

# Housing Price Indices

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## *A World Wide Overview Of Real Estate Prices in Recent Years*

*Edition August 2009*



Source: NASA Earth Observatory

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## Executive Summary

The international housing markets are critical in understanding changes in asset values and economic drivers in the world economy. This includes an understanding of the extent to which the recent housing boom in many countries across the world has been led by the long term fundamentals, such as demographic trends, rising incomes, urbanization and other macroeconomic factors, such as increases in credit and liquidity and demand for assets internationally. Similarly to the United States, many world markets have seen increases in their property values and experienced a housing bubble and a subsequent bust in the past half a decade. While some countries only experienced a steady rise in prices, others have seen bubbles even more extensive than the ones that occurred in certain regions of the U.S. Also, arising out of technological advances, coupled with the liberalization of capital markets worldwide that allow for efficient movement of capital between countries, local real estate prices are no longer only dependent on local economic conditions, but are truly shaped by global markets.

The objective of this report has been to examine the availability of housing data on a country-by-country basis and to assemble roughly comparable data over a significant time period to identify changing price levels in the international housing markets. Tracking and comparing world property markets is not a straightforward task, however. While most industrialized countries do track their economic performance and regularly report it, there are still many countries for which real estate information is not publically available or is subject to various caveats. For example, data are reported with various frequencies, across different geographies, for various property types, and may not be available for a significant time period. All of these considerations can limit direct comparisons between countries. The analysis presented here encompasses countries for which the data was readily and publically available back to at least the first quarter of 2000.

Data suggest the run up in housing prices occurred in many countries often beginning later than in the U.S and with declines starting sometime in 2008. A group of countries, particularly former communist countries, have seen an unprecedented rise in housing prices followed by an even steeper bust. In Estonia, for example, price changes between the lowest and highest points in the last decade reached some 600 percent. Many other countries saw much larger price changes than in the case of the U.S. In Singapore, Dubai, Latvia, Iceland, and the UK, price declines following considerable price bubbles range between 19 and 50 percent as of Q1 2009. On contrary, there are still countries where the prices only showed a steady continuation of price incline and have not experienced any busts.

Unquestionably, data trends show that local home prices, affected by the performance of the local economy and even varying considerably within a country, are increasingly influenced by

international movements as foreign buyers consider the benefits of purchasing homes abroad. Certainly, some destination markets will be more susceptible to global economic conditions and fluctuations and maintaining affordable property prices for local residents will prove challenging. Other markets, not necessarily subject to demand from international vacation home buyers, will still be exposed to global business cycles, including recessions and fluctuations in financial and foreign exchange markets.

## **Introduction**

The interest in worldwide housing markets arises out of the objective for understanding changes in asset values and economic drivers in the world economy. This includes an understanding of the extent to which the recent housing boom in most countries across the world has been led by the long term fundamentals, such as demographic trends, rising incomes, urbanization and other macroeconomic factors, such as increases in credit and liquidity and demand for assets. The objective of this report has been to examine the availability of housing data on a country-by-country basis and to assemble roughly comparable data over a significant time period to identify changing price levels in the international housing markets.

In the United States, NAR tracks the levels of housing prices and sales. Data on the housing markets in other countries is tracked by a variety of statistical and real estate oriented organizations, as listed in the Appendix to this report. Gathering data on housing transactions is not a straightforward task. While most industrialized countries do track their economic performance and regularly report it, there are still many countries for which the information is not publically available or, alternatively, is not reported in English. In addition, even for those countries for which data are publically available, the data are generally subject to various caveats. For example, data are reported with various frequency (monthly, quarterly, biannually or annually), vary across geographies (nationally or only large cities, for example) and property types (only single flat apartments), and may not be available for a significant time period.

In the Appendix, information is presented for countries that are known (or have been identified by other reports) to have publically available data. The Appendix describes the source(s) of housing price data and specifics for approximately 50 countries world-wide. As evident from the information collected, in many cases, types of homes sold, market volume, and a variety of other factors will not be immediately comparable from country to country. Also, while data sources for some countries indicate in their news releases that the data is collected, the data is not, however, available online. Consequently,

for the purpose of developing a worldwide composite housing price index, a limited number of foreign countries was selected.

## Composite House Price Index

The countries selected for the house price and sales indices were largely selected based on readily available data from public sources, generally from the Internet. In addition, countries chosen reported the data quarterly, dating back to at least 2000 and most had data expressed in terms of index numbers for house prices— therefore potentially accounting for changes in currency rates, CPI, etc. As a result of the selection criteria, the analysis is focused on changes in the real estate markets, not their direct, exact comparability in terms of price levels and sales volume. Table 1 lists the countries included in the composite index and their index information. Table 1 also provides sales volume data information for the very limited number of countries for which the data was found.

Also accompanying this report is the International Data Matrix, which provides in greater detail information on data readily available on the Internet. Again, due to consistency issues, not all of these countries are included in the house price composite index.

The Composite House Price Index (HPI) was developed as follows:

- A house price index was developed for each country (see Table 1 for list of countries) based on definitions, sources, and information found in the Appendix and Table 1. All countries' indices were adjusted to a base year of 2000. Thus, index for each country equals 100 in year 2000, also noted on the vertical axis of each graph as “House Price Index (Year 2000=100)”.
- A composite index was then developed based on the weighted individual country indices using the 2007 country population count. While using housing sales number would be more appropriate, those numbers were not readily available. Please note that since the United States has the largest population count of the countries selected, it carries 50 percent of the weighted index - index entitled “Composite”, which consequently closely follows U.S. HPI trend. Therefore, a second index excluding the United States - index entitled “Composite (without USA),” was developed in addition. For illustration purpose, both “Composite” and “Composite (without USA)” indices are depicted in Figure 3.

## House Price Index

Figures 1- 9 illustrate changing price levels in the selected group of countries. The first graph groups countries with data available up to first quarter of 2009 and are graphed together for comparison. The second graph groups the countries with data available up to the fourth quarter of 2008. For comparative purposes, the U.S. is included in both graphs. The subsequent graphs illustrate the composite indices, as well as several countries' index in relation to the composite index. More specifically, as noted, Figure 3 compares the composites including and excluding the U.S. and Figure 4 illustrates the U.S. home price index in comparison to the composite of the other countries. Figures 5-9 compare the respective countries' index with the composite including all countries. These graphs are not definitive in terms of exact comparability of housing prices between countries. Rather, the data tracks the best available information for housing prices in the form of index numbers. Finally, Table 2 tracks timing of the pricing peaks for each country and the percentage change in the index between the last observed data point and the first quarter of 2000.

Analysis of data suggests several global trends. Similarly to the United States, many world markets have seen increases in their property values and experienced a housing bubble and a subsequent bust in the past half a decade. While some countries only experienced a steady rise in prices, others have seen bubbles even more extensive than the ones that occurred in certain regions of the U.S. Some markets, particularly in former communist countries, have seen an unprecedented rise in housing prices followed by an even steeper bust. The housing bubble in those areas is partially due to denationalization, liberation of property rights and rising incomes, but it also points to a greater global trend. Technological advances, coupled with the liberalization of capital markets worldwide allow for efficient movement of capital between countries. In addition, removal of foreign ownership restrictions in many countries, a policy encouraged both by the Organization for Economic Cooperation and Development (OECD) and the European Union, made it easier for people to invest in foreign real estate markets. As a result, local real estate prices are no longer only dependent on local economic conditions, but are truly shaped by global markets. And some markets, primarily in tourist destinations, are completely dependent on foreign investment. For instance, the housing price decline in Malta and Cyprus since the beginning of 2009 was largely caused by lower demand from foreign buyers who are facing recession in their own country. Similarly, prices of second homes in many tourist destination markets were drastically inflated by foreign investors before the world recession, whereas now, the sales volume for vacation homes, particularly newly built, has dropped as much as 50 to 75 percent, pulling all second home prices down as well.

