Vancouver’s Real Estate Anomaly
(And how Vancouver has become the 2\textsuperscript{nd} least affordable city on Earth)

APPLIED PROJECT (699 - APRJ)

DARREN BERSUK

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COACH: IKE HALL
APPLIED PROJECT COORDINATOR: TERESA ROSE
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Abstract:

This applied project examines the Vancouver real estate anomaly. The Canadian gateway city of Vancouver is considered the second least affordable city on the planet in terms of price to income ratio for the 2011 year. This statistical ratio indicates that a Vancouverite’s median household income is only $63,800 versus the median home price of $678,500. The project answers the main research question: How has Vancouver’s real-estate market defied economic principles of a housing bubble? Although Vancouver is in a massive bubble according to every standard metric – price-to-income ratio, price-to-rent ratio, debt-to-income ratio, and the debt-to-assets ratio – it has continued its trend of rising real estate prices over the past decade at an unusually rapid pace. Record low interest rates and a rising population are traditional phenomena affecting standard demand factors and there is little doubt that they have been contributors to this trend, but these factors have affected other Canadian cities in similar fashions and have not resulted in the dramatic price to income disparity had by Vancouverites. Popular opinion among experts and real estate professionals is that foreign direct investment into the Vancouver housing market from non-residents of Canada is the anomalous factor. Non-residents have allegedly been procuring mass amounts of real estate, with mainland Chinese buyers cited as the largest purchasing group, driving up prices. Since non-Canadian buyers are said to use proxy Canadian buyers, data to prove and apply accurate measurements to the phenomenon have proven extremely difficult to document. It is standard for non-residential buyers to purchase the properties with cash and therefore sidestep the vetting process that would normally be undertaken by banks when assessing the credentials for a home loan, furthering the elusiveness of accurate data. The applied project conducts a comparative analysis of Vancouver’s alleged real estate bubble with the bubble Australia developed. Aussie governmental authorities placed heavy blame on foreign direct investment for their bubble and subsequently enacted stricter regulations against non-residential buyers in order to dampen housing price increases. This resulted in a soft landing for the Australian real estate market and has been deemed a successful endeavour. In contrast, a comparative analysis was also conducted with the United
States’ housing bubble, which experienced a much harder landing – although it was considered loose regulations on sub-prime loans rather than foreign direct investment that led to the American real estate market’s bubble and eventual downfall. It was determined that Canada’s regulatory system has sufficient controls in place to avoid a similar result to the U.S., especially in terms of possessing tighter rules on sub-prime lending practices, mortgage-backed security purchases and to whom they are permitted to be sold. The conclusion to the applied project states that although it is likely that foreign direct investments are the anomalous factor that has permitted Vancouver’s real estate market to have defied normal economic principles of a housing bubble, insufficient data and scientific evidence leaves that aspect of the discussion non-conclusive. Historically low lending rates and population growth remain factors which have aided in the housing price increases, and this lends itself to the theory that Vancouver is truly in a housing bubble at the present time. Interest rates will inevitably rise again, leaving the city with Canada’s highest debt to income ratio in a state of vulnerability.
Introduction:

Vancouver’s housing market should be on the brink of collapse, but so-called experts have been saying that for years now – and prices have continued to increase, dramatically at times with only the occasional dip. It is not only Vancouver that is cited to have elevated housing prices, but we will explore why the textbook symptoms of a housing crisis are far worse in this western Canadian gateway city. Nationwide speculation of a bubble is being fueled by extraordinarily low interest rates (in fear that they will rise) in combination with debt per family being at an all-time high. Vancouver’s housing price to family income ratio is double that of the rest of Canada. If the numbers speak for themselves, then the speculative bubble that Canada is in is twice as likely in Vancouver – but there’s something very different there that could make or break it:

Mass Foreign Direct Investment (FDI) into the real estate market. We will explore this alleged phenomenon in detail. It should be stated early in the applied project that immigration is not the focus of this aspect of the study, but rather the Foreign Direct Investment into Vancouver properties by those living outside of Canada without any wish to immigrate or assimilate. That is not to say that immigration does not play a role at all, considering that an increase in the number of consumers in a market will increase demand for housing in that area, but that is a documented demand principle that can be easily explained. This project focuses on the abnormal demand functions that keep elevating prices to levels considered “severely unaffordable” (Cox & Pavletich, 2012, p. 1) in a market where the average income is extremely low by comparison to prices.

Vancouver’s housing market is a veritable anomaly in the normal course of real-estate supply and demand, speculative pricing, and prospective bubbles. It seems to defy – or at least distort – standard economic principles because of the unusual situation it is in. It is a gateway city to wealthy foreign consumers, many of whom are buying up properties, allegedly hiking up real-estate prices, while the average Vancouverite earns a relatively modest wage.
The median household income in Vancouver is $63,800 while the median home price is $678,500, a price-to-income ratio of 10.6. A ratio of 5.1 or over is considered “severely unaffordable”, and a 3.0 or under is deemed “affordable” (Cox & Pavletich, 2012, p. 1). This figure shoots Vancouver well past that initial boundary of affordability and into a realm that would have been thought nearly impossible only a decade ago. One of the nationwide factors that led to an increase in housing prices is the record low interest rates. Many Canadians – not just Vancouverites – are receiving mortgages to purchase homes based on current interest rates, making the payments for even expensive houses much lower than if interest rates were at the historical average. Since 1990, the average Canadian interest rate has been 6.06% and elevated as high as 16% in 1991, whereas the rate has been sitting at 1% or lower since February of 2009 (Bank of Canada, 2012). Mortgage rates will vary based on the type of loan, but these are the base interest rates for all Canadians. If these rates were to increase, however, so would the monthly payments necessary to sustain the same rate of principal payoff for a non-fixed loan. The ability to afford housing would decrease, possibly enough to render residents needing to sell quickly or foreclose. Mass amounts of foreclosures busted the United States’ housing bubble in a dramatic fashion, but we will explore why the Canadian and American real estate and mortgage situations differ.

To be clear, a housing bubble is an upsurge in housing prices fueled by demand and speculation that prices will continue to increase. As prices climb higher, the gap between the consumers’ income and the median housing price typically grows wider and wider, which is why the price-to-income ratio is an important indicator of a housing bubble. “House price appreciation and income gains have historically been relatively tethered. Periods of over-performance in house prices are followed by periods of under-performance, and vice versa. The price-income ratio is a fundamental metric that usually exhibits stability over long periods of time. The price-income ratio is calculated by taking a house price measure and dividing it by a measure of income.” (Rabidoux, 2011) We will be referring to this particular measurement ratio throughout the project.
A gateway city such as Vancouver is one in which their airport or seaport serves as a primary arrival and departure point. In this case, the gateway between Canada and East Asia is the most relevant. It is commonly thought by economists and Vancouver’s real-estate experts that the mass influx of wealthy investors from Asia and especially mainland China have had major influences over housing demand factors and are significantly responsible for the ongoing increase in Vancouver’s real estate demand over the past 10 years (in the same approximate period as China’s economy has experienced rapid growth). The influx of foreign direct investment has allegedly had a massive effect on housing demand functions that stray far from the average city’s influences which consist of local income, taste patterns and number of local consumers in the market. Evidence of this phenomenon has proven to be extremely difficult to document though, since the data proving foreign ownership of Canadian homes is scarce. Realtors dealing with buyers from mainland China note that they often use proxy Canadian buyers (and their addresses) to sidestep the normally stringent documentation process the average Canadian would endure to buy a home by way of a bank loan. Since foreign direct investors purchase the properties with cash and have no need for the vetting process that banks usually provide in the home loan procedure, the use of proxies and lack of documentation of foreign ownership is allegedly commonplace. We will explore the studies and details of these allegations throughout the applied project.

Regarding real estate, demand is a function of: Quantity of properties demanded, price of housing, consumers’ income, price of related goods or services, taste patterns of consumers, expected price of the property in some future period, and number of consumers in the housing market (Thomas & Maurice, 2008).

Although Vancouver’s real estate market is behaving as if income level has increased, indicated by increased buying power, it has allegedly occurred under false pretenses because the money is being imported rather than earned in Vancouver, or even Canada. This leads to falsely indicating an increasing number of consumers in the market, urging speculators to expect a higher price in the future should the trend
continue. These all have tremendous influences on a housing market that has experienced steady price inflations since the great influx from Hong Kong in the early 1980’s, and considerably more in the past decade, but under the abnormal conditions of imported consumer funds. It should be stressed here again that the allegation is not that immigrants are elevating home prices (although there is some degree of this simply by population growth spurring an increase in consumers in the market), but rather that foreign investors who live outside of Canada are buying up properties using proxies in Canada – and that the chances of this happening increases with higher familiarity and opportunity for Canadian connections from countries wishing to invest. In this way, one can make an indirect connection between immigration and foreign investment, and we will find out throughout this project that concrete explanations are hard to come by in the puzzling dysfunction of the Vancouver real estate market.

