** (0.0149)	0.1183*** (0.0151)	0.1901*** (0.0109)	0.1843*** (0.0105)	0.2575*** (0.0130)	0.2513*** (0.0128)
Estimated floor area 000 sq/ft	0.1791*** (0.0117)	0.1796*** (0.0118)	0.7440*** (0.0498)	0.7409*** (0.0511)	1.3244*** (0.0435)	1.3212*** (0.0438)
Estimated floor area 000 sq/ft - squared	-0.0087*** (0.0017)	-0.0088*** (0.0017)	-0.1138*** (0.0124)	-0.1127*** (0.0129)	-0.1767*** (0.0137)	-0.1756*** (0.0137)
Number of bedrooms	-0.0133*** (0.0017)	-0.0134*** (0.0018)	0.0362*** (0.0067)	0.0369*** (0.0066)	0.0173*** (0.0058)	0.0172*** (0.0059)
Number of full and partial bathrooms	-0.0010 (0.0024)	-0.0011 (0.0024)	-0.0091* (0.0053)	-0.0091* (0.0052)	0.0092** (0.0046)	0.0092** (0.0047)
Age of unit	-0.0038*** (0.0004)	-0.0039*** (0.0004)	-0.0086*** (0.0011)	-0.0086*** (0.0010)	-0.0086*** (0.0016)	-0.0084*** (0.0016)
age of unit - squared	0.0000** (0.0000)	0.0000*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)	-0.0001* (0.0000)	-0.0001* (0.0000)
Lot size 000 sq/ft	0.0209*** (0.0015)	0.0208*** (0.0015)				
Lot size 000 sq/ft - squared	-0.0002*** (0.0000)	-0.0002*** (0.0000)				
Number of storeys in unit	-0.0030 (0.0055)	-0.0024 (0.0056)				
Dummy, =1 if has for carport	0.0204*** (0.0043)	0.0202*** (0.0043)				
Dummy, =1 if has single car garage	0.0321*** (0.0039)	0.0325*** (0.0039)				
Dummy, =1 if has multi-car garage	0.0706*** (0.0044)	0.0713*** (0.0044)				
Dummy, =1 if has full basement	-0.0282*** (0.0059)	-0.0283*** (0.0059)				
Dummy, =1 if has partial basement	-0.0108* (0.0061)	-0.0104* (0.0061)				
Dummy, =1 if detached with suite	0.0023 (0.0042)	0.0021 (0.0041)				
Dummy, =1 if duplex			0.1161*** (0.0207)	0.1153*** (0.0205)		
Dummy, =1 if triplex			0.1029 (0.0659)	0.1102* (0.0627)		
Constant	13.2264*** (0.0246)	13.2376*** (0.0249)	12.2936*** (0.0423)	12.2882*** (0.0424)	11.9906*** (0.0308)	11.9928*** (0.0304)
Property Type	Single	Single	Row	Row	Condo	Condo
Non-exempt Threshold	50%	75%	50%	75%	50%	75%
Adj. R-square	0.788	0.788	0.816	0.817	0.860	0.860
Number of Cases	52,652	52,652	20,850	20,850	63,380	63,380

Statistical significance is as follows: * p<0.10, ** p<0.05, *** p<0.01 : All regressions include a monthly time trend, census tract dummies and are clustered at the 4 digit postal code level

Appendix F - Data Tables for Affordability Calculations

Table F-1 House Prices

Year	Prince							
	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	George	Calgary	Edmonton
2010	692,200	536,300	410,900	332,000	316,800	228,600	398,900	349,000
2011	745,600	527,600	396,300	327,800	314,800	234,200	394,100	345,800
2012	766,700	516,000	390,600	319,700	315,800	247,500	406,400	355,700
2013	755,700	498,600	385,800	313,700	315,400	256,500	434,400	371,300
2014	794,600	503,600	403,900	320,400	323,200	277,600	475,700	393,100
2015	906,200	528,100	425,800	333,500	331,000	278,800	479,800	397,100
2016	1,183,200	615,400	473,200	369,800	348,800	281,300	466,000	388,000
2017	1,278,100	705,300	542,200	436,100	381,600	292,100	468,800	387,900
2018	1,313,600	762,100	576,300	498,200	418,000	317,800	462,300	384,000
2019	1,225,500	755,800	582,400	524,000	444,300	340,100	447,100	373,700
2020	1,289,900	799,000	616,800	553,600	477,200	362,400	447,500	374,100

Year	Kitchener-								
	Saskatoon	Regina	Winnipeg	London	Guelph	Waterloo	Barrie	Hamilton	Toronto
2010	299,000	257,000	213,700	212,300	310,100	284,000	268,300	302,200	454,100
2011	301,400	271,200	228,400	214,200	316,200	295,000	275,100	313,500	485,600
2012	317,600	299,500	244,100	218,700	335,200	302,500	288,600	335,300	524,900
2013	332,900	304,000	253,300	223,900	352,400	313,900	304,500	356,300	551,400
2014	340,900	294,900	256,600	229,900	369,400	323,100	322,500	385,100	597,600
2015	339,700	283,000	258,400	237,800	392,700	344,100	349,700	426,500	660,800
2016	335,500	289,100	263,600	255,900	430,500	396,100	418,700	499,200	784,100
2017	322,800	278,100	271,600	305,200	511,300	480,200	504,700	583,600	916,500
2018	319,600	260,700	275,300	357,900	538,000	507,000	491,300	604,300	881,600
2019	320,100	250,600	277,800	399,000	570,000	547,200	496,300	643,700	902,300
2020	328,000	255,300	291,500	463,900	638,900	630,000	565,500	729,800	999,900

Year	Quebec							
	Peterborough	Belleville	Ottawa	Montreal	City	Saint John	Halifax	St.John's
2010	233,500	183,700	355,700	275,100	224,600	171,200	219,900	242,900
2011	235,900	185,700	374,200	288,200	238,500	172,900	227,600	253,900
2012	239,500	189,600	383,500	299,100	248,100	166,800	237,300	271,600
2013	244,500	187,900	388,400	304,400	256,200	165,100	243,700	285,500
2014	253,300	192,400	391,400	307,900	258,200	164,200	245,700	289,200
2015	261,700	198,700	394,700	311,900	258,800	162,000	249,000	287,100
2016	294,100	213,800	403,000	321,200	259,600	161,800	251,700	282,900
2017	361,900	253,600	425,500	337,100	260,600	166,000	262,000	280,900
2018	404,000	284,100	458,800	355,900	262,600	167,200	266,700	271,000
2019	427,600	308,100	501,700	380,900	266,900	171,400	273,200	262,800
2020	466,400	360,500	598,400	437,300	280,500	185,500	297,100	264,800

Sources: CREA, Brookfield RPS, and BCREA

Notes: Single fmy benchmark prices, except median sales price for Prince George

Brookfield RPS Halifax base value scaled for Brookfield RPS/ CREA difference for Quebec City

Table F-2 House Price growth – Year on Year

Year							Prince		
	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	George	Calgary	Edmonton	
2010	10.6%	6.6%	1.2%	4.5%	2.2%	-1.4%	3.3%	4.0%	
2011	7.7%	-1.6%	-3.6%	-1.3%	-0.6%	3.5%	-1.2%	-0.9%	
2012	2.8%	-2.2%	-1.4%	-2.5%	0.3%	8.3%	3.1%	2.9%	
2013	-1.4%	-3.4%	-1.2%	-1.9%	-0.1%	9.5%	6.9%	4.4%	
2014	5.2%	1.0%	4.7%	2.1%	2.5%	12.2%	9.5%	5.9%	
2015	14.0%	4.9%	5.4%	4.1%	2.4%	8.7%	0.9%	1.0%	
2016	30.6%	16.5%	11.1%	10.9%	5.4%	1.3%	-2.9%	-2.3%	
2017	8.0%	14.6%	14.6%	17.9%	9.4%	4.8%	0.6%	0.0%	
2018	2.8%	8.1%	6.3%	14.2%	9.5%	13.0%	-1.4%	-1.0%	
2019	-6.7%	-0.8%	1.1%	5.2%	6.3%	16.4%	-3.3%	-2.7%	
2020	5.3%	5.7%	5.9%	5.7%	7.4%	14.0%	0.1%	0.1%	