Not all markets, though, were subject to the global housing bubble. Housing prices in some western European markets remained steady over the past decade and have not experienced fluctuations - Switzerland, Austria, Netherlands, for example. Those markets already had relatively high home prices.

The analysis of the house price changes also suggests that Singapore, Latvia, Iceland, and the UK, experienced the largest year to year price declines, ranging between 19 and 50 percent as of Q1 2009. In contrast, Australia, although seeing a slight dip in prices at the end of 2008, is now beginning to worry about a potential housing bubble. With improving economic performance, rising home prices, low interest rates, and a lack of housing supply, policy makers are concerned that Australia's housing market is heating up<sup>1</sup>. On the other hand, Estonia is an excellent example of how foreign investments coupled with changes in local economic conditions can cause severe price bubbles that can be very dangerous for the local market. Low interest rates resulting from expansion of the mortgage market and pegging of the Estonian currency to the German mark and later euro, very strong economic growth, increases in wages, low inflation, and extraordinarily strong foreign demand, led to an average annual increase in home prices of 27 percent between 2001 and 2005. In 2006, price growth reached 50 percent. Today, Estonia's residential property prices are 40 percent lower than at the peak in Q3 2007.

In general, data trends suggest that local home prices, affected by the performance of the local economy and even varying considerably within a country, are increasingly influenced by international movements as foreign buyers consider the benefits of purchasing homes abroad. Certainly, some destination markets will be more susceptible to global economic conditions and fluctuations and maintaining affordable property prices for local residents will prove challenging. Other markets, not necessarily subject to demand from international vacation home buyers, will still be exposed to global business cycles, including recessions and fluctuations in financial and foreign exchange markets. Properties in markets deemed relatively affordable when compared to prices across the world will be at considerable risk of overinvestment from foreign buyers. Singapore, for instance, generally bouncing on the bottom of the comparative price scale is now being tackled by investors seeking competitively priced middle and luxury properties.

## Sales Volume Index

A composite sales volume index was not developed due to limited availability of international data. With data found for only six countries, in addition to the United States, both the U.S. sales volume and population count dominated the index accounting for more than 70 percent of the weight. Even when the U.S. was excluded, France similarly accounted for 70 percent of the weight. Instead, for

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<sup>1</sup> Australia Tries to Avoid a Housing Bubble: As Demand for Homes Outpaces Supply, Rising Property Prices Prompt Concerns About Overheating. Wall Street Journal, August 3, 2009

selected countries, the sales volume index was graphed in comparison to the U.S. sales index illustrating the similarity in trends between the two countries. Figure 10 illustrates all countries with available data, except Estonia. Estonia is graphed separately because of the exceptionally dramatic boom observed over the past decade approximating some 600 percent increase in house prices and sales. Graphs comparing house price and sales index for France and New Zealand follow.

For the purposes of comparability, sales volume data, similarly to the price data, were adjusted to start at 100 in base year 2000. The relative change in volume again shows that some of the other countries experienced a much greater volume fluctuation than the U.S. It appears that the data for Norway and Sweden is not seasonally adjusted thus showing large annual fluctuations. Nevertheless, Estonia again shows unprecedented spike and fall in sales volume. New Zealand also exhibits larger fluctuations than the U.S., while France shows very little variation in the sales volume. Due to limited availability of the sales volume data, it is difficult to identify any general global trends.

To conclude, the work presented is a first step towards an understanding of the international housing markets. There is room for a number of improvements. The price data for each country are at this time weighted by each country's population in arriving at a general index; ideally, the appropriate weight would be sales. At this time, sales data are generally not available, and the potential availability of sales data is an issue for future examination. In addition, price data for a number of countries is not yet available, another issue for future examination. Finally, it would be appropriate to examine the degree to which data on market drivers could be obtained.

**Table 1**

Table describes countries' housing price and sales volume data.

<b>Country</b>	<b>Index information</b>
Australia	Price Index of Established Homes - Weighted Average of 8 Capital Cities. The price index for established houses covers transactions in detached residential dwellings on their own block of land regardless of age (i.e. including new houses sold as a house/land package as well as second-hand houses). Price changes therefore relate to changes in the total price of dwelling and land.
Austria	Based on prices for Vienna. Based on the EUR/m <sup>2</sup> purchase price for new and used apartments and single-family houses. The calculations are based on data generated by AiB (Austria Immobilienbörse, a platform of 17 real estate agencies). This data pool contains about 27,000 data points as well final prices at which the contract was concluded as offer prices.
Columbia	Total for apartments and houses based on 23 municipalities
Denmark	Price index for sales of one-family houses based on the cash price of new and existing one-family dwellings sold in the whole country; purchase price at cash value in percentage of officially appraised cash value in 1992. Sales include single family and owner-occupied flats.
Estonia	Price Index calculated based on the average price per square meter for two rooms and kitchen in Tallinn. Sales data based on purchase-sale contracts of real estate compiled by the Statistical Office of Estonia.
France	Average selling price of existing dwellings (individual) per square meter in metropolitan regions in France. Sample of 12,000 transactions with the FNAIM members; data corrected with a coefficient calculated from a survey made by the Ministry of Equipment Direction des Affaires Economiques Internationales. Sales include 12-month cumulated number of existing home transactions.
Ireland	Private New Houses Index is based on average new house price value at loan approval stage and therefore has not been adjusted for changes in the mix of houses and apartments sold.
Malta	Property Price Index based on advertised prices, consists of town houses, houses of character and villas.
The Netherlands	Based on data for terraced houses, corner houses, semi-detached houses, detached houses and apartments. The Price Index Owner-occupied Dwellings is based on a complete registration of sales of dwellings by the Dutch Land Registry Office (Kadaster) and Value Immovable Property (in Dutch: WOZ) of all dwellings in The Netherlands.
New Zealand	House Price Index based on detached houses only. Price and sales index from the Real Estate Institute of New Zealand.
Norway	Based on all houses (detached, small, multi dwelling). Registered purchase price of the building; all dwellings. Sales based on registered sales of real property.
Singapore	Based on all houses (detached, small, multi dwelling). Nationwide. Weighted average of the sub-indices of selected groups of planning areas, and based on the median price per square meter
Sweden	Real estate price index based on one- and two-dwelling buildings for permanent living. Sales based on sold one- and two-dwelling buildings for permanent living in the whole country
Iceland	Based on all houses (detached, small, multi dwelling)
Thailand	Housing Price Indices have been compiled with Hedonic Method from the Government Housing Bank (GHB) appraisal database by Real Estate Market Research Department, Real Estate Information Center. The indices have some limitations to the extent that the data mostly cover medium- to low -end of housing market and are concentrated mostly on the periphery of the central BKK and vicinity.
U.K.	Based on data for all houses, all buyers, and is seasonally adjusted. The Index is based on the largest monthly sample of mortgage data, typically covering around 15,000 house purchases per month, and covers the whole calendar month. From this data, a "standardised" house price is calculated and property price movements on a like-for-like basis (including seasonal adjustments) are analysed over time. Properties over £1 million are included (since December 2002) and the index is seasonally adjusted with the seasonal factors updated monthly.
United States	Data from National Association of Realtors, Median sales price of all existing homes and total unit sales of all existing homes

**Table 2**

Table contains the percent change in housing price index between the first quarter of 2000 and the quarter in which the prices reached their peak. The table also notes the quarter when the prices peaked.