At the heart of the FDI issue is the threat that the money could stop pouring in from foreign investment, potentially causing the housing bubble could burst. Threats related to Foreign Direct Investment that could lead to a housing bust are: Domestic regulatory bodies could restrict non-residents from purchasing existing housing as well as making it compulsory for temporary residents to sell all property before departing Canada (as has been the recent regulatory change in Australia to calm housing price inflations caused by overheated foreign direct investment) although this seems unlikely to happen in Vancouver according to some (Hasiuk, 2012); or various factors such as China’s economy, Chinese regulatory practices, or its own real estate market situation could make investing in the homeland a more lucrative opportunity than going elsewhere; or the Vancouver market may simply be deemed to have peaked and therefore not attract foreign investors at the same rate as it once did. Regulatory bodies may also threaten to correct the Canadian housing bubble by tightening up the lines to credit (and possibly raising interest rates down the road). Of course, if China’s economy tanks or slows dramatically, this may have a wide spectrum of effects on Vancouver’s market. A buyer’s market in China may draw consumers away from Vancouver, especially if investors think they’ve over-elevated Vancouver’s housing prices. I’ll explain later why a tanking Chinese economy will likely bode poorly for the entire world in the short-term.
There is another very important point to consider when speaking of a housing bubble burst in Vancouver, especially if you side on the speculative idea that Foreign Direct Investment is the main function that has been driving the prices up so high: As mentioned earlier, owners from outside of Canada buy their properties outright, and not from Canadian home loans. This is a key consideration because every property bought in full is absent of any outstanding loans, and therefore incapable of being foreclosed upon by banks or the Canadian Housing and Mortgage Corporation (CMHC). If sub-prime loans were at the heart of the United States housing crisis (which most consider to be the case), then we can consider the practice of buying a home outright as the polar opposite of that issue. This bodes well for a fizzle rather than a burst if a Vancouver housing correction happens at all. There is much more than that to consider though, and we will explore it all in detail.

From a management perspective, the issue of a Vancouver housing correction is relevant on two major levels: At its core, you have a city with an extremely high cost of living in combination with a disproportionately low average household wage. This situation not only serves to dissuade the brightest and most desirable in the talent pool from entering the Vancouver employment market, but the high property costs and human resource void also repels companies from setting up headquarters there. In addition to this kind of investment dissuasion, major companies that were already headquartered in Vancouver are beginning to uproot to cheaper cities where they get more property and quality human resources for considerably less money. Last year, major mining company BHP Billiton moved its Canadian head offices from Vancouver (known as a global mining capital), to Saskatchewan for this very reason (Kirby, 2011). The obvious economic trend will be to land in areas that close that gap between average household wage and property value. A $100,000 wage in Vancouver will provide considerably less disposable income than that same worker’s wage in Saskatoon, for example, where the median home price is $274,700 versus median household income of $68,300 (Cox & Pavletich, 2012). On a purely economic level, Vancouver cannot compete. Vancouver has many positives as a port city, municipality,
and a beautiful geography that have boded well for it, but pure economics tend to work against it.

This topic has importance not only in the local sense of the word (which would greatly affect property management and real-estate speculation in Vancouver), but also as a precedent-setting anomaly that may not be so unusual in years to come as globalization shrinks the planet and mass emigration trends become more commonplace. Government leaders, officials and other managers of municipalities, provinces and nations will benefit from knowing the influence that foreign direct investment and other anomalous phenomena will have on their respective economies. The scope of the project is isolated enough to apply specific economic principles to a single city, and these limitations add to the feasibility of the endeavor by providing a more controlled research environment.
Primary Research Question:

Based on these findings and the literature read on the topic, my research question for the project is:

How has Vancouver’s real-estate market defied economic principles of a housing bubble?

Sub-problems / Questions:

1. What are some of the main causes of the real estate anomaly in Vancouver?
2. What are the main trends contributing to the alleged Vancouver housing bubble?
3. How significant is Foreign Direct Investment as a determinant of housing demand and real estate pricing?
4. To what extent is foreign investment contributing to the strength or weakness of the Vancouver economy?
5. What might cause the bubble to burst?
Abbreviations

The following are abbreviations that will be used throughout the literature review:

- ARM – Adjustable-Rate Mortgage
- CMHC – Canadian Mortgage and Housing Corporation
- OECD – Organization for Economic Co-operation and Development
- FDI – Foreign Direct Investment
- HPI – Home Price Index
- IMPP – Insured Mortgage Purchase Program
- MLS – Multiple Listing Service
- MNC – Multinational Corporations
Literature Review

The literature review will include five areas that are comprised of the sub-problems being addressed in detail with the objective of answering the Primary Research Question:

*How has Vancouver's real-estate market defied economic principles of a housing bubble?*

Following the detailed examination and investigation of the sub-problems will be the culminated summary of the Primary Research Question being answered directly. The present review is limited to the Canadian housing market with specific focus on the city of Vancouver. Delineations of foreign investment – with specific focus on mainland China and its direct influence on Vancouver's real-estate market – will also be covered in detail.

**Sub-Problem 1: What are some of the main causes of the real estate anomaly in Vancouver?**

I think it's appropriate to begin this literature review with the titbit that in 2011, Vancouver edged out Sydney, Australia as the second most unaffordable city in the world – Hong Kong being number one. This study, headed by Wendell Cox and Hugh Pavletich (2012), stated that the median Vancouver home price was $678,000 (and over $1 million for a detached home!) against the average household’s median pre-tax income of $63,800. Bank of America Merrill Lynch said publicly at the end of 2011 that Canada is exuding "classic signs of over valuation, speculation and over supply…signs of a classic bubble", but that a crash of American proportions is unlikely considering real estate over valuation is being primarily fueled by record low interest rates (Ladurantaye, 2011). Yes, interest rates are a key factor for the bubble nationwide, but foreign direct investment and absentee landlords make Vancouver even more susceptible.
To get an accurate visual representation of the rise in real estate prices over the past decade, separated into detached homes, attached homes, and apartments, the following graph captures that rise quite well.

![Vancouver Average Sale Price](http://www.yattermatters.com/2012/06/vancouver-average-price-for-may-2012/)

It should also be emphasized very early in this review that the phenomenon – and specific measurements of the phenomena – of mass foreign direct investment into Vancouver’s housing market has been extremely difficult to document (Babad, 2012). This emphasizes the importance of this research, and that every measurable aspect of the Vancouver housing anomaly must be considered in order to gain a well-rounded understanding from a financial management perspective. “Just how pervasive foreign ownership of Canadian real estate is, however, hard to establish since neither the government nor the real estate industry collects official data on the subject, and buyers often use local proxies”. (Stastna, 2012). Realtors have been quite forthcoming in their desire to attract foreign buyers (and the realtors’ qualitative contributions to investigating
this subject have been more informative than most quantifiable data), although they have been less forthcoming about the notion that the foreign investment phenomena could be a main contributor to a real estate bubble. It is easy to understand why realtors would not want to emphasize a bubble effect, as it would deter buyers and speculation. The extent to which studies and experts can attribute foreign direct investment to the Vancouver housing crisis will be explored in detail later in the project, but for now we will list it as an alleged main cause of the city’s real estate anomaly.

The basic assertion of Vancouver’s real estate dysfunction is that all of the usual economic indicators suggest that median household income is far too low to sustain a market with the median home price being so high. Thus far, it has been made possible by the interest rates (and mortgage rates) being near record lows, but low interest rates have resulted in debt-to-income levels rising to dangerous levels. Craig Alexander, Derek Burleton, and Diana Petramala (2011) compiled the *TD Economics Financial Vulnerability Index*, saying that the risks related to household finances have been rising rapidly due to favorable borrowing conditions, and that provincially speaking, the B.C. populous is most at risk with a vulnerability rating of 1.24, followed by Alberta at 1.11 and Ontario at 1.05 (ibid). This study is a fitting one to explore the total picture of the ‘anomaly’ in particular, if we go through the specific criteria that went into the study:

The first criterion was the *debt-to-income ratio*, which includes mortgages, lines of credit and other consumer loans measured as a percentage of disposable income (Alexander et al., 2011), which simply measures one’s ability to fulfil one’s financial obligations. B.C. residents have Canada’s worst debt-to-income ratio at 160.5%, followed by Alberta and Ontario with 143% and 135% - the nationwide average being 127%. Having such high debt by comparison to money being generated to pay off that debt obviously adds to Vancouver’s financial vulnerability. Keep in mind as we proceed through these criteria that despite these statistics, strangely, homes are being bought and sold for higher and higher prices in Vancouver.
The second criterion of the study was the debt-to-assets ratio, which measures debt against one’s total value in assets (ibid). This is an interesting statistic because it’s one of the only criteria where B.C.’s rating was not the worst (was ranked 5th worst, which is still less than satisfactory) (ibid). Why did B.C. fair better here, if we consider that their debt-to-income ratio is so poor? Speculatively, the reason for this is because although the average resident is highly in debt, the value of their home has been rising as housing prices inflate, boosting the overall value of their assets. One must be cautious with this statistic, as housing assets can fluctuate very rapidly (as opposed to debt, which is far less likely to fluctuate due to outside forces). In the case of a correction where the value of the home dropped, the value of their assets would drop accordingly. In the context of a discussion regarding a housing bubble, this criterion must be considered with these factors in mind.