Year	Kitchener-								
	Saskatoon	Regina	Winnipeg	London	Guelph	Waterloo	Barrie	Hamilton	Toronto
2010	6.0%	9.5%	9.5%	4.6%	6.5%	6.7%	4.2%	6.8%	10.3%
2011	0.8%	5.5%	6.9%	0.9%	2.0%	3.9%	2.5%	3.7%	6.9%
2012	5.4%	10.4%	6.9%	2.1%	6.0%	2.5%	4.9%	7.0%	8.1%
2013	4.8%	1.5%	3.8%	2.4%	5.1%	3.8%	5.5%	6.3%	5.1%
2014	2.4%	-3.0%	1.3%	2.7%	4.8%	2.9%	5.9%	8.1%	8.4%
2015	-0.4%	-4.0%	0.7%	3.4%	6.3%	6.5%	8.4%	10.8%	10.6%
2016	-1.2%	2.2%	2.0%	7.6%	9.6%	15.1%	19.7%	17.1%	18.7%
2017	-3.8%	-3.8%	3.0%	19.3%	18.8%	21.2%	20.5%	16.9%	16.9%
2018	-1.0%	-6.3%	1.4%	17.3%	5.2%	5.6%	-2.7%	3.6%	-3.8%
2019	0.2%	-3.9%	0.9%	11.5%	6.0%	7.9%	1.0%	6.5%	2.4%
2020	2.5%	1.9%	4.9%	16.3%	12.1%	15.1%	13.9%	13.4%	10.8%

Year	Quebec							
	Peterborough	Belleville	Ottawa	Montreal	City	Saint John	Halifax	St.John's
2010	5.7%	2.1%	8.9%	7.5%	11.6%	2.5%	7.0%	15.7%
2011	1.0%	1.1%	5.2%	4.8%	6.2%	1.0%	3.5%	4.5%
2012	1.5%	2.1%	2.5%	3.8%	4.0%	-3.5%	4.3%	7.0%
2013	2.1%	-0.9%	1.3%	1.8%	3.3%	-1.0%	2.7%	5.1%
2014	3.6%	2.4%	0.8%	1.2%	0.8%	-0.6%	0.8%	1.3%
2015	3.3%	3.3%	0.8%	1.3%	0.2%	-1.3%	1.3%	-0.7%
2016	12.4%	7.6%	2.1%	3.0%	0.3%	-0.1%	1.1%	-1.5%
2017	23.1%	18.6%	5.6%	5.0%	0.4%	2.6%	4.1%	-0.7%
2018	11.6%	12.0%	7.8%	5.6%	0.8%	0.7%	1.8%	-3.5%
2019	5.8%	8.5%	9.4%	7.0%	1.6%	2.5%	2.4%	-3.0%
2020	9.1%	17.0%	19.3%	14.8%	5.1%	8.2%	8.8%	0.8%

Sources: CREA, Brookfield RPS, and BCREA

Notes: Single fmy benchmark prices, except median sales price for Prince George

Brookfield RPS Halifax base value scaled for Brookfield RPS/ CREA difference for Quebec City

Table F-3 Median Total Income, Census Families

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George	Calgary	Edmonton
2010	67,090	77,820	67,610	64,430	72,800	77,780	89,490	87,930
2011	68,970	79,350	70,500	66,550	75,760	82,580	93,410	91,860
2012	71,140	81,580	73,630	69,390	79,440	86,060	98,300	96,030
2013	73,390	84,500	76,870	72,070	82,710	88,070	101,260	98,480
2014	76,040	86,430	80,000	74,820	84,730	90,780	104,530	101,470
2015	79,930	89,640	82,000	76,730	86,550	92,050	104,410	101,870
2016	82,510	91,400	83,100	77,540	86,990	91,770	100,200	98,890
2017	86,140	95,250	87,060	80,390	90,030	95,400	102,060	101,190
2018	89,000	98,240	88,890	83,070	92,380	97,910	104,270	103,190
2019	91,800	101,440	91,850	85,590	95,630	100,340	106,730	105,250
2020	100,420	110,880	100,270	93,390	104,210	109,160	111,060	109,490

Year	Saskatoon	Regina	Winnipeg	London	Guelph	Kitchener-Waterloo	Barrie	Hamilton	Toronto
2010	80,570	84,890	72,050	71,840	82,560	77,040	75,300	76,730	68,110
2011	84,730	88,750	74,040	73,500	85,360	79,020	76,710	78,520	69,740
2012	87,410	91,200	75,880	74,760	87,040	80,570	79,360	80,400	71,210
2013	90,840	93,670	77,770	75,980	88,700	82,160	80,780	82,290	72,830
2014	93,400	96,080	79,850	78,050	91,380	84,380	83,240	84,980	75,270
2015	94,580	97,940	81,880	80,570	94,150	86,930	85,470	87,590	78,280
2016	93,300	96,960	83,330	81,800	96,140	88,980	87,080	89,270	80,310
2017	94,810	99,240	85,660	83,880	98,650	91,580	89,090	92,090	83,020
2018	96,320	100,830	87,760	86,860	101,700	94,650	92,590	95,680	86,670
2019	98,470	102,100	89,870	88,350	103,920	96,430	94,310	98,080	89,160
2020	103,390	107,130	93,750	91,260	111,750	103,780	101,480	103,140	96,690

Year	Peterborough	Belleville	Ottawa	Montreal	Quebec City	Saint John	Halifax	St. John's
2010	68,970	65,720	82,270	67,010	76,450	69,100	76,500	78,210
2011	70,300	67,010	84,070	69,150	79,140	70,610	78,690	83,020
2012	71,890	68,190	86,160	71,390	81,900	72,450	80,490	87,150
2013	73,280	69,640	87,400	73,250	84,160	73,600	82,510	91,100
2014	75,200	71,750	89,430	75,010	86,110	76,450	84,560	94,060
2015	77,800	72,890	92,080	76,950	87,570	77,730	85,940	96,320
2016	78,850	75,460	93,410	79,180	89,610	78,710	86,820	96,030
2017	81,410	78,670	95,510	82,000	92,690	80,760	89,510	97,110
2018	84,100	81,300	98,820	85,340	96,230	83,660	92,130	100,150
2019	85,510	83,260	100,880	89,040	99,880	85,120	93,360	101,020
2020	92,050	90,120	108,450	96,830	108,310	90,280	100,080	105,030

Source 2010-2019, Stats Canada, Cansim Table 11100009, Median Total Income, All Families, 2020 estimate using Provincial Weekly Earnings growth

Table F-4 Year on Year Growth, Median Total Income, Census Families

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George	Calgary	Edmonton
2011	2.80%	1.97%	4.27%	3.29%	4.07%	6.17%	4.38%	4.47%
2012	3.15%	2.81%	4.44%	4.27%	4.86%	4.21%	5.23%	4.54%
2013	3.16%	3.58%	4.40%	3.86%	4.12%	2.34%	3.01%	2.55%
2014	3.61%	2.28%	4.07%	3.82%	2.44%	3.08%	3.23%	3.04%
2015	5.12%	3.71%	2.50%	2.55%	2.15%	1.40%	-0.11%	0.39%
2016	3.23%	1.96%	1.34%	1.06%	0.51%	-0.30%	-4.03%	-2.93%
2017	4.40%	4.21%	4.77%	3.68%	3.49%	3.96%	1.86%	2.33%
2018	3.32%	3.14%	2.10%	3.33%	2.61%	2.63%	2.17%	1.98%
2019	3.15%	3.26%	3.33%	3.03%	3.52%	2.48%	2.36%	2.00%
2020	9.39%	9.31%	9.17%	9.12%	8.98%	8.79%	4.05%	4.03%