Change in House Price Index since Q1 2000			
	Q4 2008	Q1 2009	Price Peak
United States	21.8%		2006-Q2
Australia	114.0%		2008-Q1
Austria	28.4%		2008-Q4
Columbia		76.3%	2008-Q4
Denmark		69.1%	2007-Q2
France	104.5%		2007-Q4
Ireland		75.5%	2007-Q2
Malta		69.1%	2006-Q2
Netherlands	56.0%		2008-Q3
New Zealand		98.5%	2007-Q4
Norway		64.5%	2008-Q2
Singapore	1.1%		2008-Q1
Sweden	87.1%		2008-Q3
Switzerland	27.8%		2009-Q1
Estonia	322.0%		2007-Q3
Iceland	135.0%		2008-Q1
Thailand	27.9%		2009-Q1
United Kingdom	90.4%		2007-Q3

# House Price Index

Figure 1

House Price Index (for countries with data up to Q1 2009)

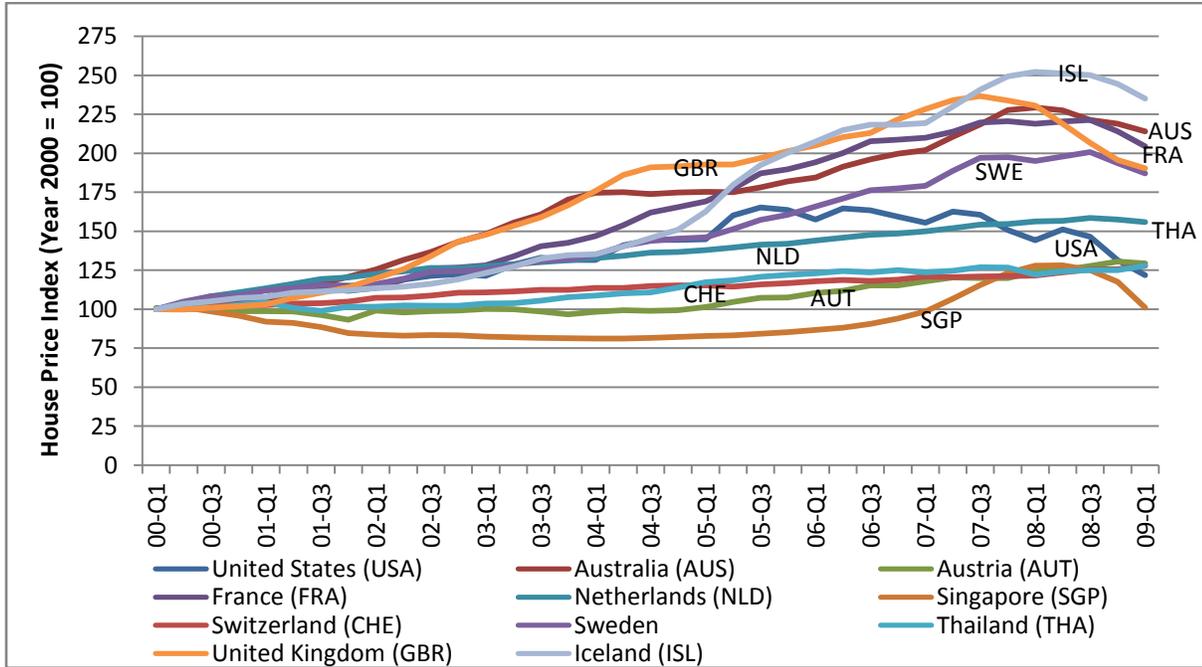


Figure 2

House Price Index (for countries with data up to Q4 2008)