The debt-service ratio is an indicator of a household’s ability to meet their monthly debt obligations – Can they pay their bills? – with interest and principle payments as a percentage of income (Alexander et al., 2011). No surprise that B.C. residents ranked by far the worst in this category – but once again these statistics scream the question: If B.C. residents are so much in debt and make so little income relative to the high housing prices, why are housing prices still rising? Who can afford these homes and who is buying so many of them? A related statistic in this study is “The share of financially vulnerable households – or proportion of households with a debt service ratio of 40% or above. This threshold is used because Bank of Canada research shows that the probability of defaulting on one’s loans increases significantly once the debt-service ratio reaches that [40%] mark.” (Alexander et al., 2011) Despite BC’s poor debt-service ratio, residents do not fair quite so badly with this statistic, speculatively indicating that it is a somewhat smaller proportion of households who are likely to have difficulty paying their monthly debt obligations. Why do the debt-service ratio and the share of financially vulnerable households seem to be misaligned? One possible explanation is Vancouver’s low unemployment rate of 6.4% by comparison to the Canadian national rate of 7.3% in June, 2012 (Statistics Canada). This indicates that although wages and household income are low compared to housing prices, the percentage of residents who
do possess a job is higher than the national average. This makes a smaller proportion of households financially vulnerable with a debt-service ratio of 40% or above. In sum for these two criterion, BC residents pay the highest interest and principle payments as a percentage of their income, but are ranked only as the 5th worst province in its proportion of residents facing financial vulnerability, possibly due to a higher employment rate.

The fourth statistic is explored in more detail in the next section, the Home price to income ratio, which calculates the “average resale prices from Multiple Listing Service (MLS) as a per cent of disposable income. This captures relative overvaluation in the housing market as well as the susceptibility of household balance sheets to a housing price correction.” (Alexander et al., 2011). This is where B.C.’s alleged housing crisis is highlighted the brightest, with a price-to-income ratio of 8.8, and a distant second coming in at 5.3 for Ontario. Coincidentally, Vancouver as a city is even worse than its provincial average, coming in at 10.6 (Cox & Pavletich, 2012). I will re-iterate that this number indicates overvaluation, with a ratio over 5.1 considered “Severely Unaffordable” by Wendell Cox and Hugh Pavletich (2012). A price-to-income ratio of 3 or under is considered normal or “Affordable”.

Given all of the aforementioned statistics that indicate that there is unaffordability in the Vancouver housing market, and that many residents are highly leveraged and debt-ridden, Statistics Canada (Statistics Canada, 2012) states that the industrial average earnings in both “Real estate and rental and leasing” and the “Construction” industries have increased by 10.2% and 5.9% for the period of March 2011 to march 2012 – which is a significant indication that houses continue to sell despite their allegedly inflated prices and properties continue to get constructed despite B.C. residents being the lowest earners by ratio to housing price in Canada, and also the most indebted. The anomaly continues. The only industry to have increased more in that time period is “Mining, quarrying, and oil and gas extraction”, which unlike real estate is neither a surprise nor a statistical anomaly.
Another statistical analysis that shows, despite the apparent unaffordability by a large percentage of Vancouverites, that housing prices continue to climb is “The Teranet – National Bank House Price Index™, an independent representation of the rate of change of Canadian single-family home prices” (Cite the Site - http://www.housepriceindex.ca/Default.aspx). It is simply a measurement of the change in housing prices from one year to the next, increased or decreased, over time. Data is available from year 1990, when Vancouver’s housing index was 55.36. To give you comparative markers, Halifax was 57.04, Montreal was 59.13 and Victoria was 45.97 (Toronto’s data for the Teranet – National Bank House Price Index did not become available until 1998). The following is how it progressed:

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<tbody>
<tr>
<td>Halifax</td>
<td>57.04</td>
<td>60.08</td>
<td>63.91</td>
<td>75.63</td>
<td>110.4</td>
<td>138.85</td>
</tr>
<tr>
<td>Montreal</td>
<td>61.71</td>
<td>56.82</td>
<td>57.95</td>
<td>68.03</td>
<td>110.2</td>
<td>147.18</td>
</tr>
<tr>
<td>Victoria</td>
<td>45.97</td>
<td>60.79</td>
<td>60.85</td>
<td>64.9</td>
<td>127.5</td>
<td>139.4</td>
</tr>
<tr>
<td>Toronto</td>
<td>Unavailable</td>
<td>Unavailable</td>
<td>68.38</td>
<td>80.06</td>
<td>104.04</td>
<td>140.66</td>
</tr>
<tr>
<td>Vancouver</td>
<td>55.36</td>
<td>70.02</td>
<td>68.54</td>
<td>70.67</td>
<td>130.04</td>
<td>170.57</td>
</tr>
<tr>
<td>Canada</td>
<td>--</td>
<td>--</td>
<td>66.46*</td>
<td>75.47</td>
<td>115.89</td>
<td>149.8</td>
</tr>
</tbody>
</table>

*Does not have nationwide “Canada” data until Feb. 1999 – so this figure represents that date – from http://www.housepriceindex.ca/Default.aspx

As we can see, there was relative stability in the rate of change in Canadian single-family home prices until circa 2002 when a period of rapid change took place. This millennium has thus far been one of increased buying and selling, which has in-turn increased housing prices nationwide. Although this behaviour has certainly not been confined to Vancouver, it is worth noting that Vancouver has experienced by far the highest rate of change over the past decade.
It is easy to see graphically the period of relative stability followed by the decade of rapid change.

**Sub-Problem 2: What are the main trends contributing to the alleged Vancouver housing bubble?**

To get to the heart of the Main Research Problem, I believe it is important to establish the economic principles behind a housing bubble. Dean Baker (2005) was one of the few economists who wrote an academic article predicting the housing bubble burst of the United States in the late 2000’s. Of course, the incident in the United States was notorious for coming seemingly out of nowhere due to the bundling of risky sub-prime loans with safe ones, then being given top ratings by Moody’s and Standard & Poor’s and sold to banks around the world. To be clear, this is not a factor in the Canadian housing market situation.

More applicable to the Canadian situation was Baker’s comparing the bubble in housing prices to the stock bubble of the late 1990’s (which busted), and predicted that the eventual collapse of the U.S. housing bubble would have a far more devastating impact...
due to the vastness of property ownership by comparison to stocks. He was right. Simply stated, a higher percentage of people are affected by fluctuations in housing prices than are affected by fluctuations in the stock market. This is very much a parallel in the Canadian housing market. (Baker, 2005)

Bubbles usually start with an increase in demand (a shift to the right in the demand curve), while supply takes a relatively long time to replenish in real estate due to the longer periods it takes to erect new properties. (Thomas & Maurice, 2008). Speculators may exaggerate the effect of increased demand through short-term buying and selling. At some point, demand decreases (a shift to the left in the demand curve), or stagnates at the same time supply increases, resulting in a sharp drop in prices - and the bubble bursts.

Wendell Cox and Hugh Pavletich (2012) explain that housing bubbles are triggered by a price-to-income ratio at anything over 3. The price-to-income ratio, or the “Median Multiple” as it is phrased by Cox and Pavletich (2012), is also recommended as the housing affordability standard by the World Bank, United Nations, and the Harvard University Joint Center on Housing. They also indicate that there are other more complex 'mix indicators' that also take mortgage affordability and interest rates into consideration, but claim that mix indicators only provide a “snapshot” and that the variability of the indicators can be misleading, whereas the price paid for the home does not vary over the term of the mortgage.

Below are two basic examples of price-to-income ratios. Ideal City is a hypothetical place in which the ideal ratio exists. The other city is Vancouver with actual statistics.

A Price-to-income ratio example:

If the median home price in Ideal City is: $150,000/
& Ideal City’s median household income is: $50,000
The price-to-income ratio is: 3
Price-to-income ratio for Vancouver:

The median home price in Vancouver is: $678,500
Vancouver’s median household income is: $63,800
The price-to-income ratio is: 10.6

(Cox & Pavletich, 2012)

Cox & Pavletich’s (2012) Housing Affordability Rating Categories are:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Price-to-Income Ratio/“Median Multiple”</th>
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<tr>
<td>Affordable</td>
<td>3.0 &amp; Under</td>
</tr>
<tr>
<td>Moderately unaffordable</td>
<td>3.1 to 4.0</td>
</tr>
<tr>
<td>Seriously Unaffordable</td>
<td>4.1 to 5.0</td>
</tr>
<tr>
<td>Severely Unaffordable</td>
<td>5.1 and over</td>
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</tbody>
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Vancouver is obviously deemed an even more severe version of Cox and Pavletich’s “Severely Unaffordable” category insomuch as it more than doubles that ratio’s threshold of unaffordability. It was important to establish this very important economic principle before proceeding with talks of a bubble, since it is the main principle that economists refer to as a bubble indicator, but at the heart of all economic principles is supply and demand.