Year	Saskatoon	Regina	Winnipeg	London	Guelph	Kitchener-Waterloo	Barrie	Hamilton	Toronto
2011	5.16%	4.55%	2.76%	3.39%	3.39%	2.57%	1.87%	2.33%	2.39%
2012	3.16%	2.76%	2.49%	1.97%	1.97%	1.96%	3.45%	2.39%	2.11%
2013	3.92%	2.71%	2.49%	1.91%	1.91%	1.97%	1.79%	2.35%	2.27%
2014	2.82%	2.57%	2.67%	3.02%	3.02%	2.70%	3.05%	3.27%	3.35%
2015	1.26%	1.94%	2.54%	3.03%	3.03%	3.02%	2.68%	3.07%	4.00%
2016	-1.35%	-1.00%	1.77%	2.11%	2.11%	2.36%	1.88%	1.92%	2.59%
2017	1.62%	2.35%	2.80%	2.61%	2.61%	2.92%	2.31%	3.16%	3.37%
2018	1.59%	1.60%	2.45%	3.09%	3.09%	3.35%	3.93%	3.90%	4.40%
2019	2.23%	1.26%	2.40%	2.18%	2.18%	1.88%	1.86%	2.51%	2.87%
2020	5.00%	4.92%	4.32%	7.53%	7.53%	7.62%	7.60%	5.16%	8.45%

Year	Peterborough	Belleville	Ottawa	Montreal	Quebec City	Saint John	Halifax	St. John's
2011	1.93%	1.96%	2.19%	3.19%	3.52%	2.19%	2.86%	6.15%
2012	2.26%	1.76%	2.49%	3.24%	3.49%	2.61%	2.29%	4.97%
2013	1.93%	2.13%	1.44%	2.61%	2.76%	1.59%	2.51%	4.53%
2014	2.62%	3.03%	2.32%	2.40%	2.32%	3.87%	2.48%	3.25%
2015	3.46%	1.59%	2.96%	2.59%	1.70%	1.67%	1.63%	2.40%
2016	1.35%	3.53%	1.44%	2.90%	2.33%	1.26%	1.02%	-0.30%
2017	3.25%	4.25%	2.25%	3.56%	3.44%	2.60%	3.10%	1.12%
2018	3.30%	3.34%	3.47%	4.07%	3.82%	3.59%	2.93%	3.13%
2019	1.68%	2.41%	2.08%	4.34%	3.79%	1.75%	1.34%	0.87%
2020	7.65%	8.24%	7.50%	8.75%	8.44%	6.06%	7.19%	3.97%

Source 2010-2019, Stats Canada, Cansim Table 11100009, Median Total Income, All Families, 2020 estimate using Provincial Weekly Earnings growth

Table F-5 Provincial Avg Weekly Earnings and Median Income

Provincial Weekly earnings

Year	BC	AB	SK	MB	ON	PQ	NB	NS	NL
2005	722.68	782.44	682.04	666.41	776.23	694.86	654.04	656.95	682.13
2006	743.69	821.57	708.05	685.92	788.74	707.45	673.13	673.30	705.99
2007	769.14	870.02	747.95	725.36	819.08	736.87	706.98	694.40	735.20
2008	788.24	921.56	783.55	745.91	838.31	750.76	729.11	712.45	765.54
2009	795.50	947.72	802.67	766.01	848.73	758.79	749.00	729.32	800.64
2010	818.17	990.21	843.81	781.59	881.27	784.09	760.55	758.06	836.52
2011	841.33	1,033.69	875.90	801.71	893.42	803.75	787.36	765.67	879.03
2012	866.48	1,069.35	918.60	823.63	906.01	822.87	806.59	788.36	925.79
2013	875.80	1,107.13	946.17	828.31	919.87	832.55	804.53	797.43	950.95
2014	897.02	1,149.01	974.43	863.19	938.12	849.56	831.80	819.88	992.28
2015	910.88	1,145.38	979.69	880.01	962.70	867.51	855.14	835.04	1,019.02
2016	920.26	1,118.18	987.31	888.26	973.61	878.39	874.73	847.88	1,015.45
2017	943.26	1,129.67	1,008.88	910.39	992.33	902.88	886.75	861.29	1,033.63
2018	969.09	1,147.75	1,014.29	936.51	1,021.87	930.98	911.99	871.70	1,036.72
2019	997.66	1,163.90	1,040.98	953.82	1,049.58	963.88	941.42	904.75	1,058.33
2020	1,082.46	1,202.01	1,092.73	993.56	1,127.68	1,040.06	996.97	967.47	1,096.94

Source: StatsCanada Cansim Table 14100223, Average

Provincial Median Total Income, All Families

Year	BC	AB	SK	MB	ON	PQ	NB	NS	NL
2005	58,500	71,000	56,300	56,100	64,500	57,000	51,500	54,000	47,600
2006	62,600	78,400	60,500	58,700	66,600	59,000	54,000	56,400	50,500
2007	65,780	82,030	65,120	62,070	69,190	61,780	56,930	59,200	55,210
2008	67,890	86,080	69,800	64,530	70,910	63,830	59,790	61,980	59,320
2009	66,700	83,560	70,790	65,550	69,790	64,420	60,670	62,550	60,290
2010	66,970	85,380	72,650	66,530	71,540	65,900	62,150	64,100	62,580
2011	69,150	89,830	77,300	68,710	73,290	68,170	63,930	66,030	67,200
2012	71,660	94,460	80,010	70,750	74,890	70,480	65,910	67,910	70,900
2013	74,150	97,390	82,990	72,600	76,510	72,240	67,340	70,020	73,850
2014	76,770	100,750	85,710	74,790	78,790	73,870	69,290	72,270	77,040
2015	79,750	100,300	86,970	76,990	81,480	75,530	71,040	73,900	79,260
2016	81,370	96,470	85,820	78,110	83,160	77,670	72,330	74,590	78,960
2017	84,850	99,430	87,960	80,530	85,900	80,550	74,710	76,710	79,800
2018	87,600	101,780	89,760	82,380	89,270	83,780	77,020	78,920	81,230
2019	90,300	104,130	92,430	85,070	91,710	87,250	78,850	80,830	82,680
2020									

Source: StatsCanada Cansim Table 11100009, average over year

Table F-6 Growth Rate Adjustment to Predict 2020 Median Income

Income Type & Measure	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George	Calgary	Edmonton
Average 2017-2019								
CMA/ CA Median Income Growth	3.62%	3.54%	3.40%	3.35%	3.21%	3.02%	2.13%	2.10%
Provincial Median Income Growth	3.53%	3.53%	3.53%	3.53%	3.53%	3.53%	2.58%	2.58%
Provincial Weekly Earnings Growth	2.73%	2.73%	2.73%	2.73%	2.73%	2.73%	1.35%	1.35%
bp spread	89	81	67	62	48	29	78	76