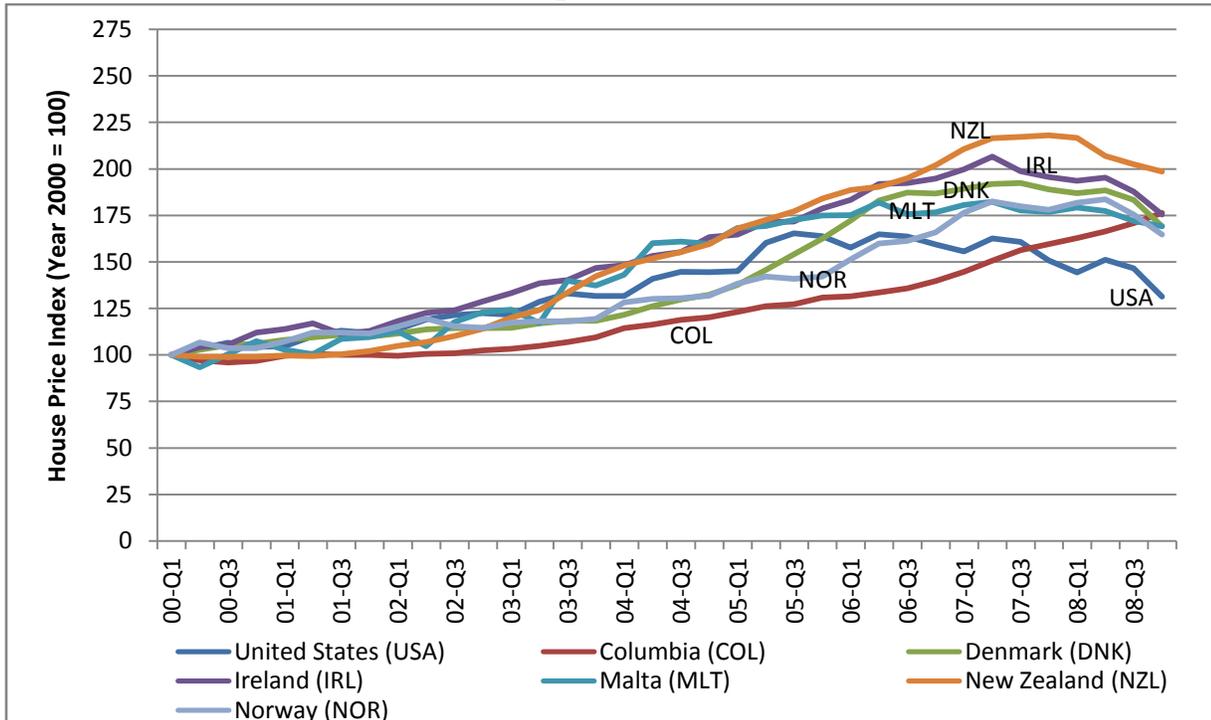


Figure 3

Composite House Price Index with and without USA data

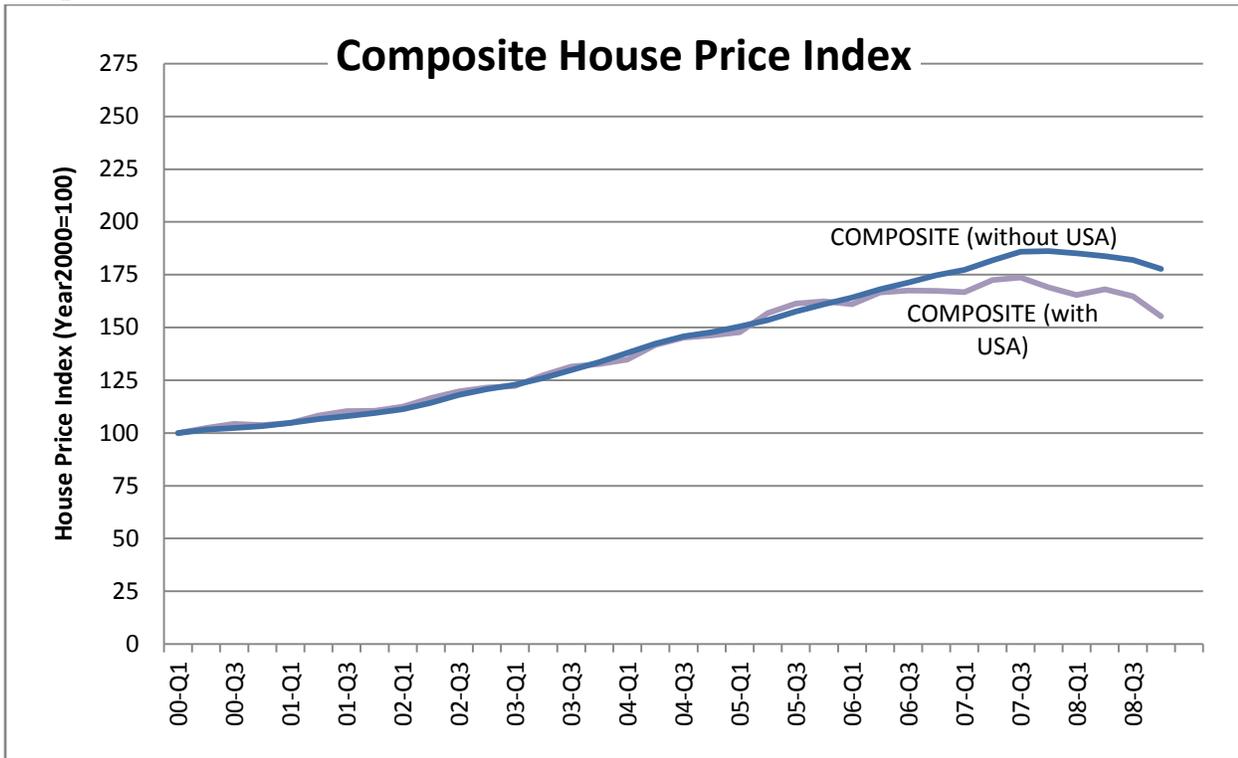


Figure 4

United States vs. Composite (without USA) House Price Index

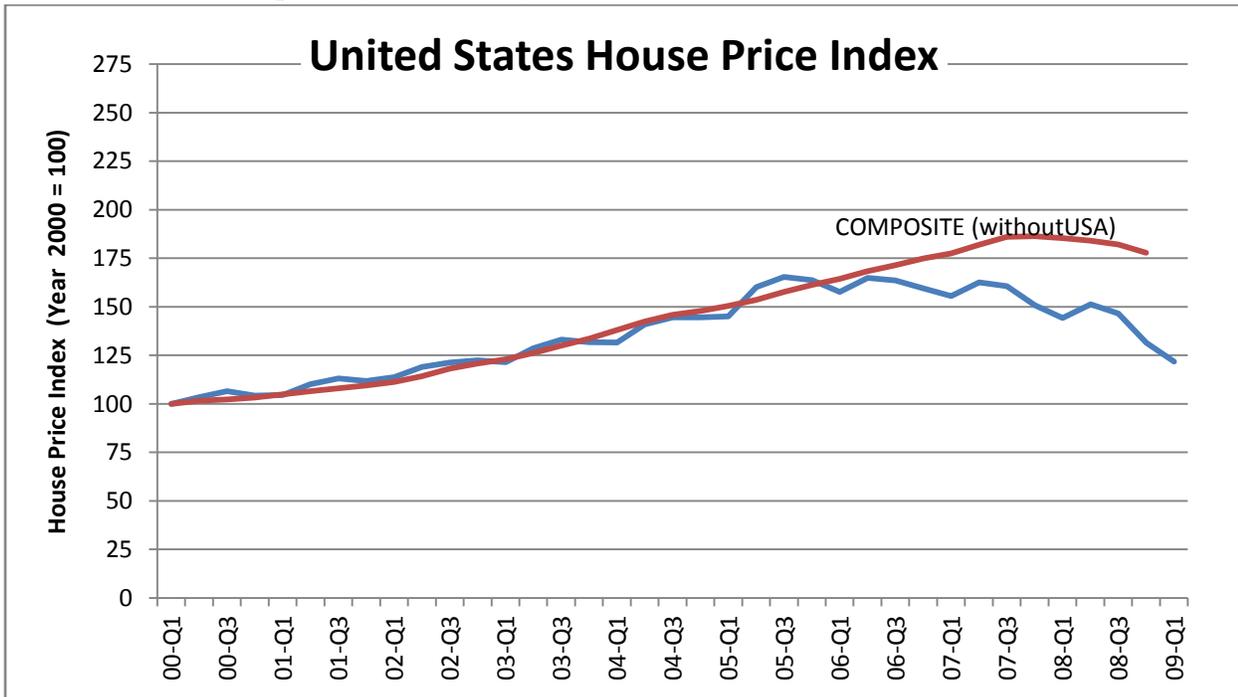


Figure 5

United Kingdom vs. Composite House Price Index