In your average city, a bubble scenario is created through demand increases (with an expansion of the price-to-income ratio) by way of cheap debt or low interest rates and credit is increasingly abundant through looser mortgage requirements. Because of these factors, the overall psychological trend is such that people are willing to take on more debt when rates are low (Rabidoux, 2011). Historical trend is that people will buy a home if they are capable of doing so, and lower interest rates combined with loose mortgage requirements allow that to be possible. These are all too familiar in many parts of Canada, but despite Vancouver’s market trends appearing to be an exaggerated microcosm of the country as a whole, Foreign Direct Investment and
absentee landownership is still a significant add-on demand function heavily influencing Vancouver’s real estate market that is much less effectual in the rest of Canada (although Toronto exhibits some similar behaviours).

Thomas and Maurice (2008), who wrote the MBA text Managerial Economics, cite the relationships between demand functions and the quantity of a product demanded, ‘property’ being the product in this case. A housing bubble is fueled by demand to consume properties while supply is struggling to keep up. Since it takes a relatively long time to erect properties, supply is difficult to keep up with demand in hot markets, like Vancouver has been over the years. One of the demand functions that heavily effects a housing market is “Expected price of the good in some future period” or “P_e” (Thomas & Maurice, 2008), as speculators feel that there are profits to be made in the short-term buying and selling of properties, which even further increases demand. The old adage is to buy low and sell high – the basis of speculative investing.

“Buyers from mainland China are leading a wave of Asian investment in Vancouver real estate as China tries to damp property speculation at home. Good schools, a marine climate and the large, established Asian community as a result of Canada’s liberal immigration policy make Vancouver attractive” (Hui-yong & Doneville, 2011). Ultimately, property values will rise as quantity demanded rises, and demand will increase with an increase in consumer income. When taste patterns turn to consumption in a specific area such as Vancouver, the number of consumers increase, and speculation sets future prices higher – all economic principles that are allegedly being initiated by wealthy non-Canadian buyers that effectively elevate demand, lower supply, and inflate prices.

Although Foreign Direct Investment may be a culprit for rising housing prices, there is evidence to suggest that immigration in and of itself is healthy for real estate markets. Immigration is an accurately measureable statistic that has Canada’s major banks reporting will keep more people buying. Geoffrey Kwan and Sean Adamick’s June 29, 2012 report from RBC Dominion Securities on the Canadian Housing and Mortgage
Industry said that strong immigration nationwide going forward will help the real estate industry – once again highlighting that immigrants are not the focus of Vancouver’s housing dysfunction – and in fact, immigrants help the market in many ways. CIBC’s Benjamin Tal released a report in August, 2012 stating that “after ten years in Canada the propensity among immigrants to own a house is higher than among native-born Canadians,” (Tal, 2012, p. 2), going on to state that “By province, British Columbia is projected to enjoy the strongest increase in housing demand over the coming decade, a fact that might limit the degree and duration of the projected correction in housing activity in the province.” Once again, the experts try to weigh all of the pros and cons and speculate where the market is going to land.

Speculation is nothing more than a series of educated guesses, and at other times speculation in masses just begets further speculation. Over-speculation begets an eventual loss of consumer confidence as prices climb above the normal thresholds of what is considered acceptable – although Vancouverites (and alleged foreign investors) have managed to stay positive on the speculative side until recently. Kwan and Adamick’s report (June, 2012) indicates that consumer confidence is declining and that Toronto and Vancouver home prices are overvalued in the 10-15% range. Gitman and Hennessey (2008) say in Principles of Corporate Finance that “Simply stated, the value of any asset is the present value of all future cash flows it is expected to provide over its useful life”. That said, the useful life of a property might prove to be vastly different from investor to inhabitant. Foreign Direct Investments are exactly that: Investments. Buyers are gambling (or speculating based on educated guesses) that the value of the properties they buy today will be worth more in the future when they are sold. Local inhabitants of those homes, and potential buyers who need a place to live in, often view the act of driving up the market prices of their homes as a detriment to their lives – which in Vancouver can be backed by the statistic of being the second least affordable city in the world. It’s great if you own a home and the value of it rises, but for those trying to purchase a home for the first time, it makes it more difficult to afford, especially in Vancouver if you fall into the ‘average household income’ range. As you will see in the next section, most real estate investments made over the past 20 years were likely
profitable ones. Speculation can be a positive or negative, depending on which side of the investment you started or ended on.

The aforementioned Dean Baker (who predicted the US housing crash) said we must be very weary of a bubble when the increase in housing prices is not being driven by fundamental factors in the real estate market: Income and population growth are the two main fundamental factors (Baker, 2005). We have already established that the income rates in Vancouver have not even closely kept pace with the housing price increases. It can be argued that the increase in immigration has led to an increase in the population rates, and it has but Vancouver as a municipality is becoming saturated while the “Greater Vancouver” area grows larger and ever more populated.

The Canadian Mortgage and Housing Corporation’s 2011 Annual Report disputes Baker’s (2005) claims of a bubble. The Canadian Housing and Mortgage Corporation (CMHC), “Established as a government-owned corporation in 1946 to address Canada’s post-war housing shortage, the agency has grown into a major national institution” (Canadian Housing and Mortgage Corporation [CMHC], 2012) and downplayed the symptoms of a housing crisis. The report provides what the CMHC consider to be sound economic and fundamental reasons for the nationwide housing boom. It starts with the rising population. The report said “Between 2006 and 2011, Canada’s population grew by 5.9%, up slightly from the previous intercensal period (2001 to 2006) when it grew by 5.4%. Canada’s population growth between 2006 and 2011 was the highest among G8 countries” (CMHC, 2012, p. 38). If we look specifically into the population increase in Metropolitan Vancouver, we get a mixed bag, with the city of Vancouver growing slower than the national average at only 4.4%, but its surrounding areas grew at a much higher rate (below) – still considered to be in the Metropolitan Vancouver region:

<table>
<thead>
<tr>
<th>British Columbia</th>
<th>Population</th>
<th>Growth Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vancouver</td>
<td>603,502</td>
<td>4.4</td>
</tr>
</tbody>
</table>

24
The CMHC also cites interest rates as a function in increasing demand, but gives a forecast of the future rates that is meant to sound optimistic, but in reality is grim if rates reach the levels they predict, given the amount of variable rate loans in an already struggling economy. “CMHC forecasts that posted mortgage rates will remain relatively flat through late 2012. During 2012, the one-year posted mortgage rate is expected to be in the 3.3 to 3.6% range, while the five-year posted mortgage rate is forecast to be within 5.1 to 5.4%. The low interest rate environment is supportive of housing demand.” (CMHC, 2012, p. 38) For those homeowners carrying a floating mortgage rate, an increase would translate into monthly payment increases, so this increase is not necessarily as insignificant as the report presumes.

In addition, the report by the CMHC said that increased employment by 1.2% from 2010 to 2011 has contributed to the housing boom. Of course, income is a fundamental demand function, so this is a sensible statement. “Incomes grew in 2011 because of the economic recovery and the resulting improvements in the labour market. Income will continue to grow at a moderate pace in 2012 and be supportive of housing.” (CMHC, 2012)

Statistics Canada (2011) says:

<table>
<thead>
<tr>
<th>Economic families¹, two people or more</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ constant 2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic families¹, two people or more</td>
<td>72,300</td>
<td>75,300</td>
<td>76,300</td>
<td>76,400</td>
<td>76,600</td>
</tr>
</tbody>
</table>

¹Statistical discrepancy present between the number of families, families by type of family, and family unit households.

(Statistics Canada, 2012)
Statistics Canada’s median total income by family type for British Columbia was:

| British Columbia | 62,600 | 65,780 | 67,890 | 66,700 | 66,970 |

(Statistics Canada, 2011)

Statistics Canada’s median total income by family type for Vancouver:

| Vancouver (B.C.) | 62,900 | 66,330 | 68,670 | 67,550 | 67,090 |

(Statistics Canada, 2011)

So as we can see, the CMHC is correct in saying that income in Vancouver has grown, but it would be a difficult argument to make in terms of economics that it has grown enough to support a market where the median Vancouver home price is $678,000 and over $1 million for a detached home, as stated earlier (Cox & Pavletich, 2012). It should be noted here that for some reason, Statistics Canada only has average income after tax for Canada as a whole, and yet do not have those stats by province or municipality. Instead, they use median total income by family type for provinces and municipalities, so we cannot make a direct comparison, but it appears that Vancouverites are still well under the average income nationwide, given that the Canada-wide stats are after taxes and the municipal stat is before taxes – and about $9,000 lower. (Statistics Canada, 2012)

Foreign Direct Investments into a region’s real estate market is not a fundamental factor for housing prices. If it is in fact an anomalous and influential factor though, does its influence have the strength to sustain the market to the point where the speculative bubble is just that – speculation? Or does its power to sustain the market rely solely on the perpetual phenomenon of Foreign Direct Investment? We answer these questions in the next section.
Sub-Problem 3: How significant is Foreign Direct Investment as a determinant of housing demand and real estate pricing?