Income Type & Measure	Saskatoon	Regina	Winnipeg	London	Guelph	Kitchener-Waterloo	Barrie	Hamilton	Toronto
Average 2017-2019									
CMA/ CA Median Income Growth	1.81%	1.74%	2.55%	2.60%	2.63%	2.72%	2.70%	3.19%	3.55%
Provincial Median Income Growth	2.50%	2.50%	2.89%	3.31%	3.31%	3.31%	3.31%	3.31%	3.31%
Provincial Weekly Earnings Growth	1.78%	1.78%	2.40%	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%
bp spread	3	-5	15	7	9	18	16	65	101

Income Type & Measure	Peterborough	Belleville	Ottawa	Montreal	Quebec City	Saint John	Halifax	St.John's
Average 2017-2019								
CMA/ CA Median Income Growth	2.74%	3.33%	2.60%	3.99%	3.68%	2.65%	2.46%	1.71%
Provincial Median Income Growth	3.31%	3.31%	3.31%	3.95%	3.95%	2.92%	2.71%	1.55%
Provincial Weekly Earnings Growth	2.54%	2.54%	2.54%	3.14%	3.14%	2.48%	2.19%	1.39%
bp spread	21	80	6	85	54	16	26	32

Source: Stats Canada, Cansim Table 11100009, Median Total Income, Cansim Table 14100223, Provincial Weekly Earnings

Median total income is not available for 2020. To estimate this value for each city, we apply a growth rate to their 2019 values. The growth rate is estimated by taking the 2020 growth rate in provincial average weekly earnings and adjusting it by the spread between the average 2017-2019 in CMA or CA median total income growth and provincial growth rate over the same period in average weekly earnings.

Table F-7 Mortgage Rates

Year	Inflation	Avg Rate - 5 Year	Uninsured - 5 Year	Insured - 5 Year	Estimated Uninsured - 5 Year	Estimated Insured - 5 Year
2010	1.84	4.82			3.89	3.86
2011	2.92	4.59			3.66	3.63
2012	1.50	4.24			3.31	3.28
2013	0.90	4.17	3.24	3.23		
2014	1.95	4.08	3.22	3.17		
2015	1.12	3.77	2.82	2.77		
2016	1.42	3.7	2.69	2.65		
2017	1.56	3.76	2.88	2.85		
2018	2.30		3.53	3.43		
2019	1.95		3.19	3.14		
2020	0.74		2.47	2.4		

Source Bank of Canada, Cansim Table 1760043 and Cansim Table 10100006
StatsCanada, CPI -All Items, Cansim Series v41690973

Notes For insured and uninsured rates prior to 2013, use the average discount to 5 year average 2013-2017 apply it to the average 5 year rate.

Table F-8 2020 Property Tax

Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George	Calgary	Edmonton	
0.2926%	0.5042%	0.5272%	0.7115%	0.7386%	1.0620%	0.7522%	0.9326%	
Saskatoon	Regina	Winnipeg	London	Guelph	Kitchener-Waterloo	Barrie	Hamilton	Toronto
0.7810%	0.2926%	2.7523%	1.3483%	1.1228%	1.0995%	1.2102%	1.1890%	0.5997%
Peterborough	Belleville	Ottawa	Montreal	Quebec City	Saint John	Halifax	St. John's	
1.4017%	1.6428%	1.0880%	0.8528%	1.0104%	2.9083%	1.0380%	0.7700%	

Source: Property tax rates from <https://wowa.ca/calculators/property-tax>

Table F-9 Estimated Property Tax

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George	Calgary	Edmonton
2010	2,700	2,890	2,330	2,830	2,520	2,760	2,200	2,270
2011	2,820	3,010	2,430	2,950	2,630	2,880	2,320	2,410
2012	2,900	3,100	2,500	3,030	2,710	2,960	2,440	2,520
2013	3,000	3,210	2,590	3,130	2,800	3,060	2,580	2,670
2014	3,090	3,300	2,660	3,230	2,880	3,150	2,690	2,790
2015	3,150	3,370	2,710	3,290	2,940	3,220	2,780	2,880
2016	3,230	3,460	2,790	3,380	3,020	3,300	2,940	3,040
2017	3,350	3,580	2,890	3,500	3,130	3,420	3,070	3,180
2018	3,520	3,770	3,040	3,680	3,290	3,600	3,160	3,270
2019	3,640	3,890	3,140	3,810	3,400	3,720	3,250	3,370
2020	3,770	4,030	3,250	3,940	3,520	3,850	3,370	3,490

Year	Saskatoon	Regina	Winnipeg	Guelph	Kitchener-Waterloo	Barrie	Toronto
2010	1,910	560	5,670	5,690	5,500	5,430	4,760
2011	1,960	570	6,020	5,800	5,610	5,540	4,860
2012	1,990	580	6,130	5,890	5,690	5,620	4,930
2013	2,050	600	6,430	6,010	5,810	5,740	5,030
2014	2,110	620	6,690	6,160	5,950	5,870	5,150
2015	2,190	640	6,920	6,300	6,090	6,010	5,270
2016	2,260	660	7,180	6,460	6,240	6,160	5,400
2017	2,330	680	7,440	6,630	6,400	6,320	5,550
2018	2,430	710	7,710	6,810	6,580	6,490	5,700
2019	2,500	730	7,900	6,960	6,730	6,640	5,830
2020	2,560	750	8,020	7,170	6,930	6,840	6,000

Year	Peterborough	Belleville	Ottawa	Montreal	Quebec City	Saint John	Halifax	St. John's
2010	5,190	4,700	5,170	3,150	2,390	4,430	2,570	1,570
2011	5,290	4,790	5,270	3,260	2,470	4,610	2,640	1,690
2012	5,370	4,860	5,350	3,350	2,540	4,730	2,720	1,740
2013	5,490	4,970	5,460	3,440	2,610	4,850	2,780	1,780
2014	5,610	5,080	5,590	3,550	2,700	4,990	2,840	1,910
2015	5,740	5,200	5,720	3,640	2,760	5,080	2,870	1,940
2016	5,890	5,330	5,860	3,740	2,830	5,160	2,940	1,990
2017	6,040	5,470	6,020	3,800	2,890	5,230	2,970	2,100
2018	6,210	5,620	6,180	3,830	2,900	5,290	2,990	2,030
2019	6,350	5,750	6,320	3,770	2,860	5,310	3,030	2,030
2020	6,540	5,920	6,510	3,730	2,830	5,390	3,080	2,040

Notes: 2020 Estimated house value times 2020 tax rate,
pre-2020 values are estimated by applying the provincial CPI - property insurance index

Table F-10 Provincial Average 2019 Owner Home Insurance, Heating & Electricity Expenditures with CPI rates for All Expenditure Categories

2019 Average expenditure per household

Year	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Water, fuel and electricity for principal accommodation	3198	3261	3064	3290	1838	2700	2478	3356	3351	2216
Homeowners' insurance premiums	918	543	768	807	630	887	814	1018	1181	867

Consumer Price Index; Homeowners' home and mortgage insurance (2002=100)

Year	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
2010	110.4	118.7	154.3	139.1	146.5	175.5	130.6	208.6	199.9	132.9
2011	115.5	123	165.2	142.6	146.8	176.5	140.6	224.5	229.8	152.3
2012	123.2	124.9	177.9	148.2	153	177	148.8	224.7	235.4	157.8
2013	140.3	134.9	210.2	168.5	154.4	179.4	162	208.1	253.1	161.2
2014	139.3	138.9	216.5	184	155.1	197.9	166.4	217	292.1	167.7
2015	154.6	150.1	237.5	200.9	151	225.3	168.5	245.9	336.4	174
2016	178.4	166.3	252.9	221.7	154.6	233.8	176.2	272.1	356.1	181.4
2017	187.7	170.2	254.2	225.5	158.8	242.3	183.1	290.5	364.7	185.8
2018	197.8	172.2	264.2	230.5	163.9	251.4	189.7	316.3	372	195.8
2019	209.9	172.8	281.5	241.7	173.9	268.5	199.8	332.1	384.3	207.9
2020	219.2	178.5	298.9	258.4	183	284.3	207.3	343.4	409.7	218.9

