

- **Over the past decade, roughly 350,000 new homes were built to accommodate 700,000 more Albertans**
- **Natural rate of house-hold formation (i.e. housing demand without migration) in Alberta is 19,000 today and will drop to 12,000 by 2020**
- **Total net migration of 45,000 annually is needed to offset reduced housing demand from the aging population**
- **Net international migration doubled between 2000 and 2010 to 20,000**

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Interest rates, wages and prices are all factors affecting housing affordability, which in turn influence housing demand by Alberta families. Of interest here is the influence of new households on the markets, as it is new entrants in the buyer market that keep construction going and demand strong.

In Alberta, it's traditionally thought that inter-provincial migration has been the dominant source of new people. What shouldn't be overlooked, however, is the impact that the boom had on how the average Albertan decided to cohabitate, especially among the younger generation.

There tends to be established trends, based on age, in how individuals in any community live together. Children live with parents before gaining independence and starting a household of their own. The path varies from person to person, but it is nonetheless a fairly consistent one.

While the path towards independence tends to be stable, shocks do sometimes occur. In the United States, for instance, massive unemployment has caused many formerly independent households to cohabitate with family or friends. In contrast, the boom years in Alberta probably encouraged more rapid formation of households among young adults.

Over the past decade, construction activity in Alberta was very strong and—even with stellar economic and population growth—was more than sufficient to accommodate the growing population. These extra homes were absorbed thanks to a jump in the household formation rate (HFR), with younger individuals being able to live independently sooner than in the past.

A major trend which will influence housing demand going forward will be the aging of the population, with relatively fewer young Albertans entering the housing market than during the boom. Offsetting this will be net in-migration, with international migrants becoming increasingly important.

Estimating Potential Housing Demand

A community needs to build enough new homes to accommodate a growing population, but the ratio of new home construction to population growth is not one-to-one. Younger individuals are far more likely to live under someone else's roof, whereas older individuals are more likely to live independently, as a couple or with roommates. It's the household, regardless of how it's composed, that dictates how many new homes are ultimately needed.

The **household formation rate** is estimated by looking at what the likelihood an individual in a specific age bracket will be a *primary household maintainer*. This is the individual whose name appears on the mortgage (or lease agreement), or who is primarily responsible for the bills (each household selects one individual, even if more than one contributes)—it's simply an indicator of how independent households are formed by age cohort. We can use the **HFR and population projections** to then estimate how many new households are formed in a given year. Combine this information with migration trends (which are much more volatile and difficult to predict) and it is possible to estimate the future housing needs of a region.

One reason we care about the rate of household formation is because it is the fundamental driver of housing starts. Housing starts are a very important aspect of Alberta's economy and if the wrong number of homes is built (i.e. supply does not match demand) it can lead to sudden shifts in the value of local real estate.

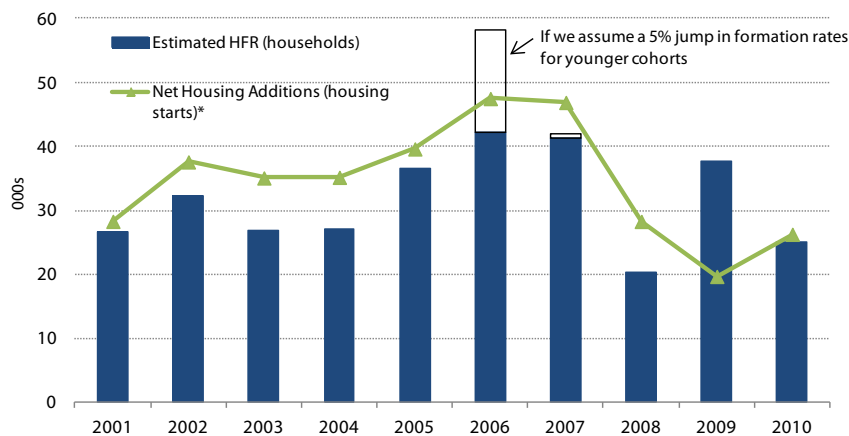
Alberta's Construction Boom

Combining household formation rates and demographic changes over the past decade, we see just how well the housing stock has managed to keep pace with demand. Over the decade there were roughly 344,000 net housing additions to accommodate an estimated increase of 316,000 new households.

However, it should be pointed out that using 2001 as the start year is rather arbitrary (but you have to start somewhere). For instance, construction activity during the latter part of the 1990s was particularly weak. As a result, some of the activity in the following decade was a result of some pent-up demand. Building tends to go in cycles, similar to the rest of the economy.