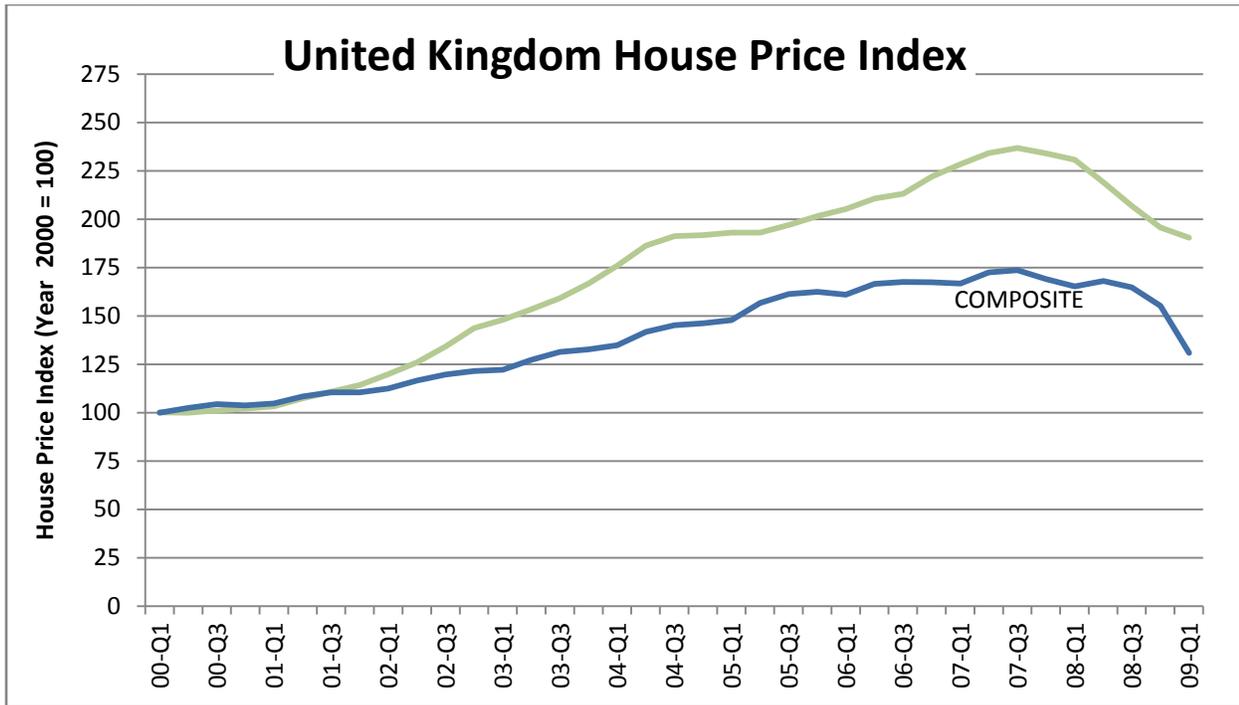


Figure 6

Iceland vs. Composite House Price Index

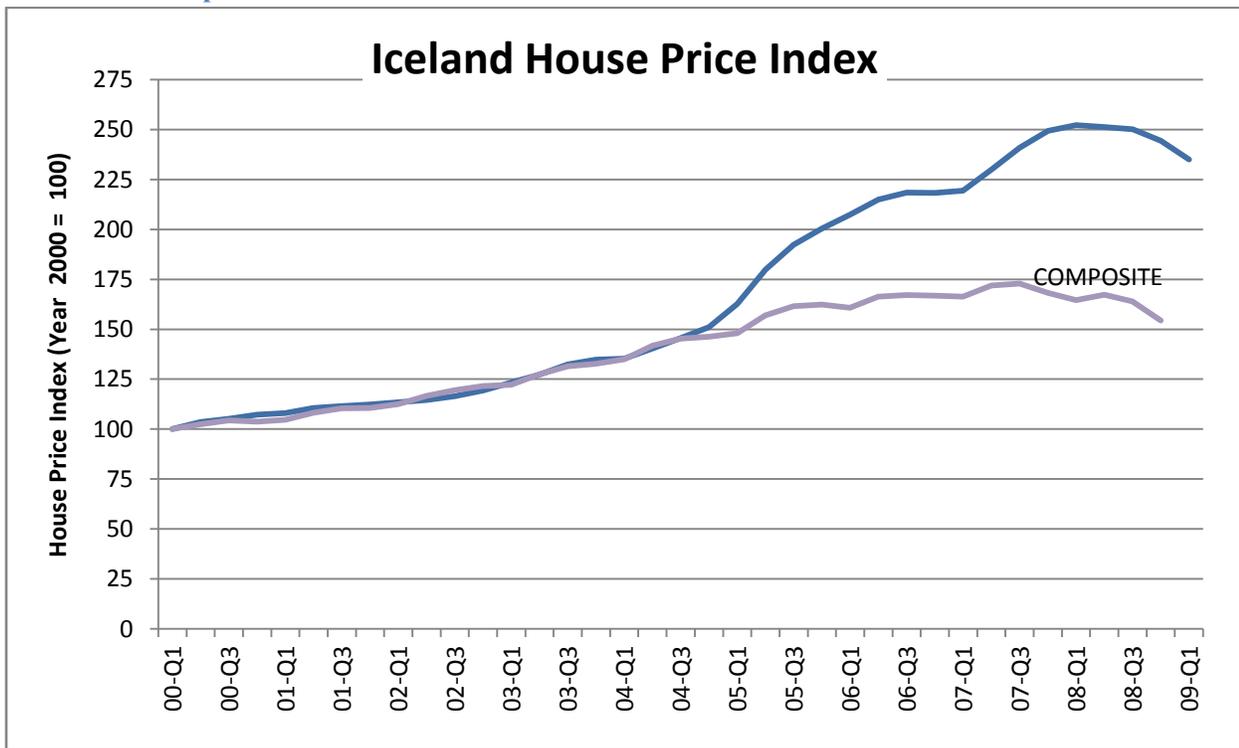


Figure 7

Denmark vs. Composite House Price Index

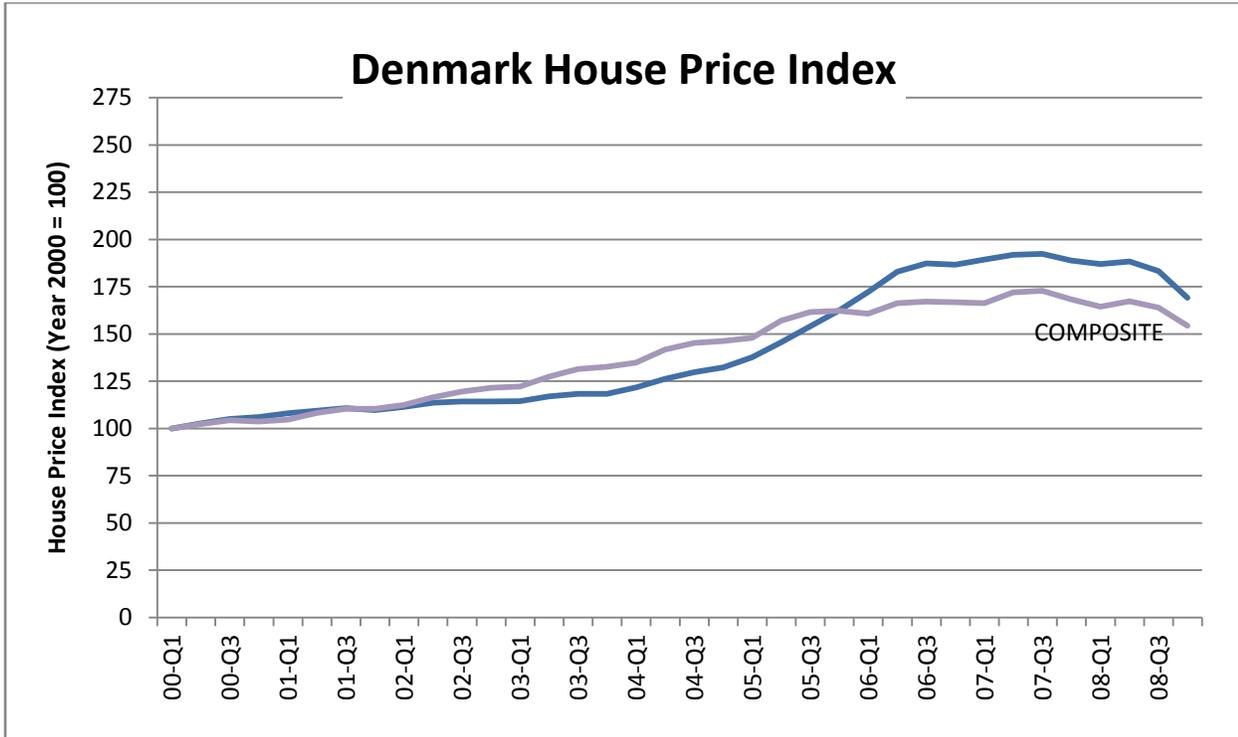


Figure 8

New Zealand vs. Composite House Price Index