Consumer Price Index; Property taxes and other special charges (2002=100)

Year	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
2010	124.4	144.8	139.8	152.5	120.3	133	105.1	117.6	144.3	138.9
2011	134.1	146.1	143.8	158.7	124.4	135.6	111.6	120.8	152.7	144.8
2012	137.6	148.7	148.1	162.8	127.8	137.6	113.5	122.4	160.1	149
2013	141.3	152.2	151.5	167.2	131.4	140.5	119.1	126	169.5	154.1
2014	151.6	155.2	154.4	171.9	135.6	143.8	123.9	129.9	176.9	158.7
2015	153.6	158.8	156.1	174.9	139	147.1	128.3	135.1	182.8	161.8
2016	157.7	162	160	177.9	142.5	150.8	133	139.3	193.2	166.1
2017	166.2	162.6	161.4	180.1	145.1	154.8	137.8	143.6	201.9	172.2
2018	161	164.8	162.5	182.4	146	159	142.9	149.4	207.6	181
2019	161.2	168.7	165.1	183	143.8	162.7	146.3	153.8	213.7	187.2
2020	161.6	175.4	167.6	185.7	142.3	167.5	148.6	157.7	221.5	193.7

Consumer Price Index; Water, Heating, and Electricity (2002=100)

Year	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
2010	144.8	168.1	141.7	141.3	122.8	135	116.1	127.5	145.3	126.3
2011	160.1	180.9	160.5	148.9	127.9	136.6	116.5	128.8	162.4	130.6
2012	169.7	184.8	172.3	151.2	129.1	139.3	114.8	128.9	156	135
2013	171.6	192.2	176.4	152.4	130.5	146.1	120.7	134	162.9	137.8
2014	172.4	198.4	187	157.4	134.9	161.9	127.8	144.2	172.2	146.7
2015	165.3	177.1	172.5	154.6	134.2	165.7	130.1	151.3	157	146.3
2016	161.5	169	164.3	156.2	133.2	172.4	132.7	154.1	149.6	145.5
2017	167.8	177.5	171.2	163.5	133.8	164.6	138.5	161.2	157.5	151
2018	184.9	192.9	183	169.1	134.9	159.9	143.1	166.5	168.9	153.2
2019	189.1	187.3	185.3	172.1	133.2	164	148.1	171.3	177.3	159.6
2020	186.1	164.5	173.2	170.7	129.4	163.4	147	175.9	181.8	160.9

Source: Stats Canada, Cansim Table 18100005

Table F-11 House Price to Income Ratios

Year	Vancouver	Calgary	Toronto	Ottawa	Montreal
2010	10.3	4.5	6.7	4.3	4.1
2011	10.8	4.2	7.0	4.5	4.2
2012	10.8	4.1	7.4	4.5	4.2
2013	10.3	4.3	7.6	4.4	4.2
2014	10.4	4.6	7.9	4.4	4.1
2015	11.3	4.6	8.4	4.3	4.1
2016	14.3	4.7	9.8	4.3	4.1
2017	14.8	4.6	11.0	4.5	4.1
2018	14.8	4.4	10.2	4.6	4.2
2019	13.3	4.2	10.1	5.0	4.3
2020	12.8	4.0	10.3	5.5	4.5

Year	Victoria	Regina	Kitchener-Waterloo	Quebec City	Halifax
2010	6.9	3.0	3.7	2.9	2.9
2011	6.6	3.1	3.7	3.0	2.9
2012	6.3	3.2	3.8	3.0	2.9
2013	5.9	3.3	3.8	3.0	3.0
2014	5.8	3.2	3.8	3.0	2.9
2015	5.9	3.2	4.0	3.0	2.9
2016	6.7	3.2	4.5	2.9	2.9
2017	7.4	3.2	5.2	2.8	2.9
2018	7.8	3.1	5.4	2.7	2.9
2019	7.5	3.1	5.7	2.7	2.9
2020	7.2	3.1	6.1	2.6	3.0

Year	Kelowna	Saskatoon	Guelph	Barrie	St. John's
2010	6.1	3.7	3.8	3.6	3.1
2011	5.6	3.6	3.7	3.6	3.1
2012	5.3	3.6	3.9	3.6	3.1
2013	5.0	3.7	4.0	3.8	3.1
2014	5.0	3.6	4.0	3.9	3.1
2015	5.2	3.6	4.2	4.1	3.0
2016	5.7	3.6	4.5	4.8	2.9
2017	6.2	3.4	5.2	5.7	2.9
2018	6.5	3.3	5.3	5.3	2.7
2019	6.3	3.3	5.5	5.3	2.6
2020	6.2	3.2	5.7	5.6	2.5

Year	Nanaimo	Peterborough	Belleville	Saint John
2010	5.2	3.4	2.8	2.5
2011	4.9	3.4	2.8	2.4
2012	4.6	3.3	2.8	2.3
2013	4.4	3.3	2.7	2.2
2014	4.3	3.4	2.7	2.1
2015	4.3	3.4	2.7	2.1
2016	4.8	3.7	2.8	2.1
2017	5.4	4.4	3.2	2.1
2018	6.0	4.8	3.5	2.0
2019	6.1	5.0	3.7	2.0
2020	5.9	5.1	4.0	2.1

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George
2010	10.3	6.9	6.1	5.2	4.4	2.9
2011	10.8	6.6	5.6	4.9	4.2	2.8
2012	10.8	6.3	5.3	4.6	4.0	2.9
2013	10.3	5.9	5.0	4.4	3.8	2.9
2014	10.4	5.8	5.0	4.3	3.8	3.1
2015	11.3	5.9	5.2	4.3	3.8	3.0
2016	14.3	6.7	5.7	4.8	4.0	3.1
2017	14.8	7.4	6.2	5.4	4.2	3.1
2018	14.8	7.8	6.5	6.0	4.5	3.2
2019	13.3	7.5	6.3	6.1	4.6	3.4
2020	12.8	7.2	6.2	5.9	4.6	3.3

Source: CREA and BRPS House Price Series, StatsCan Median Total Income, families

Table F-12 Owner Expenditures to Income Ratio

Year	Vancouver	Calgary	Toronto	Ottawa	Montreal
2010	55%	27%	42%	30%	27%
2011	56%	25%	43%	30%	26%
2012	53%	24%	43%	29%	26%
2013	51%	25%	43%	29%	25%
2014	51%	26%	45%	28%	25%
2015	52%	25%	45%	27%	24%
2016	63%	25%	49%	27%	23%
2017	67%	26%	55%	28%	24%
2018	71%	27%	54%	30%	25%
2019	63%	25%	53%	31%	25%
2020	55%	23%	49%	30%	23%

Year	Victoria	Regina	Kitchener- Waterloo	Quebec City	Halifax
2010	38%	25%	28%	19%	20%
2011	36%	25%	28%	19%	20%
2012	34%	25%	27%	19%	20%
2013	32%	26%	27%	19%	20%
2014	31%	26%	27%	19%	20%
2015	30%	25%	27%	18%	19%
2016	33%	24%	29%	17%	19%
2017	36%	25%	32%	17%	19%
2018	40%	26%	34%	17%	20%
2019	38%	25%	34%	16%	20%
2020	34%	24%	33%	15%	18%

