

***Housing as an Investment
Greater Toronto Area***

Completed by:

Will Dunning Inc.

For:

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Housing as an Investment Greater Toronto Area

Overview

We are constantly faced with questions about how to allocate our assets - including our time, our thoughts, and our money. This report looks at the allocation of our financial assets between two asset classes - stock market investments and housing.

Most of the time, stocks increase in value more rapidly than does housing. For example, over the past 25 years, stock market gains have exceeded growth in house prices in Toronto. Comparing 1983 to 2008, the TSX stock index increased at an average annual rate of 6.9% versus a 5.4% rate for the average house price in the Greater Toronto Area. From that perspective alone, it might be concluded an investment in the stock market performs better financially compared to home ownership. This research paper conducts an analysis of two investment options:

- Buying and living in a home versus
- Living in a rental apartment, and investing the home equity and any monthly savings in the TSX stock index.

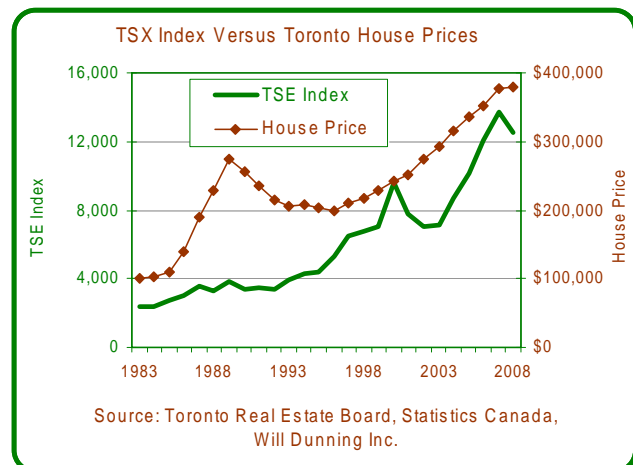
It finds that home ownership performs much better as an investment, compared to investment in the stock market (as measured by the TSX stock index).

The report was produced by Will Dunning Inc., at the request of the financial services firm Trinity Diversified North America Limited. The opinions and analysis in this report are those of the author and do not necessarily reflect those of Trinity Diversified.

House Price Trends in Toronto

The Toronto housing market has experienced two distinct cycles over the past 25 years:

- A strong economic expansion in the second half of the 1980s led to rapid increases in house prices.
- However, a deep recession early in the 1990s caused house prices to fall until 1996.
- Starting in 1996, an economic expansion generated rising house prices in Toronto.
- As of late 2008 and early 2009, it is clear that this expansionary phase has ended



During the 25 year period (1983 to 2008) the average house price almost quadrupled, from \$101,626 in 1983 to an average of \$379,347 during 2008 - an average increase of 5.4% per year. Over a long period of time, this growth rate has generated a very substantial increase in housing values.



A comparison with stock market performance is interesting. Over the same 25 year period, the TSX index increased at an average of 6.9% per year – greater than the 5.4% growth rate for house prices (this calculation of average annual values for the TSX index takes the averages of the month end closing values).

The strong performance of the TSX gives rise to an interesting (and important) question – would a person or family be better off by investing in stocks, rather than “tying-up” their capital in a house?

The remainder of this paper explores that question, using a detailed financial analysis model. The following four sections present the results. The methodology is described at the end of the report.

The Findings – Over 25 Years

The analysis compares two investments:

- Buying a home and living in it, versus
- Renting a two bedroom apartment, investing the amount of money that would have been used for the down payment on the home, as well as any savings that result from renting. As well, the investments earn dividends: it is assumed that the tenant is disciplined and re-invests all of the dividends (net of income tax) in the portfolio.

The main assumptions used in the analysis are taken from the past performance of the Toronto housing market and the TSX stock index, as well as cost trends for the costs associated with home ownership and renting.

Initially, the analysis is based on 25 years of actual data. It assumes that at the end of 1983 a home is purchased. The financial position is assessed at the end of 2008. The table below summarizes the results, at five year intervals.

Even though it is assumed that the stock index will rise more quickly than the average house price, and even though, in the beginning, the rental cost is less than one-half of the cost of home ownership, buying (and living in) a home is far superior (financially) to renting in Toronto.

- The household – being a first-time buyer – buys a modest home with a value 25% below the average house price. A 10% down-payment is made (and mortgage insurance is obtained).
- For just over one-half of the 25 year period, the monthly cost of home ownership exceeds the monthly rent, until 1997. During that period, the tenant is able to invest his/her housing savings in the portfolio. Once the rent begins to exceed the cost of home ownership, the tenant withdraws funds from the portfolio, to cover the cost differential. The portfolio will continue to receive dividends and capital gains. But, due to the withdrawals, the rate of growth of the portfolio slows.
- The tenant’s portfolio is initially modest - about \$10,500 - consisting of the 10% down payment, 2% of the home’s value for closing costs, and the cost of the mortgage insurance premium. However, that portfolio grows very rapidly, due to investment of the housing cost savings, capital gains, and re-investment of dividends. **At the end of 25 years, the portfolio has a value of \$252,000.** However, if the tenant withdraws funds from the portfolio, some capital gains tax would be payable. **The after-tax value of the portfolio is estimated at \$216,000 at the end of 25 years.**