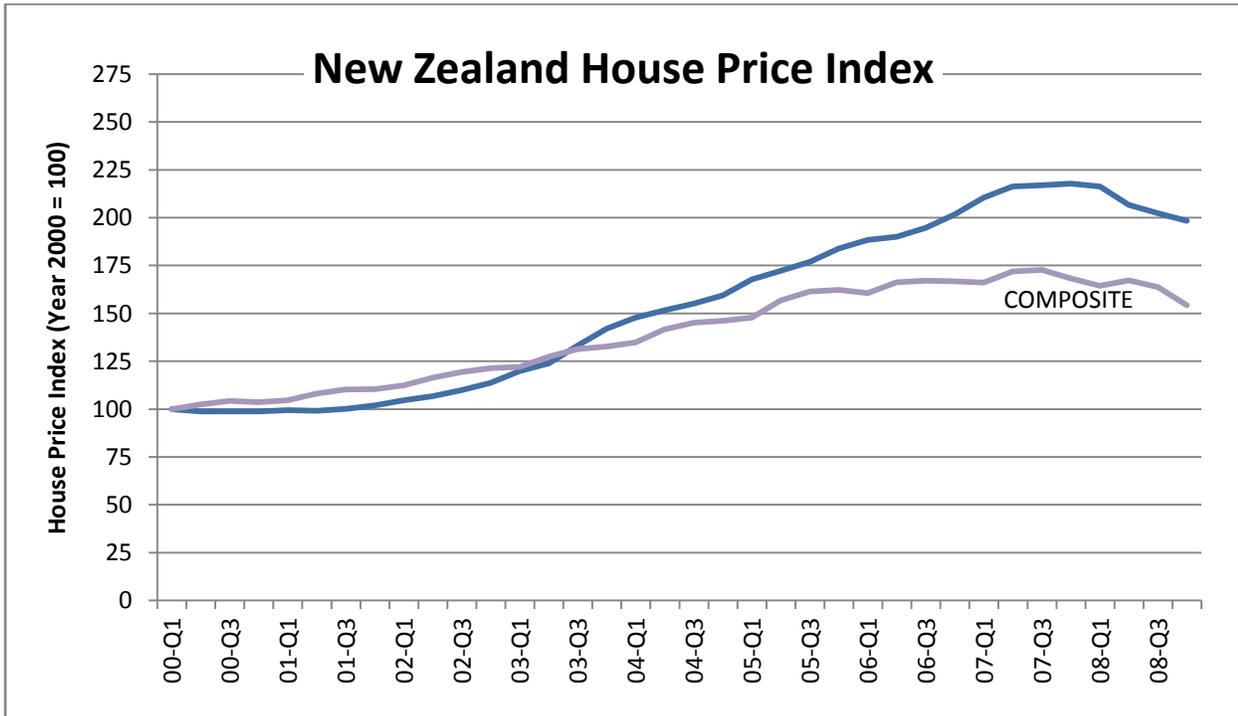
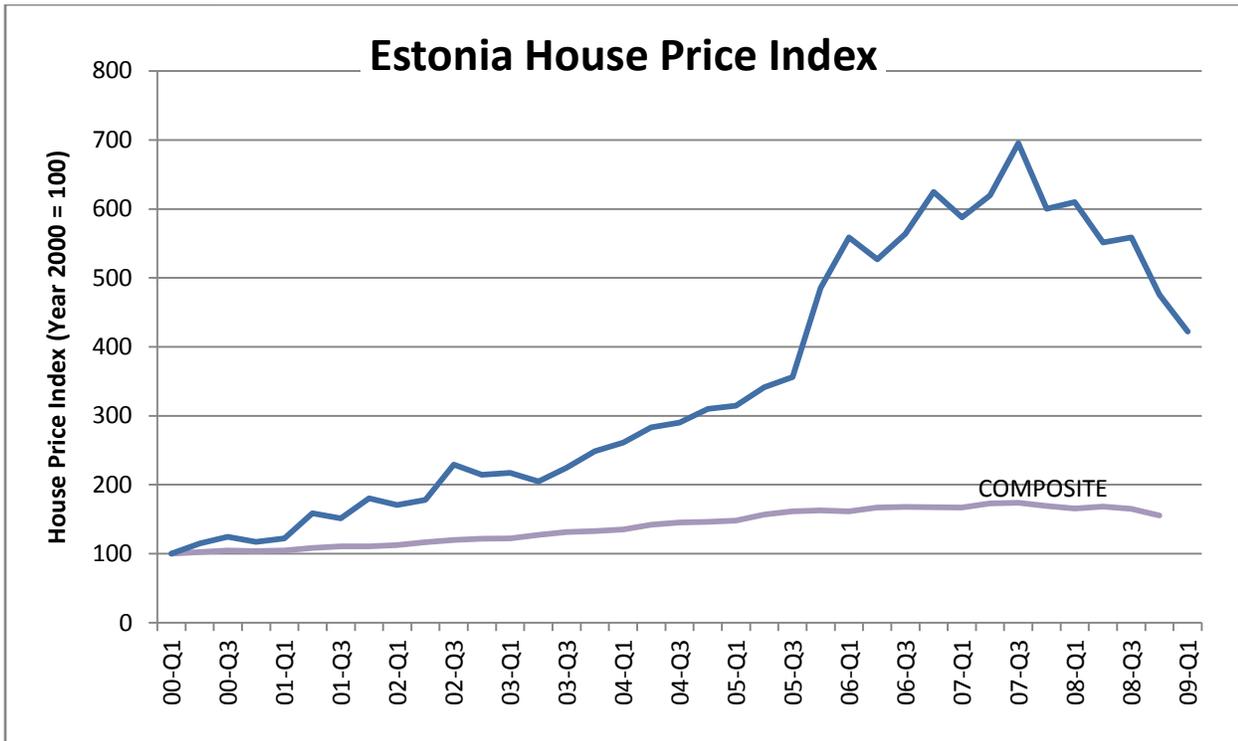


Figure 9

Estonia vs. Composite House Price Index



## Sales Volume Index

Figure 10

Sales Volume Index for countries with available data

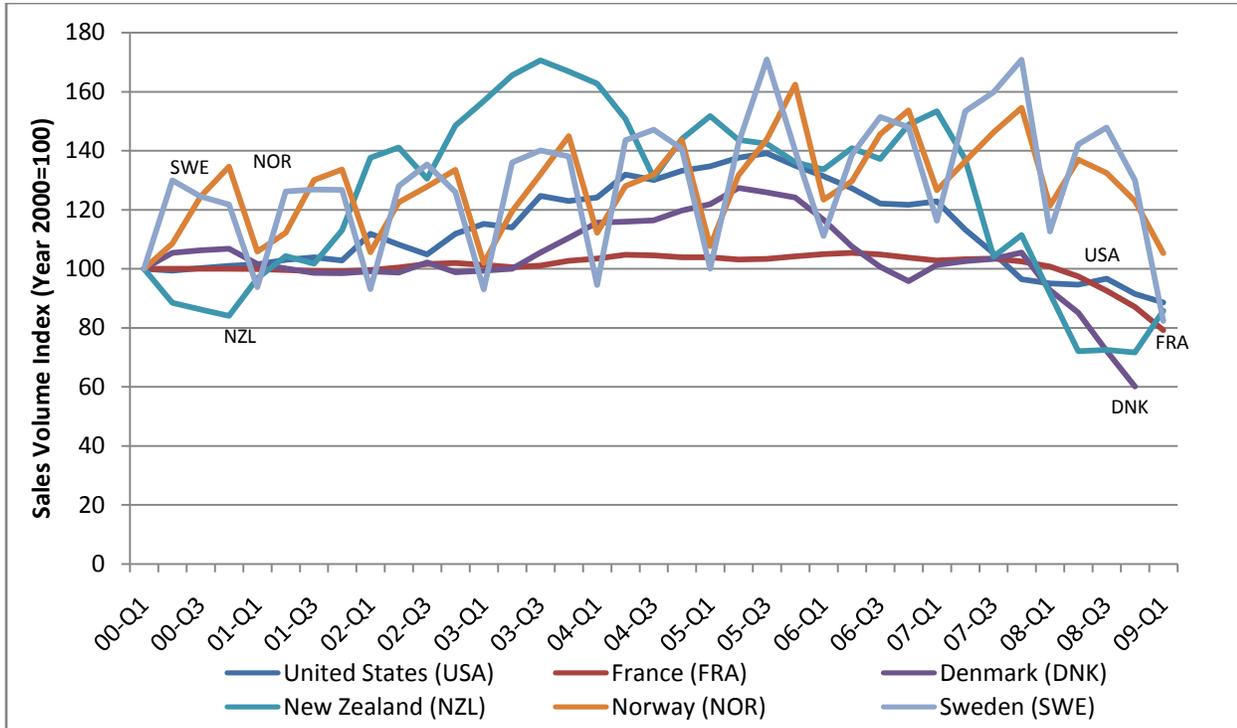
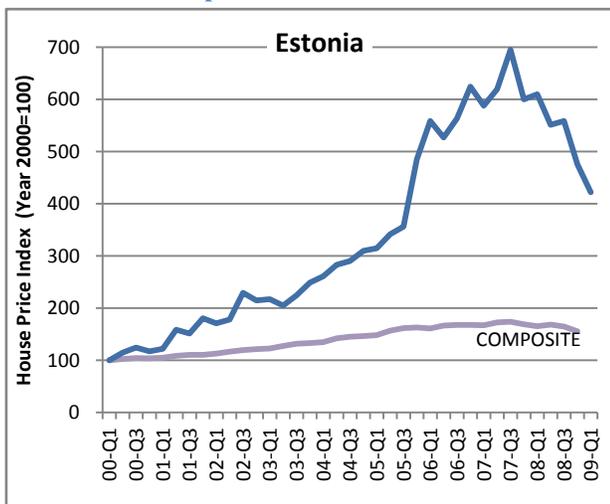