Vancouver as a Gateway City:
A study by David Ley, Judith Tutchener, and Greg Cunningham states that “research has identified immigration, social polarization, and gentrification as factors with significant impacts upon price movements and other housing characteristics in gateway cities”. They go on to dissect various neighbourhoods of gateway cities whereby they concluded that there were positive relationships between inflated dwelling prices and immigration, gentrification and socio-economic status, but foreign investment and immigration does not always drive up housing prices, and can even conversely affect the housing market. Tom Carter (2005) says that “Not all immigrants, however, arrive with wealth. Many are poor, live in less attractive neighbourhoods and pay unrealistic amounts of their inadequate incomes for poor quality housing. Some end up homeless on the street. The role of immigrants in housing markets is an important consideration for urban and housing policy.” (Tom Carter, 2005) Of course, the other side of this point is the aforementioned CIBC report by Benjamin Tal that said immigration has the potential to increase housing demand and that after a ten year residence in Canada, immigrants are even more likely to buy than Canadian-born residents (Tal, 2012).

The Effects and History of Foreign Direct Investment in Vancouver:
Bloomberg contributors Hui-yong Yu and Christopher Donville said in May of 2011 that an anecdotal measurement of the Chinese influence on the Vancouver market can be quantified by local real estate business Royal Pacific Realty’s surge of sales during the Lunar New Year – a significant Chinese holiday period – when Chinese buyers came over to buy up an unprecedented amount of properties. “Sales of detached homes, townhouses and condominiums in metropolitan Vancouver jumped 70 percent in February from January, to 3,097 units from 1,819, and were up 25 percent from a year earlier, according to the Real Estate Board of Greater Vancouver. In March, sales climbed 32 percent from February, to just shy of a record for the month of 4,371
transactions set in 2004. Sales increased by 80 percent from two years ago.” (Hui-yong & Donville, 2011). Is it a coincidence that home sales in Vancouver jumped so dramatically in the same time period as the Chinese holidays? Perhaps, but alternate explanations have been elusive. And if it becomes an accepted fact that the correlation between the Chinese Holidays and record-breaking home-selling months is accurate and attributable, then the next question is to ask whether this behaviour has a powerful enough influence to definitively say it is driving up the collective prices of homes, because even if it is true, it does not mean that its effect is significant enough to have been driving a hot market so sustainably for so long.

To establish the history of this building trend, the graph below shows the first spike in housing prices back in 1980, when Mark Hasiuk says, “waves of Hong Kong residents including members of the business elite, wary of communist China’s pending takeover, poured across the Pacific, gobbling up property with converted HKDs [Hong Kong Dollars].” (Hasiuk, 2012) Brian Morton (2012) added that most immigrants from the Hong Kong area spoke Cantonese and continued trickling in to the Vancouver area. An even larger spike on the graph can be seen at the year 2002 mark. This is when immigrants from mainland China started showing major interest in Vancouver as a city to emigrate to and invest in, quite distinctive to those from Hong Kong by their Mandarin language. Morton stated that 60% of Vancouver suburb Richmond residents are immigrants and 44% are of Chinese origin – a significant portion of the population as a whole (Morton, 2012), but Hasiuk makes it clear that it’s difficult to tell exactly how much influence wealthy Chinese are having on the dysfunctional Vancouver housing market because evidence of the FDI phenomena is mostly anecdotal.
Important Disclaimer about Foreign Direct Investment (FDI) with Regard to Real Estate:

Vancouver’s anomalous nature is deserving of attention from a financial management standpoint, and in consideration of ever-increasing globalisation and the increasing possibility that the Vancouver precedent is likely to become more common. An assumption should be made by which average immigrants who buy and live in their home(s), and work and spend locally through average behavioural trends, have not been and are not the focus of this study. Also important to note is that Foreign Direct Investment in most other industries has the potential to have an overwhelmingly positive effect on local economies, but that this is far less probable in real estate, an explanation for which will be explored in the next section.

Hasiuk, to make it clear that this is not about race or ethnic lines, makes sure this is about the have and the have-nots: “Local ownership spawns healthy communities. If you own, you care. And through property taxes, invest in parks, schools and other amenities. Conversely, for foreign owners, property taxes represent investment fees while circumventing Vancouver’s tax code, which taxes residencies (4.2 per cent) and
businesses (18 per cent) at separate rates. Isn’t speculative foreign investment a form of business?” (Hasiuk, 2012)

Should foreign ownership of Canadian properties be taxed as businesses? It is a business interest, after all. Hasiuk says foreign buyers will often use local addresses such as their lawyer’s office when registering the title with the provincial land office, so it’s almost impossible to put an accurate number on the scope of foreign ownership and absentee landlords. If this practice of FDI is deemed a business by the Canadian government which is subject to increased taxes, what regulatory steps would need to be taken to deter proxy buyers and collect accurate data? Hasiuk says, “capitalism requires competition, and free market principles should drive our housing market. But we no longer control that market.” (ibid). So what, if anything, should Canada – and Vancouver more specifically – do to regain control over its real-estate market? Or is there in fact any harm at all in having demand influenced by wealthy foreign investors? It still adheres to economic principles of demand function influence on price, albeit unusual interpretations of (M) Consumer’s income (because the income is not necessarily locally generated) and (N) Number of consumers (because often one investor buys multiple properties and leaves them vacant, or rents them at a low-ball price which leaves rental market levels artificially low – another much talked about problem in Vancouver in the press, and yet equally hard to prove through hard data due to the alleged use of proxies).

**Sub-Problem 4: To what extent is foreign investment contributing to the strength or weakness of the Vancouver economy?**

*Shouldn’t foreign investment pump valuable funds into the local economy?*

Yes...except with real estate, in general. Perhaps Foreign Direct Investment has been demonized throughout this project thus far, but in industries outside of real estate, FDI can be very good for local economies.
Vivienne Poy, who was originally from Hong Kong and went on to become Canada’s first Asian senator (Haggart, 2004), made an interesting and indicative statement in her maiden speech to the senate. She was responding to inflammatory remarks that a Markham deputy mayor made claiming local residents were being driven out by the Chinese and their businesses, "Attitudes are difficult to change," Poy observed. "The difference today is that when the Chinese move in, property prices go up." (Haggart, 2004)

Poy, of course, meant that in a definitively positive way, and therein lies the major question that national, provincial and municipal leaders should be asking themselves: From a purely economic perspective, do rising real-estate prices under Foreign Direct Investment-influenced conditions mean that the economy is strengthening, or does its contribution to increased housing unaffordability also contribute to the overall detriment of that region’s economy? We must examine whether the pros of imported money (pumping money into an economy is typically considered a positive thing) outweigh the cons of rising real estate prices (which could potentially make property unaffordable and/or cause a bubble by which a damaging correction may result).

“Foreign real estate investors seem to be the new bogeyman of homebuyers across the country. Just how pervasive foreign ownership of Canadian real estate is, however, is hard to establish since neither the government nor the real estate industry collects official data on the subject and buyers often use local proxies. Informal polls of realtors in Metro Vancouver and the Greater Toronto Area by industry associations and the media have reported figures as varied as 3.5 per cent and 20 per cent for the percentage of housing sales that involve buyers from outside Canada. Canada has few restrictions on foreign ownership of real estate, and what limits do exist are at the provincial level and mostly pertain to agricultural land.” (Stastna, 2012)

Professor Magnus Blomström wrote for The Organization for Economic Co-operation and Development (OECD), that inward Foreign Direct Investment will ideally raise employment, encourage exporting, generate tax revenues and – perhaps most lucratively – the hope is that the knowledge being imported (which is often technological
in nature these days) will spill over into Vancouver’s private sector. “For instance, local firms may be able to improve their productivity as a result of forward or backward linkages with MNC [Multinational Company] affiliates, they may imitate MNC technologies, or hire workers trained by MNCs. The increase in competition that occurs as a result of foreign entry may also be considered a benefit” (Blomström, 2002).

If we apply those idealised scenarios of foreign direct investment into Vancouver’s real-estate, we find that there is little to no improvement in employment, aside from perhaps a niche group of realtors who specialize in catering to foreign investors – insignificant on the OECD scale of hiring and training local employees for a multinational corporation’s workforce. Also, there isn’t a noteworthy transfer of knowledge, technological or otherwise, gained by Vancouverites by the purchase of a property by an absentee buyer.

On the plus side of foreign direct investment into the Vancouver real estate market, significant income increases by way of commissions have filled the pockets of local realtors. One certainly would be hard-pressed to find complaints out of those who benefit from the rising prices of houses or by the short-term buying and selling frenzy that speculation inspires. These opportunities to buy low and sell higher are open to the general populous – or at least to those who can afford the ante to the game. We cannot ignore that this aspect of the phenomenon does have a positive effect on the Vancouver economy in general, as realtors and the profiteers of “flipping” properties have in-turn spread that wealth into the local economy by way of consumption of products and services. Also theoretically, governmental tax revenues from each property trickle down to inhabitants of the province, funds which will increase as housing prices increase.