- The home owner builds home equity very rapidly, due to (1) the growth in the value of the home and (2) the repayment of the mortgage principal. **After 25 years, the home is worth about \$285,000. Since the mortgage has been repaid and there is no income tax payable on this equity, all of the \$285,000 is accessible to the home owner. This is 31% greater than the after tax value of the tenant’s portfolio.**
- For a very brief period, the (after tax) value of the tenant’s portfolio exceeds the home owner’s equity (until mid-1986). There is also a brief period in the late 1990s and early in this decade when the value of the portfolio exceeds the value of the home (during the period of the “tech stock bubble”). From that point, the home owner’s equity permanently exceeds the tenant’s portfolio.

Table 1
Owning a Home Versus Renting an Apartment in Toronto
Summary of Financial Performance

Date – End of...	Home Owner Cost	Renter Cost	Ownership Cost Minus Renter Cost	Portfolio Balance	After Tax Value of Portfolio	Value of Home	Mortgage Balance	Home Equity	Ownership Advantage
1983	\$967	\$473	\$494	\$10,518	\$10,518	\$76,263	\$68,598	\$7,665	-\$2,853
1988	\$1,019	\$618	\$401	\$47,369	\$45,801	\$172,226	\$65,584	\$106,642	\$60,841
1993	\$1,049	\$790	\$259	\$77,769	\$74,781	\$154,868	\$59,182	\$95,686	\$20,905
1998	\$889	\$906	-\$17	\$141,048	\$126,185	\$162,611	\$44,859	\$117,752	-\$8,433
2003	\$1,003	\$1,069	-\$66	\$144,057	\$129,875	\$219,800	\$25,439	\$194,361	\$64,486
2008	\$1,116	\$1,134	-\$18	\$251,688	\$216,458	\$284,510	\$0	\$284,510	\$68,053

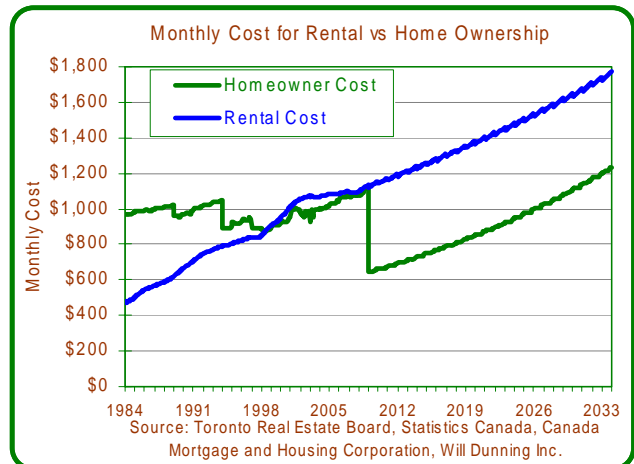
Source: Will Dunning Inc.

Results Over a 50 Year Period

For most home owners, the story does not end at 25 years. Another analysis, therefore, assumes that the owner stays in the home until he/she sells it and moves into a different housing situation. In this analysis, it is assumed that the owner lives in the home for 50 years. For the additional 25 years of this scenario (to the end of 2033) assumptions for the key variables are derived from past trends. However, given recent events, the growth rates for the TSX, house prices, and rents are reduced by one-half compared to prior rates.

The table on the next page summarizes the results at five year intervals.

- After the mortgage is repaid in 25 years, the cost of home ownership drops by about 40%. Meanwhile the rental cost continues to increase.
- In order to compensate for the gap between rental costs and the cost of home ownership, the tenant withdraws increasing amounts from the portfolio. The withdrawals are slightly smaller than the income from on-going dividend income and capital gains. Therefore, the value of portfolio increases, but slowly.





- At the end of the 50 year period, the value of the home is more than \$550,000, about 80% greater than the after tax value of the portfolio (\$309,000).
- In order to take advantage of the housing equity, the owner would have to sell it and incur some costs (sales commission as well as legal costs). After costs, the available equity would be about \$520,000, still far in excess of the \$309,000 (after tax) that might have been accumulated by a tenant.