Figure 11

Estonia vs. Composite House Price Index



Estonia vs. USA Sales Volume Index

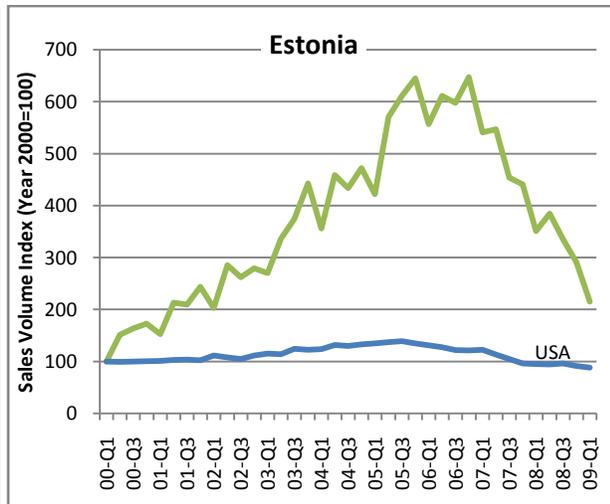
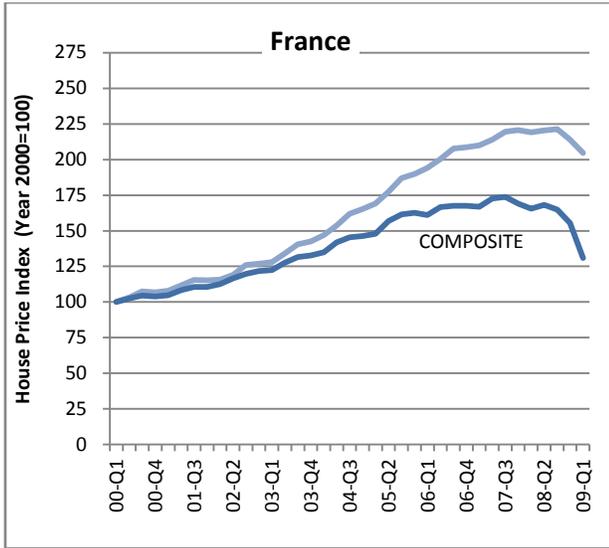


Figure 12

France vs. Composite House Price Index



France vs. USA Sales Volume Index

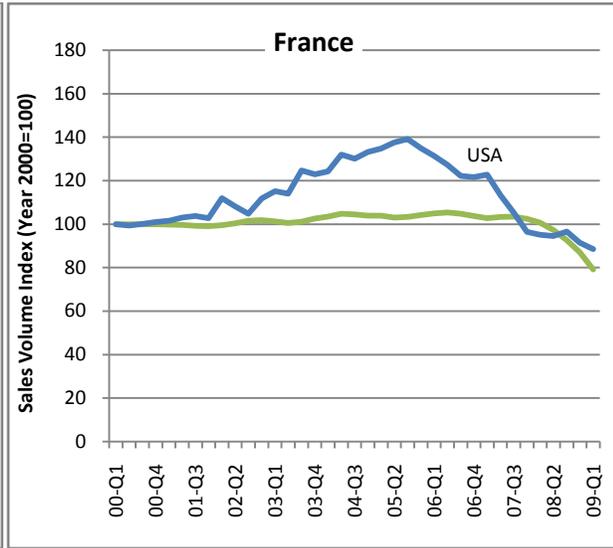
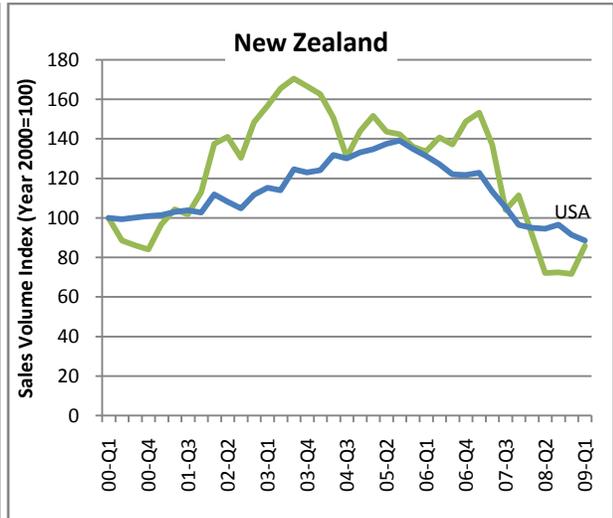
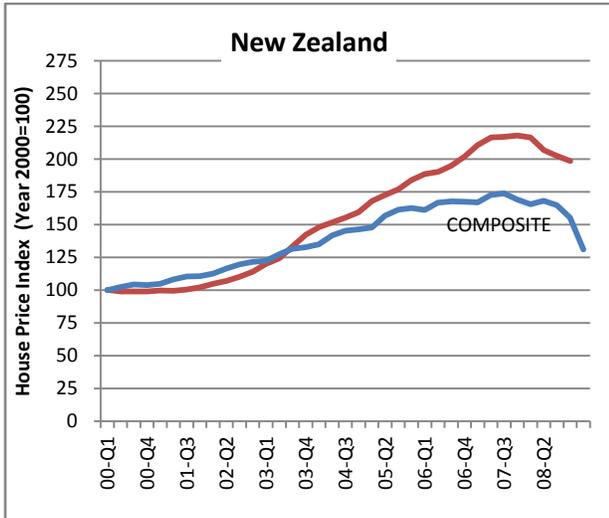


Figure 13

New Zealand vs. Composite House Price Index New Zealand vs. USA Sales Volume Index



## Appendix

### Residential Property Prices – Summary of Available Data

- **Argentina.** Reporte Inmobiliario is a small firm which compiles its own time-series for Buenos Aires, with a large set of very specific databases, sold through a web portal and magazine. It releases many house price time-series in Buenos Aires; however the longest time-series for old apartments, starting 1981, is only biannual.
- **Australia.** There are two sources of house price time-series for Australia - the Australian Bureau of Statistics (ABS) and the Real Estate Institute of Australia (REIA). The ABS releases quarterly average prices of established houses in the eight capital cities, while the REIA publishes median prices through their media press releases. The two agencies update prices quarterly.
- **Austria.** The Oesterreichische National Bank produces residential property price index time series for Austria (national) and Vienna. The indices are based on the price per square meter for new and used condominiums and single family homes. The whole-Austria time series stretches back to 1991, while the Vienna series started in 2000.
- **Belgium.** The annual house price time-series for Belgium stretches back to 1991, and is released by the Institut National de Statistique. There are separate indices for three classifications of dwellings - 1) ordinary dwelling houses; 2) villas, bungalows, country houses; and 3) apartments. The Institute also releases house prices by region.
- **Bulgaria.** The National Statistical Institute releases a quarterly average market price of dwellings by district. This time-series covers old flats only. An annual summary of prices is also available.
- **Canada.** Statistics Canada has monthly house price time-series based on contractors' selling prices of new residential houses in 21 metropolitan areas. This time-series is available from 1981. Additionally, The Canadian Real Estate Association compiles the statistics of existing homes and properties sold through the Multiple Listing Service, and provide the data to its members.
- **China.** Ehomeday is a major property market website based in Shanghai. Ehomeday produces monthly house price index of second-hand houses in Shanghai, as well as several other cities.
- **Colombia.** The Departamento Administrativo Nacional de Estadística releases quarterly house price index based on selling prices of new dwellings. There are house price indices for total dwellings, apartments and houses; as well as house price indices by area.
- **Croatia.** The Central Bureau of Statistics of the Republic of Croatia publishes a semi-annual price index of new dwellings sold, with the average price of new dwellings sold. There are data for the whole country and for the capital, Zagreb.
- **Cyprus.** MAP S. Platis constructs a time-series of monthly house price index, based on the database of BuySell Cyprus Real Estate. Prices are based on transaction prices of apartments, town houses, semi-detached houses and detached houses.
- **Czech Republic.** National-level property price data for Czech Republic are produced by the Czech Statistical Office and are published in the Financial Stability Report of the Czech National Bank. The time-series started in 1991.
- **Denmark.** StatBank Denmark produces a quarterly house price index, based on sales price in ordinary free trade. The Danish house price time-series started in 1992.