In sum, foreign investment can be positive in significant ways when there is multinational company assimilation into local markets and workforces or if there is an inherent knowledge exchange where inward foreign direct investment results in the inclusion of differentiated information. This is not what is happening in the Vancouver housing market, but there is still an increased revenue stream that stems from property
taxes and commissions, and the profits made from selling homes at higher prices than what they were bought serve as significant financial benefit to those doing the selling.

More Economic Principles Related to the Vancouver Market:

Price-to-rent ratio is usually another indicator of a housing bubble. It is calculated by dividing the house price by the total rent for a year (Lazaruk, 2012). For example, below is the May, 2012 price-to-rent ratio for apartments in Vancouver (does not include detached or attached home prices or rents):

The average condo price is: $461,410
The average rent is: $1,498 x 12 months = $17,976
Price to rent ratio is: 25.6 times higher

The rule of thumb in the past is that a price-to-rent ratio of over 15 times is a bad time to buy because the property is over-valued. (Lazaruk, 2012) By conventional price-to-rent ratio standards, Vancouver apartments are considerably over-valued.

Chris Julliard and Grace Wong of the Wharton School of the University of Pennsylvania say it is a good predictor of future price changes. It helps to think of the price-to-rent ratio in relation to Gitman’s and Hennessey’s (2008) explanation of the price-to-earnings (P/E) ratio when appraising a share value, only here we are determining the true value of real estate, whether it is appropriately priced, over-valued and what the risk is of buying it. Julliard and Wong said “focusing on the price-rent ratio is analogous to the commonly used price-dividend ratio to analyze the stock market.” (Julliard & Wong, 2006)

Joshua Gallin (2008) takes this analogy in a different direction, saying that it may be inaccurate to think that rent is a fundamental determinant of home values – even if at first it appears to make sense that rent costs should not stray too far out of line with property values in terms of ratio. “The analogy to the stock market is straightforward:
The rent–price ratio in the housing market is like the dividend–price ratio in the stock market (Leamer 2002). Campbell and Shiller (2001) showed that when stock prices have been high relative to dividends, future price growth for stocks has been subdued. One might reasonably expect the analogous statement to be true for the housing market…” Gallin found in his study that “periods in which house prices are high relative to rents appear to be followed by periods in which real rent growth is faster than usual, and real house-price growth is slower than usual, and that the response of prices dominates that of rents”. In terms of his study, Gallin says “we can reject the null hypothesis that rents “do all the correcting” but that we cannot reject the null that “prices do all the correcting.” Including a measure of the user cost of housing capital does not alter the result”, essentially meaning that price-to-rent ratio is not an accurate valuation predictor, and hence, is less predictive of a housing bubble than price-to-income.

That is not to say that the price-to-rent ratio is meaningless. In fact, Joshua Gallin was of the lone opinion (in the scope of my research) who thought that price-to-rent ratio was a poor indication of a housing bubble – but it should also be said that he was the only researcher I found who conducted an extensive study on that specific topic alone, and not simply as one in a series of indicators. The vast majority of economists – even the ones Gallin referenced himself in Leamer, Campbell and Shiller – believe that the price-to-rent ratio in conjunction with the price-to-income ratio give the best indicators of housing affordability, and hence, the best indication of a housing bubble if it proves to be in the unaffordable range.

Dean Baker (2005) says that rents and home prices have always moved closely together for the simple reason that families can freely switch between renting and owning depending on the relative prices. Also, and perhaps more telling from a business-minded perspective, landlords can sell off rental property if home sale prices are climbing significantly higher in comparison to rents (Baker, 2005).

Why is this important to the Vancouver housing market in particular? Because the 15 times rule of thumb has typically been considered accurate by economists due to its
historically accurate tendencies in normal markets. If we retrace our primary research question: *How has Vancouver's real-estate market defied economic principles of a housing bubble?* The simple answer so far, as we have explored, is that along with all of the normal demand principles, there are rather abnormal market drivers. It may not be foreign direct investment that is driving up Vancouver's housing prices, as concrete proof is still eluding us due to lack of accurate data of buyers' residence statuses, but a credible alternative explanation has been elusive as well. All *normal* economic principles state that Vancouver is severely over-valued. The abnormal market drivers – Foreign Direct Investment in particular – would offer a possible explanation as to why this gateway city's real estate has managed to steadily increase in value despite the indicators that state it should be a bursting bubble, but it would be based on educated guesses rather than concrete data.

**Sub-Problem 5: What might cause the alleged bubble to burst?**

I would like to begin this section, at the risk of fear mongering, by stressing Dean Baker's warning that the events of a bubble bursting in major cities can have a devastating effect on the entire country (Baker, 2005). For Canada, the three cities that are considered most bubble-prone are Vancouver, Toronto and Montreal, ranked as second, sixteenth and eighteenth least affordable in the world by the aforementioned Cox and Pavletich (2012). In that study, price-to-income ratio was used as the sole indication of unaffordability in all larger metropolitan markets on the planet (defined by cities being over 1.5 million in population, or 1 million in Australia).

Canada's rising of interest rates may be an unlikely short-term scenario, but it is an inevitability that interest rates will raise from the historical lows at which they are now (in 2012). Michael Parkin (2011) says it is not 'if' the Bank of Canada raises interest rates, but “when”. I will first explore what happens when the interest rates rise, and then detail specific reasons and likelihoods of why and when they will.

Jim Powell (2010) of the CATO Institute sums it up well: “Even now, with interest rates near zero, millions continue to struggle to make mortgage payments, making it likely
that the number of mortgage defaults will increase when interest rates rise. That means more homes will be offered by individual homeowners and banks with an urgent need to sell, depressing home prices.” Powell argues that low interest rates draw people of low means into buying homes that they think they can afford based on the current external economic situation and their own personal financial state, but that they are often stretched (even in the present situation) to pay their bills and mortgage in order to maintain their home – and fail to save any money for a rainy day.

The problem is that rainy days do come, whether it is of absolutely no fault of one’s own – such as a slump in the economy, which Canadians are presently experiencing – or if one is hit with unemployment. The most tragic situation occurs when the economy is doing just fine, and one’s job is going very well or at least at par with the situation when they bought their home, but the interest rates start to rise, which is a normal reaction to a good economy. People of low means have tended to take adjustable rate mortgages (ARMs) because they are lower than fixed-rate mortgages. The problem with this is that if they were stretched at those low rates, just barely making ends meet and failing to save any money, even a small rise in interest rates would cause their mortgage payments to rise to unaffordable levels. This was a key aspect of the U.S. housing crisis scenario.

Once a string of foreclosures start taking place, the real estate market has an overabundance of supply. Too much supply and not enough demand to cover that supply triggers a drop in housing prices and suddenly homes are worth less than before, sometimes sinking to values lower than the debt that homeowners still owe to the bank. The U.S. housing crisis scenario demonstrated that faced with the choice of selling the home for less money than the homeowner still owed to the bank was not realistic. People often refuse to keep paying off a mortgage on a house that no longer belongs to them. This causes further foreclosures and the cycle continues.

At its most basic:
Rising interest rates lead to higher mortgage costs (on ARMs); and then higher mortgage costs lead to unaffordability for a portion of the population (1 in every 19 Las Vegas homes were under foreclosure in the first half of 2011 – Christie, 2011); and then foreclosures lead to too much supply of homes; and then too much supply leads to the lowering of housing prices; and then the lowering of housing prices leads to a portion of the population owing more on their homes than the actual value, which leads to the continuing cycle of foreclosing.

This is a simple explanation of a housing crisis within the very complex cause and effect issues of real estate and interest rates-related scenarios. Interest rates are directly correlated with inflation rates, which are correlated with export levels, which are correlated with GDP, and the cycle continues in that regard as well.

The point is that interest rates cannot stay suppressed simply because it would cause foreclosures and lower home values. The eventual rising of interest rates is inevitable, even if there are devastating effects. Michael Parkin says “The key reason that [raising interest rates] is the right medicine is that there is an important asymmetry in the cost of errors, and the risks need to be unbalanced away from rising inflation. If inflation breaks loose of its anchor and moves seriously above target, the situation can be addressed only with seriously above-normal interest rates.”

*China’s economy and its importance to the Vancouver real estate market:*

If we are willing to accept the notion that foreign direct investment is driving up the housing prices in Vancouver, and that mainland Chinese buyers account for the majority of those consumers – which is a popular, yet unproven belief – then the Chinese economy becomes an important indicator for the Vancouver real estate market.

The explosive growth of the Chinese economy over the last decade has been amongst the top financial influences in the world. Craig Alexander and Pascal Gauthier (2011) did a study to “investigate how an unanticipated sharp decline in the rate of China’s economic growth might impact Canada” and “The main conclusion is that the Canadian
economy would be quite vulnerable.” Their findings indicate that Canada’s economic fortunes have significant direct and indirect reliance on the Chinese economy. It should also be mentioned that China’s economic influence is not confined to just Vancouver or Canada, but Alexander and Gauthier point out that a mere slowing of the Chinese economy to 5% would be a major blow to the entire world and could cause a global recession. Comparatively, China’s growth rates were at 14.2% in 2007 and have averaged 9.73% since, and have not dipped below 8% since 1990 when GDP annual growth was 4% (World Bank Statistics).