As mentioned in the text box above, we use the HFR to help estimate what the trend demand for housing will likely be as the population changes. These trends may not be constant, however.

Household Formation and Housing Starts, Alberta



Source: Statistics Canada & ATB Financial Calculations

*Net housing additions adjusts housing starts for housing stock depreciation (2% annually)

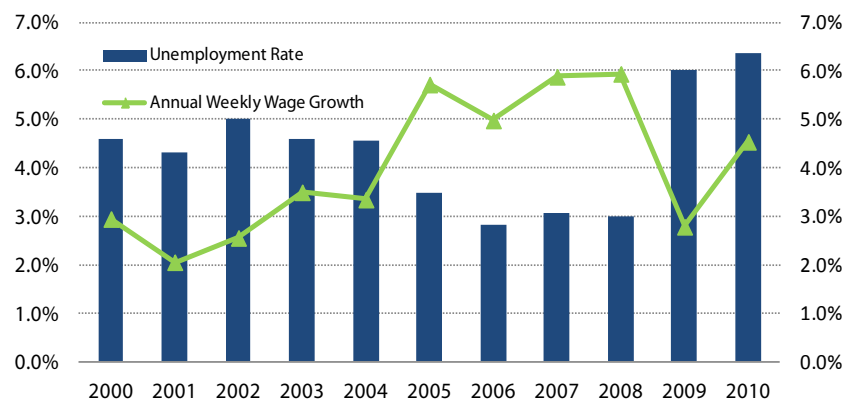
When divorce became more prevalent, for example, the HFR rose, reflecting more households for a given population. Even more important than societal shifts are economic conditions, in particular, patterns that would be considered unusual when one thinks of the normal business cycle (e.g. Alberta in the mid-2000s).

This takes us back to graph above. Housing demand (as suggested by the HFR) indicates that, despite the record high levels of net migration, there were more than enough homes built between 2001 and 2006. Even so, by 2006, a once-in-a-generation boom in housing prices began when demand outpaced supply. The only explanation, consistent with such a strong level of construction, is a sudden jump in the HFR.

There were a number of economic factors that pushed the HFR higher by 2006, chief among them the extremely strong job market. This was especially true for younger workers, where the impact on the housing market was felt most acutely. Not only were there more jobs, but by 2005 there was a sudden jump in average weekly wage rates (see the graph below).

Another factor lifting demand was a series of changes in mortgage financing rules. The Government of Canada introduced 40 year mortgages with zero down payment requirements in 2006. This was a significant shift in the traditional mortgage market, which previously had only 25 year amortizations, and Canadians snapped them up (although they were available only to individuals with sufficiently high credit scores, i.e. these weren't sub-prime loans). Ultimately, the change allowed households to leverage-up and buy more costly homes relative to their income than ever before.

Alberta Unemployment Rate, Aged 25-34, and Rate of Weekly Wage Growth



Source: Statistics Canada

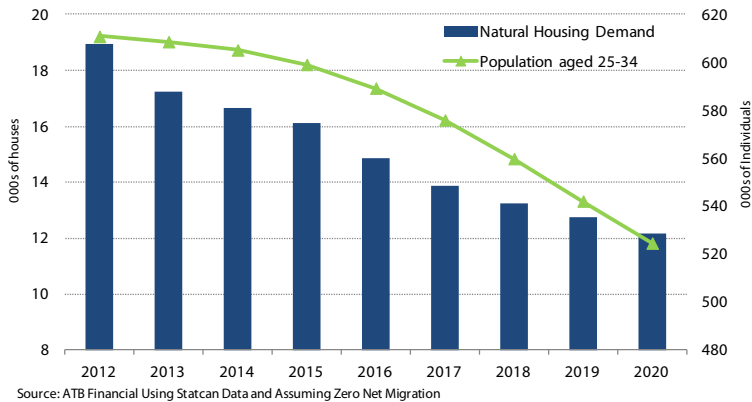
For cultural and economic reasons, we don't expect trend household formation to change significantly over longer periods of time. Today's graduates don't expect the same kind of bidding frenzy that occurred among their predecessors during the boom, and mortgage financing rules have been returning to more traditional levels.

To summarize, the pace of home construction over the decade of the 2000s was enough to accommodate a fast growing population—but it was still overwhelmed by the increase in the HFR that the economic boom and new mortgage market rules brought. If the HFR had not changed, the jump in construction would have meant an oversupply of anywhere between six months to a year in construction activity, and prices would not have spiked.