Year	Kelowna	Saskatoon	Guelph	Barrie	St. John's
2010	35%	23%	28%	28%	20%
2011	32%	22%	27%	27%	20%
2012	29%	21%	27%	26%	19%
2013	28%	21%	27%	27%	19%
2014	28%	21%	27%	27%	19%
2015	27%	21%	27%	27%	18%
2016	29%	21%	28%	30%	17%
2017	32%	21%	31%	34%	18%
2018	35%	21%	33%	34%	18%
2019	33%	21%	33%	33%	17%
2020	30%	19%	31%	31%	15%

Year	Nanaimo	Peterborough	Belleville	Saint John
2010	32%	27%	25%	22%
2011	30%	27%	24%	22%
2012	28%	26%	24%	21%
2013	26%	26%	23%	21%
2014	26%	26%	23%	20%
2015	25%	25%	23%	20%
2016	26%	27%	23%	19%
2017	30%	30%	24%	19%
2018	34%	32%	26%	20%
2019	34%	32%	27%	19%
2020	30%	30%	26%	18%

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George
2010	55%	38%	35%	32%	27%	20%
2011	56%	36%	32%	30%	25%	19%
2012	53%	34%	29%	28%	24%	19%
2013	51%	32%	28%	26%	23%	19%
2014	51%	31%	28%	26%	23%	19%
2015	52%	30%	27%	25%	22%	18%
2016	63%	33%	29%	26%	22%	18%
2017	67%	36%	32%	30%	24%	19%
2018	71%	40%	35%	34%	26%	21%
2019	63%	38%	33%	34%	26%	21%
2020	55%	34%	30%	30%	24%	19%

Sources: Authors calculations using, CREA, Bank of Canada, and StatsCan data

Notes: Assumes 30 year amortization and 20% downpayment

Table F-13 Rents

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Abbotsford- Mission	Prince George	Calgary	Edmonton
2010	940	805	739	648	683	657	599	894	844
2011	964	818	734	661	692	665	609	899	857
2012	982	827	750	665	709	662	623	957	882
2013	1005	832	776	686	719	678	641	1039	934
2014	1038	848	787	700	737	685	655	1133	1001
2015	1079	866	798	723	764	712	673	1121	1029
2016	1159	911	863	759	800	744	693	1049	1000
2017	1223	988	936	805	821	765	708	1024	990
2018	1306	1075	1003	885	933	831	734	1049	1017
2019	1382	1130	1095	946	923	926	772	1079	1028
2020	1415	1184	1145	1009	983	956	780	1086	1031

Year	Saskatoon	Regina	Winnipeg	London	Guelph	Kitchener- Waterloo	Barrie	Hamilton	Toronto
2010	764	742	649	700	782	740	851	705	949
2011	787	789	677	710	797	752	884	722	977
2012	815	830	704	747	829	773	893	735	1007
2013	845	875	750	752	842	811	915	766	1032
2014	884	903	782	767	868	817	984	792	1067
2015	894	918	813	781	898	850	1005	829	1103
2016	908	926	836	802	952	871	1011	870	1132
2017	896	934	880	841	980	916	1035	905	1194
2018	911	935	920	877	1034	1019	1141	970	1261
2019	930	930	958	915	1145	1041	1161	1021	1361
2020	957	951	991	1001	1211	1073	1191	1096	1421

Year	Peterborough	Belleville	Ottawa- Gatineau	Montreal	Quebec	Saint John	Halifax	St. John's
2010	740	704	836	627	600	555	732	636
2011	762	735	854	641	609	572	752	655
2012	768	766	877	637	618	587	773	696
2013	775	775	884	651	634	582	784	725
2014	800	790	892	655	648	599	800	755
2015	812	804	925	668	666	600	833	784
2016	828	844	930	679	684	624	846	786
2017	846	874	968	698	699	623	881	774
2018	910	921	1025	720	720	648	904	781
2019	935	977	1109	754	745	698	960	812
2020	987	1034	1165	810	778	701	1015	812

Notes: CMHC market rental surveys, Cansim Table 34100133, average one bedroom rents in structures with three or more units.

Table F-14 Renter Income, Median Total Income, Persons Not in Census Families

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Abbotsford- Mission	Prince George	Calgary	Edmonton
2010	24,660	29,120	25,670	24,120	25,300	22,480	25,610	34,970	32,980
2011	25,070	29,650	26,400	24,640	26,420	22,850	26,840	35,860	34,260
2012	25,800	30,270	27,310	25,840	27,720	23,720	28,410	35,910	35,850
2013	26,150	30,800	27,930	26,630	28,460	24,010	29,400	36,190	36,730
2014	26,880	31,550	28,710	27,030	28,690	24,460	30,160	37,320	38,070
2015	27,890	32,350	29,410	27,900	29,000	25,210	30,580	39,030	37,960
2016	28,510	33,080	29,720	28,380	28,660	25,560	29,970	37,110	36,430
2017	29,540	34,170	31,070	29,340	29,110	26,300	31,570	35,410	36,760
2018	30,540	35,730	31,830	30,360	29,870	27,680	32,470	36,070	37,510
2019	31,130	37,010	32,710	31,420	30,920	29,090	32,820	36,010	37,390
2020	33,850	40,560	35,660	34,320	33,500	32,050	35,730	36,360	38,440

Year	Saskatoon	Regina	Winnipeg	London	Guelph	Kitchener- Waterloo	Barrie	Hamilton	Toronto
2010	29,450	31,040	26,380	25,450	28,580	26,570	26,310	26,230	23,230
2011	30,510	31,880	27,120	26,690	30,080	28,310	27,330	27,600	24,510
2012	32,020	33,430	28,020	27,330	30,870	28,820	28,160	28,130	24,900
2013	33,770	35,010	28,500	27,800	31,660	28,950	28,530	28,660	25,210
2014	34,960	36,200	29,010	28,320	32,400	29,450	29,390	29,390	25,660
2015	34,860	36,380	29,620	28,990	33,050	30,180	29,940	30,040	26,540
2016	34,250	35,920	29,750	29,370	33,520	30,410	30,110	30,710	26,830
2017	34,540	36,200	30,290	29,710	34,370	31,020	30,940	31,320	27,430
2018	34,660	36,670	30,890	30,940	36,030	31,850	32,100	32,590	28,820
2019	35,210	36,300	31,250	30,980	36,400	31,650	31,670	33,080	28,930
2020	36,660	37,590	32,320	33,060	39,200	33,630	33,770	35,530	31,090

Year	Peterborough	Belleville	Ottawa- Gatineau	Montreal	Quebec	Saint John	Halifax	St. John's
2010	23,830	24,570	31,750	23,000	26,830	23,510	26,950	23,970
2011	25,080	25,860	32,930	23,650	27,740	24,040	27,680	25,210
2012	25,530	26,330	33,530	24,790	29,090	24,560	28,460	26,510
2013	26,190	26,580	33,790	25,150	29,880	25,160	28,950	27,580
2014	26,900	27,600	34,150	25,600	30,590	25,890	29,330	28,270
2015	27,790	27,770	34,650	26,150	31,050	26,080	29,910	28,810
2016	27,780	28,670	34,860	26,630	31,590	26,440	30,400	29,280
2017	28,330	29,280	35,870	27,470	32,870	27,600	31,300	29,850
2018	29,220	30,640	37,480	28,990	34,430	28,550	32,040	30,350
2019	29,720	31,080	38,100	29,960	35,860	29,310	32,760	30,580
2020	31,850	33,450	41,120	32,590	39,110	31,340	35,140	31,720

Source 2010-2019, Stats Canada, Cansim Table 11100009, Median Total Income, Persons Not in Census Families, 2020 estimate using Provincial Weekly Earnings

Median total income is not available for 2020. To estimate this value for each city, we apply a growth rate to their 2019 values. The growth rate is estimated by taking the 2020 growth rate in provincial average weekly earnings and adjusting it by the spread between the average 2017-2019 in CMA or CA median total income growth and provincial growth rate over the same period in average weekly earnings. Provincial earnings are shown above in Table F-6.