So, why would the Chinese GDP growth stall? At its most basic, The People’s Bank of China is trying to dampen inflation, slow down the real estate market and the Chinese economy in general – reasons to follow in the next paragraph. Alexander and Gauthier (2011) say “It bears noting that growth of 5-7% represents a deep recession for an economy where rising population and productivity support potential (long-term trend) growth at 8-9%.” They also note that the scenario of their study was based on a slowdown that originates in China, rather than an outside influence such as the world economic crisis caused by subprime mortgages and credit default swaps. An internal cause could stem from a variety of sources, but they say “A plausible trigger could be an overshooting in the tightening of monetary policy and lending, followed by a collapse in real estate market valuations, private investment, and large losses for the domestic financial system.” The irony of that quote should not be lost within the context of this applied project in that these risks are inherent to all regions of rapid growth. On the other hand, one could make the argument that a projection of that scenario could drive even more money into the Vancouver real estate market – or into another gateway city whereby the FDI trend shifts.

The reason The People’s Bank of China would want to raise interest rates, which have gone up a full percentage point since 2010, is to slow the economy down in order to stifle inflation. China’s growth is heavily dependent on their ability to manufacture and export products at low cost, but inflationary pressures may stand in the way of their ability to attract and retain foreign consumers, as inflation will correlate with increased
costs. Alexander and Gauthier (2011) say that these efforts to slow the economy could result in a “hard” or “soft” landing; a hard landing being designated by China’s GDP growth falling under 6%. They said “At nearly $9 billion, China accounted for 1.6% of foreign direct investment (FDI) in Canada in 2009. This year it will likely make up roughly 3% of total FDI. The direct trade and FDI impacts would not be insignificant by any means; but, they would not derail the Canadian economy. Unfortunately, these immediate impacts are just the tip of the iceberg.” Since China is expected to make up 15% of the world’s GDP, a “hard landing” could have devastating trickle-down effects to Vancouver and the world alike.

To put things into perspective, Canada’s GDP growth in 2010 and 2011 were 3% and 2.9%. Japan and most Eurozone countries are expected to have growth rates in the area of 1.5%, aside from Germany – but we should not ignore the fact that Germany’s growth engine has been exports to China and Asian emerging markets (Alexander & Gauthier, 2011), so even strong markets tend to be China-dependent in some sort of significant fashion, whether directly or indirectly, Canada included. Therefore, a hard landing for China’s economic growth would likely result in a European recession and a speculative global recession. Alexander and Gauthier consider a hard landing unlikely, but that the potential is there and justifies scenario planning of this nature. China’s economy is strong but its balance is fragile.

To conclude this section on the influence of China’s economy on the Vancouver real estate market, we should narrow down its macro effect on the world into its direct effect on Vancouver. Of course, a global recession will likely leave all major housing markets struggling. On the other hand, a struggling Chinese economy may encourage more investment into the Vancouver housing market, as it has been deemed a reliable investment trend by Chinese buyers. A step further in speculation says that a hard landing would stifle Chinese profitability and therefore slow down its benefactors’ ability to continue to invest at the same rate as they have over the past decade, potentially removing buyers from the Vancouver market and suppressing home prices.
Analysis

Analysis of the Vancouver housing anomaly – as one can gather from the literature review – is laden with a series of subtleties, speculative influences and indirectly comparable situations to other housing markets. For this reason, a proper analysis of the Vancouver real estate market should not only hold a magnifying glass up to its own points of market manipulation, but should also be subject to a comparative analysis to other alleged housing bubbles, their underlying economic principles and regulations, and take into consideration the causes and effects of their respective historical outcomes.

The two main comparative markets whose cycle of (1) housing price increases (2) bubble speculation (3) price correction, are the real estate markets of the United States and Australia. They are interesting market comparisons because they both started with speculative bubbles but landed with very different results, not only because of how the situation was managed economically and legislatively, but also because of their respective systems in place at the time. In brief, both markets were facing a speculative housing bubble, but the United States had an extremely hard landing (a burst) with devastating effects, while Australia had a soft landing (a fizzle) where the correction’s dangerous consequences were limited, fortunately. Canada’s case is not entirely analogous to either country, but there are some very important similarities to each that can highlight pitfalls to avoid, regulatory changes to embrace or repel, and historical parallels that can act as cautionary beacons.

The good news for Vancouverites and the alleged Canadian housing bubble in general is that the sub-prime loan situation which acted as a catalyst to the United States housing crisis is quite unlikely to happen in Canada.
Reason 1: Accountability. Canadian banks are held accountable for the loans they make, whereas the US banks were not. The problem is that when a lender does not stand to take financial losses if the borrower fails to pay them back, the lender will be likely to take chances and lend to high-risk homebuyers – especially if that mortgage broker is getting bonuses based on the amount and size of loans he or she makes. The banks in Canada (as opposed to US regulations) are held responsible for the loans they make and will suffer financial losses if they make bad loans. The practices in the US that brought the market to its knees are difficult to believe now, and regulatory changes have been working to remedy the problem, but reparations are still needed. In the United States, it was common practice to securitize loans, which meant they turned the asset (the home) into financial instruments that could be bought and sold on open financial markets, traded not unlike stocks and bonds. Once the “mortgage backed securities” were sold, the risk was passed off to investors (the buyers of those mortgage backed securities).

“In Canada, the situation was and is completely different. Since the late 1960s, banks and trust and mortgage loan companies have issued mortgages and term deposits that were more or less matched in terms of rollover period...Canadian financial institutions made a concerted effort to match their deposit book and their mortgage book. Furthermore, mortgages were seen by these institutions as a very desirable asset to hold in their portfolios. Hence there was very aggressive competition in the market for mortgages and term deposits, and spreads were fairly narrow. Moreover, nationwide branching facilitated the diversification of mortgage lending by financial institutions across regions and thus enabled them to avoid the risk of undue concentration of loans in any area of the country facing an especially difficult economic situation. With institutions eager to add mortgages to their portfolios, there was much less scope in Canada for the kinds of securitization that have dominated the U.S. mortgage market.” (Freedman, 1998)

The closest Canadian banks are able to come to securitizing a loan is to sell it to the Canadian Mortgage and Home Company (CMHC), but the purpose of this process is not to transfer risk to the CMHC, but rather for the banks to free up capital in order to
administer more loans. The Insured Mortgage Purchase Program (IMPP) is a governmental program further lowering risk to the Canadian housing market (and the economy in general):

“Under the IMPP, the government proposes to purchase these mortgages from financial institutions. More specifically, through CMHC, the government intends to buy National Housing Act Mortgage-Backed Securities (NHA MBS), a kind of bond for which the underlying asset is a pool of mortgage loans guaranteed by CMHC. In exchange, financial institutions will receive a cash payment that they may use to make new loans to consumers and businesses.” (Nadeau, 2009)

In the end, if a mortgage-backed security that was sold to the CMHC is not paid back, the banks are still held responsible. The CMHC is more of an insurance company than an investor – and the CMHC is typically viewed as being more stringent when assessing a security they are willing to buy from a bank (as opposed to the many European buyers of American securities who failed to do their due diligence when assessing the risk of those securities. A lesson learned here is that Moody’s and Standard & Poor’s risk assessments cannot be taken as gospel). Furthermore, the NHA MBS requirements to the CHMC are infamously strict. This makes the overall process harder perhaps for the average Canadian to get a loan, but it is a system that ensures the likelihood of a mass downturn unlikely. The Parliament of Canada explains it better:

“In the United States, the federal authority began by injecting taxpayer funds directly into the capital of technically insolvent banks. It then purchased the financial institutions’ high-risk assets of uncertain value to enable those institutions to clean up their balance sheets. Taxpayers’ money was therefore used to buy assets that no one wanted.

The situation is completely different in Canada, where, to access the liquidity made available to them by the government, financial institutions must dispose of assets that they consider have the highest value: mortgages guaranteed against default. These mortgages present no risk to financial institutions because the institutions are guaranteed to receive the amounts owed them, regardless of the source of those funds. In the current financial crisis, one could ask for no more. In fact, these mortgages are so safe they carry a risk weight of 0% under the rules of the Bank for International Settlements” (Nadeau, 2009)
Australia’s situation is much different than the United States, but is eerily similar to that of Vancouver, and to a lesser extent, Toronto. The uncanny parallel stems from the hiking up of housing prices by way of the alleged Foreign Direct Investments into the housing markets of certain municipalities. William McCarthy’s (2011) comments segue well into this next section: “The rise of China’s economy has been monumental, as has been its global home buying spree. Much of this capital went to Australia, the United Kingdom and Vancouver—a continent, a country and a city. Currently, only Vancouver has not enacted legal and tax deterrents to prevent, or at least curtail, foreign speculation and multiple purchases in its housing markets, something even China has been forced to do.” (McCarthy, 2011)

In 2007, Australians had deregulated their foreign investment policies regarding the purchases of real estate and immediately experienced rapid price rises allegedly due to mass Asian speculative investment, very similar to what Vancouver is currently experiencing. Before it got out of control however, the Australian government decided it was best to return to more regulated Foreign Direct Investment policies. This meant that non-residents were not permitted to buy existing housing, but were continued allowance for purchases of new housing stock. It also became compulsory for temporary residents to sell all property before departing Australia. Here is the explanation given by the Australian government’s Foreign Investment Review Board, which instated these changes in April, 2010:

“The Government seeks to ensure that foreign investment in residential real estate increases the supply of dwellings and is not speculative in nature. The policy seeks to channel foreign investment in the housing sector into activity that directly increases the supply of new housing...and brings benefits to the local building industry and its suppliers.