- **Estonia.** The Statistical Office of Estonia records transactions in the real estate market. It has a time series for the purchase-sale price of 2-room and 3-room apartments by region (Tallinn, Tartu City and Parnu City). The time-series stretches back to 1991.
- **Finland.** Statistics Finland publishes a time-series price index of dwellings in old blocks of flats by region. This index is based on the average selling price of houses, and started in 1983.
- **France.** The house price statistics produced by FNAIM are published in their quarterly press releases. There are indices for apartments and houses by region. Price per square meter data is also available. The data stretch back to 1980. In addition, National Institute of Statistics and Economic Studies publishes quarterly house price index by region which dates back to 1996. Separate index is available for apartments (condos) and for single family homes.
- **Germany.** BulwienGesaAG publishes yearly prices of owner-occupied apartments based on its survey covering 125 German cities. BulwienGesa's time-series started in 1990. Hypoport recently released its monthly house price index based on residential sales transacted through the EUROPACE Internet-based platform. The time-series started in 2006.
- **Greece.** The Bank of Greece releases quarterly indices of prices of dwellings by region. The data cover urban areas. A separate index is produced for Athens. The data go back to 1993.
- **Hong Kong.** There are two major sources of house price time-series in Hong Kong - the Ratings and Valuation Department (RVD) and Hong Kong University (HKU). The RVD base their series on transactions coursed through the institution for stamp duty purposes. RVD data are regularly updated. Hong Kong University has recently released its Real Estate Index Series, based on actual transactions of completed private residential properties registered with the Land Registry of the Hong Kong SAR Government.
- **Hungary.** Otthon Centrum is a top real estate company in Hungary. It releases data on the average square meter price of second-hand and newly built condominiums in Budapest. In addition, Hungarian Central Statistical Office publishes Estimated Residential Property Prices for Budapest (HUF/M2) for apartments.
- **Iceland.** Statistics Iceland publishes a quarterly house price index, by type of dwellings and by area. This time-series is based on actual property transaction prices. The data stretch back to March 2000.
- **Indonesia.** The Bank of Indonesia releases a quarterly residential price index, based on development projects in 14 cities, classified by type of building - small, medium and large.
- **Ireland.** The Economic and Social Research Institute monitors house prices in Dublin, commuter counties (Louth, Meath, Kildare and Wicklow) and the rest of the country. The Environment, Heritage and Local Government maintains a database of house prices with time series stretching back to as early as 1970.
- **Israel.** The Central Bureau of Statistics of Israel publishes a quarterly time-series of the average prices of owner-occupied dwellings by residential area and size group, based on houses sold. The time-series extends back to 2003.
- **Italy.** Nomisma Spa releases a semi-annual housing report with the average price of residential buildings for the 13 urban areas in Italy. The time series extends back to 1990.
- **Japan.** Japan does not have house price statistics, so the general practice is to take land prices as a proxy. Land prices for residential buildings are produced by the Japan Real Estate Institute. Three land price time-series are available: nationwide land price, 6 large city areas, and nationwide excluding the 6 large city areas. These time-series stretch back to 1955.

- **Latvia.** Latvian Central Statistical Agency publishes data compiled from the Bank of Lithuania's aggregate of data on sold residential property compiled by the state enterprise centre of registers. Covers all residential property (houses and flats) transacted in the whole country. Arco Real Estate firm also publishes monthly reports with prices of standard type apartments.
- **Lithuania.** Inreal, a real estate company, releases quarterly housing report where they publish average prices of apartments, houses and residential land plots in Vilnius, Kaunas and Klaipeda.
- **Luxembourg.** The Department of Housing of Luxembourg publishes a quarterly house price index based on advertised selling prices of houses. The price indices are adjusted for inflation. STATEC Luxembourg releases a yearly price per square meter of habitable surface of single-family houses. The series is still in its initial stage, though.
- **Malaysia.** The Central Bank of Malaysia releases quarterly house price indicators covering the following types of houses: terraced, semi-detached, detached and high-rise unit. There are time series by area as well. Areas include Kuala Lumpur, Selangor, Johor, Pulau Pinang, Negeri Sembilan and Perak.
- **Malta.** Malta's property price index is based on advertised prices, covering apartments, maisonettes, terraced houses, town houses, houses of character and villas. The Maltese house price time-series stretches back to 2000.
- **Netherlands.** The NVM has development house prices released quarterly. This time-series extends back to 1985. Also, Netherland Statistics office releases price index by dwelling type dating back to 1995.
- **New Zealand.** House price time series for New Zealand are available from the Real Estate Institute of New Zealand (REINZ) and the Reserve Bank of New Zealand (RBNZ). REINZ has median sales price time-series. RBNZ has two variations of house price index - based on detached houses, and based on other houses and flats.
- **Norway.** Statistics Norway publishes house price index by dwelling type and area. Statistics Norway gathers data from major real estate agencies.
- **Philippines.** Colliers Philippines publishes quarterly figures of prices of 3-bedroom condominiums in the Makati Central Business District. Colliers started publishing the data in 1994.
- **Poland.** REAS Konsulting releases the average prices of new flats in Warsaw and Krakow. Their time-series extend back to 2000.
- **Portugal.** The Instituto Nacional de Estadistica releases a quarterly average value of bank evaluation on housing
- **Russia.** Federal State Statistics Service office releases annual price index of dwellings in secondary market as a percent of previous year's prices.
- **Singapore.** The Urban Redevelopment Authority release has various property price indices which differ by the type of residential units covered. These residential units are classified as follows: detached, semi-detached, terrace, apartment and condominium.
- **Slovakia.** The National Bank of Slovakia publishes residential property price index by type of flats and houses, and by region. Their time-series started in 2005.
- **South Africa.** ABSA releases a monthly house price index based on the total purchase price of house of 80m2 to 400 m2 size, costing R2.9 million or less, whose loans were approved by ABSA. ABSA's time-series stretches back to 2000.
- **South Korea.** Kookmin Bank publishes a house price index by type of houses, ie, single houses, row houses and apartments. The data stretches back to 1986 and is updated quarterly.

- **Spain.** Banco de Espana releases average price for all houses as well as a more specific price time-series of new houses and second-hand houses. These time-series extend back to 1990.
- **Sweden.** Statistics Sweden has a good collection of house price data. There are time series of real-estate price index for one- to two-dwelling buildings, and purchase prices of tenant-owned flats and assessed value of dwelling buildings. The data stretch back to 1986.
- **Switzerland.** The Swiss National Bank publishes house price indices in their monthly statistical bulletin. Time-series of house price indices for new, old, owner-occupied and single-family houses are available.
- **Thailand.** The Bank of Thailand publishes house price indices by type of dwellings- single detached and townhouse. The indices are based on the data of the appraisal database of the Government Housing Bank.
- **Ukraine.** Blagovest, a major real estate company in Ukraine, has a monthly house price time-series for apartments in Kiev. House prices per district are also available. The time-series started in 2001.
- **United Arab Emirates.** Colliers International and the UAE's five leading banks (HSBC Bank Middle East Limited, Barclays Bank PLC, Amlak Finance PJSC, Dubai Islamic Bank PJSC, and Emirates NBD) have recently launched the Dubai House Price Index. The index covers apartments, villas and townhouses across certain foreign ownership areas of Dubai.
- **United Kingdom.** Nationwide is a good source of British house price data. Various time-series can be sourced from this agency such as regional house price series, quarterly and monthly indices, inflation adjusted prices, prices by type of dwellings. Data stretch back to as early as 1952. Also, Halifax is the UK's largest mortgage lender and conducts a wide range of housing research including the long standing Halifax House Price Index. The Halifax House Price Index is the UK's longest running monthly house price series with data covering the whole country going back to January 1983. From this data, a "standardized" house price is calculated and property price movements on a like-for-like basis (including seasonal adjustments) are analyzed over time.

Sources: Global Property Guide and OECD