Table F-15 Rent to Income Burdens

Year	Vancouver	Calgary	Toronto	Ottawa	Montreal
2010	46%	31%	49%	32%	33%
2011	46%	30%	48%	31%	33%
2012	46%	32%	49%	31%	31%
2013	46%	35%	49%	31%	31%
2014	46%	36%	50%	31%	31%
2015	46%	35%	50%	32%	31%
2016	49%	34%	51%	32%	31%
2017	50%	35%	52%	32%	31%
2018	51%	35%	53%	33%	30%
2019	53%	36%	57%	35%	30%
2020	50%	36%	55%	34%	30%

Year	Victoria	Regina	Kitchener-Waterloo	Quebec City	Halifax
2010	33%	30%	33%	27%	33%
2011	33%	30%	32%	26%	33%
2012	33%	30%	32%	26%	33%
2013	32%	32%	34%	26%	33%
2014	32%	32%	33%	25%	33%
2015	32%	33%	34%	26%	33%
2016	33%	34%	34%	26%	33%
2017	35%	35%	35%	26%	34%
2018	36%	36%	38%	25%	34%
2019	37%	37%	40%	25%	35%
2020	35%	37%	38%	24%	35%

Year	Kelowna	Saskatoon	Kingston	Barrie	St. John's
2010	35%	31%	35%	39%	32%
2011	33%	31%	34%	39%	31%
2012	33%	31%	36%	38%	32%
2013	33%	30%	35%	39%	32%
2014	33%	30%	35%	40%	32%
2015	33%	31%	36%	40%	33%
2016	35%	32%	37%	40%	32%
2017	36%	31%	37%	40%	31%
2018	38%	32%	37%	43%	31%
2019	40%	32%	39%	44%	32%
2020	39%	31%	38%	42%	31%

Year	Nanaimo	Peterborough	Belleville	Saint John
2010	32%	37%	34%	28%
2011	32%	37%	34%	29%
2012	31%	36%	35%	29%
2013	31%	36%	35%	28%
2014	31%	36%	34%	28%
2015	31%	35%	35%	28%
2016	32%	36%	35%	28%
2017	33%	36%	36%	27%
2018	35%	37%	36%	27%
2019	36%	38%	38%	29%
2020	35%	37%	37%	27%

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George
2010	46%	33%	35%	32%	32%	28%
2011	46%	33%	33%	32%	31%	27%
2012	46%	33%	33%	31%	31%	26%
2013	46%	32%	33%	31%	30%	26%
2014	46%	32%	33%	31%	31%	26%
2015	46%	32%	33%	31%	32%	26%
2016	49%	33%	35%	32%	34%	28%
2017	50%	35%	36%	33%	34%	27%
2018	51%	36%	38%	35%	38%	27%
2019	53%	37%	40%	36%	36%	28%
2020	50%	35%	39%	35%	35%	26%

Sources CMHC market rental surveys, Cansim Table 34100133, average one bedroom rents in structures with three or more units. 2010-2019, Stats Canada, Cansim Table 11100009, Median Total Income, Persons Not in Census Families, 2020 estimate using Provincial Weekly Earnings

Table F-16 Average Rent - One Bedroom Units – Vacant

Year	Vancouver	Victoria	Kelowna	Calgary	Edmonton
2014	931	869	829	1175	1002
2015	1057	912	795	1156	1017
2016	1221	1035	915	1051	975
2017	1302	1195		1032	951
2018	1467	1332	1181	1076	1000
2019	1558	1285	1426	1097	1012
2020	1687	1423	1352	1100	1026

Year	Saskatoon	Regina	Winnipeg	London	Guelph
2014	877	921	838	719	908
2015	888	890	845	761	912
2016	916	949	849	728	965
2017	872	959	919	820	1014
2018	952	886	955	904	1173
2019	892	871	990	950	1286
2020	930	847	1077	1099	1378

Year	Kitchener-Waterloo	Barrie	Hamilton	Toronto	Peterborough	Belleville
2014	823	909	798	1088	810	
2015	903	878	765	1169	793	
2016	894	983	915	1170	816	
2017	964	1107	938	1364	842	900
2018	1177	1241	1001	1481	817	950
2019	1151	1382	1066	1729	970	1096
2020	1222	1004	1236	1710	1066	1186

Year	Ottawa-Gatineau	Montreal	Quebec	Saint John	Halifax	St. John's
2014	1004	654	640	586	739	991
2015	994	678	684	572	787	836
2016	1033	708	762	595	772	792
2017	1003	696	793	618	886	803
2018	1184	734	821	621	810	794
2019	1307	830	994	637	841	823
2020	1381	1029	897	691	1110	862

Source: CMHC Monthly Rental Market Survey reports:

<https://www.cmhc-schl.gc.ca/en/professionals/housing-markets-data-and-research/housing-data/data-tables/rental-market/average-apartment-rents-vacant-occupied>

Table F-17 Rent Burden - One Bedroom Units – Vacant

Year	Vancouver	Calgary	Toronto	Ottawa	Montreal
2014	42%	38%	51%	35%	31%
2015	46%	36%	53%	34%	31%
2016	51%	34%	52%	36%	32%
2017	53%	35%	60%	34%	30%
2018	58%	36%	62%	38%	30%
2019	60%	37%	72%	41%	33%
2020	60%	36%	66%	40%	38%

Year	Victoria	Regina	Kitchner-Waterloo	Quebec City	Halifax
2014	33%	35%	34%	25%	30%
2015	34%	34%	36%	26%	32%
2016	38%	34%	35%	29%	31%
2017	42%	36%	37%	29%	34%
2018	45%	37%	44%	29%	30%
2019	42%	38%	44%	33%	31%
2020	42%	40%	44%	28%	38%

Year	Kelowna	Saskatoon	Kingston	Barrie	St. John's
2014	35%	30%	37%	37%	42%
2015	32%	31%	43%	35%	35%
2016	37%	32%	38%	39%	33%
2017		30%	37%	43%	32%
2018	45%	33%	43%	46%	31%
2019	52%	30%	38%	52%	32%
2020	46%	30%	40%	36%	33%

Year	Nanaimo	Kamloops	Peterborough	Belleville	Saint John
2014			36%		27%
2015			34%		26%
2016			35%		27%
2017			36%	37%	27%
2018			34%	37%	26%
2019			39%	42%	26%
2020			40%	43%	27%

Year	Vancouver	Victoria	Kelowna	Nanaimo	Kamloops	Prince George
2014	42%	33%	35%			
2015	46%	34%	32%			
2016	51%	38%	37%			
2017	53%	42%				
2018	58%	45%	45%			
2019	60%	42%	52%			
2020	60%	42%	46%			

Sources CMHC market rental surveys, average one bedroom rents, vacant units in structures with three or more units. Stats Canada, Cansim Table 11100009, Median Total Income, Persons Not in Census Families, 2020 estimate using Provincial Weekly Earnings

Recommended Issues for Further Examination

The findings in this report indicate that the SVT appears to be working, by moderating foreign demand and adding units to the rental market. At the same time, the number of property owners liable for SVT decreased between 2018 to 2019 and appears to be “levelling off” between 2019 to 2020, indicating that further expansions to the SVT may be warranted if the government wants to see further moderation of demand and/or increases in units added to the rental market.

Ministry of Finance staff therefore recommend that the government further examine the following aspects of the tax for potential future changes.

Expanding the SVT specified area:

The SVT applies to a “specified area” which is defined in the SVTA. When the tax was developed, the SVT applied in core urban centres that, at the time of implementation, were experiencing near zero vacancy rates and housing prices that were disproportionately high compared to local incomes.