Future Housing Demand Trends

The foregoing discussion highlights how the highly cyclical nature of Alberta's energy based economy makes it very difficult to forecast housing trends. One trend that is rather easy to predict, however, is the aging of the population. While Alberta isn't aging as quickly as the rest of the country, the birth rate is significantly below what it was in previous generations and this will no doubt influence housing demand going forward.

Forecast of Natural Housing Demand, Alberta



Source: ATB Financial Using Statcan Data and Assuming Zero Net Migration

If we purposefully exclude any migration and forecast housing demand based solely on Alberta’s aging demographics, housing demand will drop off dramatically.

In 2012, native Albertans will have added 19,000 households, but by 2015 they will add only 16,000; by 2020, it falls to only 12,000. For the most part, this is due to a steady decline in the percentage of the native population aged 25-34 (the prime age at which most new households are formed).

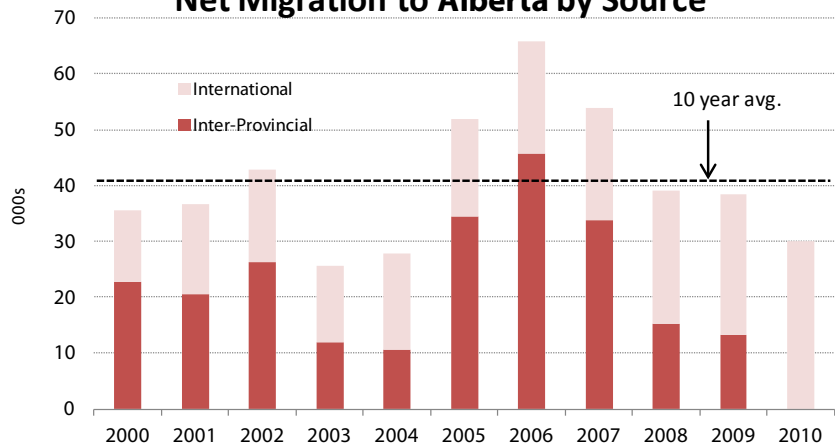
Fortunately, robust economic activity in Alberta means it is a magnet for new migrants. In the past, inter-provincial migration was the dominant source of population growth, but increasingly *international* migrants are choosing Alberta. In fact, the number of international migrants actually jumped considerably exactly when inter-provincial migration started to wane, going from 16,500 in 2008 to 21,400 in 2009.

Toronto, Vancouver and Montreal attract the majority of new international immigrants. There are several reasons for this, including these cities’ large, diverse economies and already established ex-pat communities. As Calgary and Edmonton continue to grow, some of this momentum may shift in their favour. Inter-provincial migration, by contrast, is very volatile due to shifting relative economic opportunities and costs of living.

How much *total* migration will be required to offset upcoming lower housing demand stemming from an aging population?

Net migration of around 45,000 individuals would keep total household formations at roughly 30,000 annually for the foreseeable future. This is higher than the previous 10-year average, but not impossible. The reason household formations stabilize at this level in the forecast is, with migration of this magnitude, the percentage of the population aged 25-34 also stabilizes.

Net Migration to Alberta by Source



Source: Statistics Canada

Conclusion

In a boom/bust economy like Alberta's, there can be great volatility from year-to-year, which makes it difficult for the construction industry to match supply with demand. Yet, common and predictable patterns remain—the most obvious being that children born will eventually move on to start families of their own. This is the natural rate of household formation.

While the household formation rate is influenced by economic conditions and housing affordability, causing either occasional surges in demand or weak periods, it tends to even out in the long run. This is why given assumptions on birth, death and migration rates, a rough estimate of the natural rate of housing demand can be made.

Clearly the trend towards smaller families, which started decades ago, will have an impact on the housing market. This isn't to say it will cause a glut in housing or a precipitous drop in prices, as it's hard to say how the market will adjust. The most plausible scenario would simply see new housing activity slowdown, which would have its own implications for the local economy.

One cannot escape the fact that even in Alberta the population is slowly aging; going forward, the province will come to rely increasingly on migration as a source of population growth and new housing demand. These migrants might certainly be coming given buoyant projections for Alberta's energy sector, but we shouldn't hold our breath expecting the real estate market to take off like it did in 2006 unless we see in-migration begin to rise precipitously.