The effect of the more restrictive policy measures on developed residential real estate is twofold. Firstly, it helps reduce the possibility of excess demand building up in the existing housing market. Secondly, it aims to encourage the supply of new dwellings, many of which would become available to Australian residents, either for purchase or rent. The cumulative effect should be to maintain greater stability of house prices and the affordability of housing for the benefit of Australian residents...Australia’s eligibility rules for foreign investors in residential real
The graph below is the “Price Index of Established Houses” with data taken from the Australian Bureau of Statistics, and we can see where the market rose rapidly during the period of deregulation and then started its cooling off phase after the April 2010 reinstatement of regulation policies. It should be noted that this is not definitive proof that Foreign Direct Investment was driving the real estate prices up in the first place, especially considering the rise in interest rates from 3% in November 2009 to 4.75% in November of 2010 (Reserve Bank of Australia). In Australia, just as in Canada, the real estate foreign direct investment data was scattered and unreliable and the policy changes were based as much upon hearsay as is being experienced in Vancouver.

(http://www.globalpropertyguide.com/real-estate-house-prices/A#australia)
Conclusion: How has Vancouver's real-estate market defied economic principles of a housing bubble?

Answers to this primary research question have not been short on attention from experts, analysts, and speculators with anecdotal evidence or indirectly related facts and figures. Having said that, answers have been short on scientifically sound, directly related data and conclusive evidence, especially regarding the issue of foreign direct investment into the Vancouver housing market. Throughout the applied project, there have been diligent attempts to uncover the reasons why Vancouver has successfully and sustainably (so far) managed to defy standard economic principles of a housing bubble, while trying not to succumb to unfounded hypotheses, media hype, or scapegoat reasons for the otherwise unexplainable.

Therein we find the predicament of trying to solve a problem for which accurate data does not exist. Because quantifiable evidence is absent and quantifiable research of foreign investment into Vancouver's housing market has eluded the academic community (few, if any, recent studies of this topic exist), it was attempted to paint a complete portrait of the situation that could be appreciated from as many angles as possible. The conclusions according to the literature review and analyses of this project are as follows:

There is no doubt that Vancouver is in a housing bubble according to every standard metric: price-to-income ratio, price-to-rent ratio, debt-to-income ratio, and the debt-to-assets ratio. It is now the second least affordable city on the planet according to Cox and Pavletich (2012). An argument can be made that historically low interest rates can be considered a significant cause of the wide disparity between Vancouver’s median household income of $63,800 and the median home price of $680,500. Low interest rates and thus low mortgage rates have led homebuyers in Vancouver to be subject to lower monthly payments in correlation to the purchase price. Therefore, the lower the
mortgage rate is, the higher the housing affordability rises (for that time period), and so residents have been in an environment of increased affordability in the recent past, especially since 2009. The perception of affordability in cases of low interest rates skew in consideration that interest rates will inevitably raise from historical lows, so only those with long-term fixed rate mortgages will be able to prolong those low payments throughout the payoff lifecycle of the property. The trend of purchasing homes based on extraordinarily low mortgage rates is a classic bubble-creating tendency, and the research throughout this project shows that Vancouver has fallen victim to this. Low interest rates are partly to blame for its bubble, but this could be said about most major cities in Canada at this time.

A major topic of exploration throughout this project has been the notion that foreign direct investment is the main differentiating factor that makes Vancouver’s alleged bubble far worse than other Canadian cities. In terms of standard metrics of determining the existence and severity of a bubble, FDI has not only been deemed a cause of the price inflations, but is also considered the ongoing differentiating factor that maintains market growth despite what the numbers say. That most experts consider FDI to be a major cause of housing price inflation is based more on deductive reasoning than on conclusive evidence. One of the main phenomena that leads one to deduce that investment from mainland China is having a major influence is the May 2011 report by Hui-yong Yu and Christopher Donville which stated Vancouver home sales jumped 70% from January to February during the Lunar New Year, which is a significant Chinese holiday period, insinuating that Chinese residents used this time to travel to Vancouver to purchase homes. Alternate explanations for this phenomenon have not been offered. Although not proof, all signs point toward FDI from mainland China being the anomalous factor increasing home sales, deductively speaking.

Adding to that is the corresponding strength of East Asia’s, and especially China’s, economy over the same period of the increased buying activity in Vancouver. One may be inclined to deduce that this is more than a coincidence.

Anecdotal evidence points in the direction of FDI influence as well. Statements from countless realtors cannot be ignored who claim to deal with non-residents during the
home-hunting process, only to have Canadian buyers take over during the procurement procedure. Once again, this is not scientific evidence, but in the absence of proper data, one could reason the collective opinions of those on the front lines hold weight. If their statements are accurate, it would not leave a data trail to verify that non-residents were the indirect purchasers due to the Canadian proxy buyers. Data of this nature will be difficult, if not impossible, to collect unless more stringent regulations are in place that would require due diligence on the financial backgrounds of those purchasing homes with cash. It is not to be insinuated in any way that this process should be implemented, but it is highlighted that presently there is no way to prove if FDI is having a significant influence on Vancouver’s steady rise in home prices over the past decade.

Although population growth in Central Vancouver has been relatively slow, the Greater Vancouver area has been growing quite rapidly, and this is a standard demand function that serves to elevate home prices. This is considered a minor factor that has not been deemed the cause of the enormous price inflations, but as researchers we must take into consideration that a long series of smaller causes can potentially induce a large effect. FDI is not the only explanation if we consider the ‘perfect storm’ of smaller factors which may be contributing. Speculation by residents that property values will continue rising will prompt a surge in property investments by locals. This, in combination with the overall psychological trend of people willing to take on more debt when mortgage rates are extremely low, will drive Canadians to purchase more homes. Speculation and the willingness to invest heavily in a hot market is commonplace, and not phenomena reserved solely for foreign investors.

Despite the remote possibility that there may be a ‘perfect storm’ of smaller demand factors, research of this topic has revealed that the vast majority of experts in this field believe that the steady rise of sales with increasing prices over the past decade are difficult to explain with standard demand factors. Foreign direct investment into the Vancouver market is more than just a convenient explanation for an inexplicable phenomenon. It is likely to be the anomalous demand factor. ‘Factor’ is an important word in that statement, because without the series of standard influences on the market,
it is less than likely that FDI would ever have played a role. FDI is a factor, but one of many demand factors.

How has Vancouver's real-estate market defied economic principles of a housing bubble? It is believed that speculation has begotten a surge of investment into the Vancouver real estate market from both domestic and foreign investors, which has begotten rising prices which fuel the speculation that the trend will continue. Major cities nationwide have also experienced the trend of rising prices due to historically low interest rates. The anomalous exacerbation of rising prices in Vancouver outpacing the national trend finds its roots in the strength of China’s economy in combination with Vancouver as a gateway city. This will have likely promoted increased investment in that regard. The importation of foreign funds is enough to create an anomalous increase in sales. It is believed that this is how Vancouver has managed to defy standard economic principles of a housing bubble, but it is not thought that this kind of growth is sustainable. There is a ceiling to what investors are willing to pay for a home and when Vancouver is speculated as a riskier investment than alternatives, prices will decrease. Also, interest rates will eventually rise prompting less investment, in-turn prompting prices to lower. Increased housing satiety in the already heavily satiated Greater Vancouver area may slow population growth, also increasing the likelihood that prices will drop.

Vancouver is in a housing bubble, and it will eventually either fizzle or pop. The correction is likely to be a slower one because the factors that have led to the bubble’s creation – factors provable or not provable in this paper – are unlikely to make a dramatic transformation, with the exception of speculation. If the psychological trend overwhelmingly turns toward Vancouver being in a bubble and common thought is that it is an extreme risk to invest in, it will then lose voluminous investors both foreign and domestic. Average buyers will choose to hold off their home purchases until they feel the market has corrected. In response, collective cost/benefit analyses of whether to buy or rent will eventually settle both markets at equilibrium. This is the nature of real estate, but rarely have we seen a market grow a gap so wide between median price and median income as we have in Vancouver. It has been an anomaly, but like all
anomalies that take place in adaptable conditions, the anomaly will eventually cease and normality will return – or perhaps a new normal will emerge. It is believed that Vancouver’s market will correct itself in the short-term future.
References