When the SVT was introduced, rapid price increases were relatively contained to the initial areas where the tax applied. However, since 2018, housing prices have increased substantially in all areas of the province, including areas outside of the SVT specified area. In 2022, residential assessments had the greatest increase in rural areas or smaller communities in the province and these areas are becoming increasingly challenged by high demand and limited supply.

Findings by the Dr. Tsur Somerville and Dr. Jake Wetzel of Stada Analytics on the assessment and effectiveness of the SVTA indicate that affordability has improved somewhat more in the SVTA specified areas in British Columbia than elsewhere in BC. In addition, a report published by Javed Tomal and Hafiz Rahman from Thompson Rivers University shows that housing prices in Kamloops have risen when compared to the similar sized market of Chilliwack (where the additional property transfer tax and SVT apply)⁸³.

Though there may not be a high instance of foreign ownership or vacant properties in more rural areas, expanding the SVT will provide a disincentive for future speculative investment that can lead to further demand and increases in housing prices.

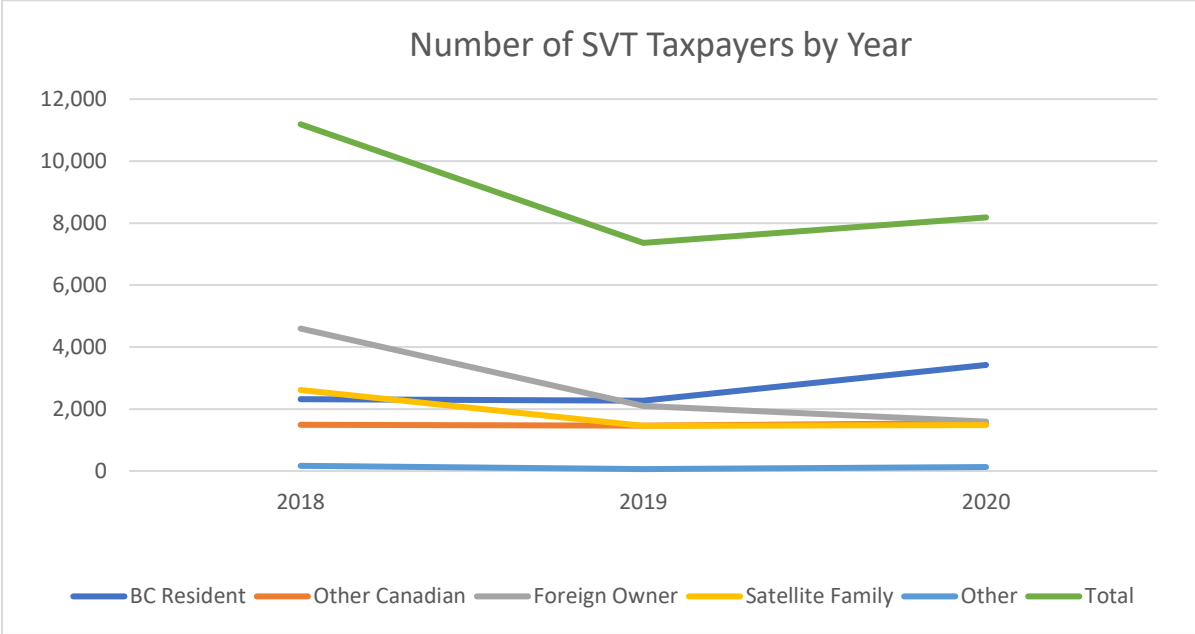
Several factors should be assessed when considering an expansion to the SVT to new areas, including assessed values of residential property, population, requests for inclusion, proximity to other SVT specified areas and whether the municipality is primarily a vacation area. Proximity to existing SVT areas is important because speculative behaviour can be subject to “regional drift”. Regional drift means that speculative purchasers would be likely to purchase in a different municipality if one area was included in the SVT and another was not. Typically, this means the tax should apply in municipalities that are in close proximity if it’s reasonable to live in one municipality and work in the other.

⁸³ Tomal, J.H., Rahman, H. A Bayesian piecewise linear model for the detection of breakpoints in housing prices. METRON 79, 361–381 (2021). <https://doi.org/10.1007/s40300-021-00223-8>

The government could take an incremental approach to expanding the SVT. For example, an expansion could begin in areas that have had substantial assessed value/housing price increases in recent years and areas that are in close proximity to existing SVT areas. The government could consider further expansion on an annual basis based on the market conditions in the Province at the time.

Increasing SVT rates:

The number of property owners liable for SVT decreased between 2018 to 2019 and appears to be “levelling off” between 2019 to 2020.⁸⁴ With only three years of SVT data and other changes occurring to the tax during this time (e.g., expiring exemptions and increasing tax rates), it’s difficult to determine with certainty if this is a trend that will continue. However, if the number of taxpayers remains fairly constant for another year, this would imply that property owners who were incentivized to change their behaviour have already done so, and those that chose to pay the tax will continue to do, absent any additional changes.



Increasing the SVT rates may incentivize owners who will pay the tax at the current rate to change their behaviour (i.e., rent or sell), while tax credits could continue to be in place for B.C. resident owners or non-B.C. resident owners who claim income in Canada. Increasing the tax rate would result in more revenue for affordable housing and/or more units returned to the market.

Vancouver City Council recently unanimously approved a tax rate increase on the City of Vancouver’s Empty Homes Tax (EHT) from 3 percent to 5 percent beginning in 2023. Ministry

⁸⁴ An exception is non-exempt B.C. resident owners which increased between 2019 to 2020. This increase was primarily due to the land without residence exemption expiration.

of Finance staff recommend analyzing at least one more year of SVT data and monitoring results in the City of Vancouver before government proceeds with increases to the SVT rates.

Amending development/construction exemptions:

Division 5 of the SVTA provides several exemptions for property under construction or renovation. These exemptions provide exemptions when owners are taking reasonable steps without undue delay to develop or renovate their property. Over 17,000 property owners claimed a construction or renovation exemption in 2020.

There is currently no limit for how many years an owner may claim an exemption under Division 5. Development, particularly phased developments, can take many years and choosing the correct time limit would be challenging. In addition, three years of data is not enough to assess whether these exemptions are being misused. However, government could consider putting in place time restrictions so that property owners can only claim each exemption for a limited number of years. A time limit would provide a further incentive for property owners to develop or renovate their property in a timely manner, and for municipalities to provide approvals for development in a timely manner. However, determining a fair time limit for each exemption would benefit from consultation and at least another year worth of data.

Amending the year of acquisition exemption:

The SVT is imposed on the owner of a property as of December 31 of the relevant calendar year. Section 49 of the SVTA provides an exemption for an owner who has acquired a property in the calendar year if they paid PTT or qualified for an eligible PTT exemption. The exemption is in gives new owners time to move in or find tenants (and therefore qualify for a principal resident or rental exemption) and ensures that the action of the previous owner doesn't determine whether the new owner will be liable for SVT. For example, if the previous owner kept the property vacant and it was acquired in November and immediately rented to tenants, the new owner wouldn't meet the requirement of the tenancy exemption because the property wouldn't have been occupied for six months of the year. Over 24,000 owners claimed the recently acquired or inherited exemption.

There is currently no limit on how many times an owner may claim the recently acquired exemption or how many times the exemption may be claimed on a property. In order to discourage property flipping or speculative purchases, there could be limits placed on how many times the exemption may be claimed. For example, a change could be made that an owner may only claim the recently acquired exemption once every five years. If owners are buying properties within the five years, they would have to ensure that they qualify for another exemption or pay the tax.

Government may wish to analyze more data before deciding if changes should be made to this exemption.