Table 2
Owning a Home Versus Renting an Apartment in Toronto
Summary of Financial Performance
Over a 50 Year Period

<i>Date – End of...</i>	<i>Home Owner Cost</i>	<i>Renter Cost</i>	<i>Ownership Cost Minus Renter Cost</i>	<i>Portfolio Balance</i>	<i>After Tax Value of Portfolio</i>	<i>Value of Home</i>	<i>Mortgage Balance</i>	<i>Home Equity</i>	<i>Ownership Advantage</i>
1983	\$967	\$473	\$494	\$10,518	\$10,518	\$76,263	\$68,598	\$7,665	-\$2,853
1988	\$1,019	\$618	\$401	\$47,369	\$45,801	\$172,226	\$65,584	\$106,642	\$60,841
1993	\$1,049	\$790	\$259	\$77,769	\$74,781	\$154,868	\$59,182	\$95,686	\$20,905
1998	\$889	\$906	-\$17	\$141,048	\$126,185	\$162,611	\$44,859	\$117,752	-\$8,433
2003	\$1,003	\$1,069	-\$66	\$144,057	\$129,875	\$219,800	\$25,439	\$194,361	\$64,486
2008	\$1,116	\$1,134	-\$18	\$251,688	\$216,458	\$284,510	\$0	\$284,510	\$68,053
2013	\$730	\$1,240	-\$510	\$269,343	\$229,462	\$325,128	\$0	\$325,128	\$95,666
2018	\$828	\$1,356	-\$527	\$289,370	\$244,388	\$371,545	\$0	\$371,545	\$127,157
2023	\$943	\$1,483	-\$540	\$312,632	\$261,930	\$424,588	\$0	\$424,588	\$162,658
2028	\$1,076	\$1,621	-\$545	\$340,358	\$283,069	\$485,204	\$0	\$485,204	\$202,134
2033	\$1,231	\$1,773	-\$542	\$374,067	\$309,182	\$554,473	\$0	\$554,473	\$245,291

Source: Will Dunning Inc.

An Alternative Scenario

The analysis has assumed that the household buys the home and lives in it for 50 years. In many cases, however, over time as households' incomes increase and as they build housing equity they will choose to move from their first home into a more expensive dwelling.

The first home purchase has been assumed to be a property that is priced at 75% of the average house price. This scenario assumes that after 15 years (at the end of 1998) the household moves to a home that is priced at the average level. This results in a larger mortgage amount and monthly mortgage payment as well as higher realty taxes. It also increases the period of time before the household will become mortgage free. Furthermore, some of the housing equity must be used to cover the costs of buying a selling the first home and buying the new home.

Therefore, in this scenario, the monthly cost of home ownership is higher than the monthly rent for a longer period of time: the size of the portfolio that can be accumulated by a tenant is increased. On the other hand, the amount of home equity is also increased.

In the first scenario, home ownership costs fell below rental costs in 1997. In this scenario, ownership costs remain above rental costs until the mortgage is paid off (which is assumed to occur at the end of 2023).

Highlights in this scenario include:



- After the mortgage is repaid, the cost of home ownership drops by about 40%. The rental cost continues to increase, and is far larger than the cost for homeownership.
- However, because the tenant's portfolio has become quite substantial, dividend income is large enough to cover the shortfall (the difference in costs between renting and owning) and the tenant does not have to withdraw any capital from the portfolio.
- Thus, both of the two investment options - the tenant's portfolio and home ownership - continue to grow in value at healthy rates.
- Overall, starting in 2002 and until the end of the analysis period in 2033, the value of the investment in housing is considerably larger than the after tax value of the tenant's portfolio.
- The ownership advantage is not as large as in the first scenario. However, in compensation for this lower financial return, the home owner is enjoying a better quality of housing than in the first scenario. Furthermore, most people would see this housing as far superior to the apartment option of the tenant.

Table 3
Owning a Home Versus Renting an Apartment in Toronto
Summary of Financial Performance
Over a 50 Year Period
Move-Up Scenario

<i>Date – End of...</i>	<i>Home Owner Cost</i>	<i>Renter Cost</i>	<i>Ownership Cost Minus Renter Cost</i>	<i>Portfolio Balance</i>	<i>After Tax Value of Portfolio</i>	<i>Value of Home</i>	<i>Mortgage Balance</i>	<i>Home Equity</i>	<i>Ownership Advantage</i>
1983	\$967	\$473	\$494	\$10,518	\$10,518	\$76,263	\$68,598	\$7,665	-\$2,853
1988	\$1,019	\$618	\$401	\$47,369	\$45,801	\$172,226	\$65,584	\$106,642	\$60,841
1993	\$1,049	\$790	\$259	\$77,769	\$74,781	\$154,868	\$59,182	\$95,686	\$20,905
1998	\$945	\$906	\$39	\$141,722	\$126,857	\$162,611	\$44,859	\$117,752	-\$9,105
2003	\$1,213	\$1,069	\$145	\$159,604	\$145,799	\$291,801	\$101,328	\$190,473	\$44,674
2008	\$1,399	\$1,134	\$266	\$294,722	\$257,223	\$377,709	\$83,361	\$294,348	\$37,125
2013	\$1,493	\$1,240	\$254	\$371,302	\$326,726	\$431,632	\$62,647	\$368,985	\$42,259
2018	\$1,604	\$1,356	\$248	\$463,302	\$409,854	\$493,254	\$35,628	\$457,626	\$47,771
2023	\$1,732	\$1,483	\$249	\$573,800	\$509,326	\$563,672	\$0	\$563,672	\$54,347
2028	\$1,199	\$1,621	-\$422	\$662,229	\$584,593	\$644,145	\$0	\$644,145	\$59,552
2033	\$1,372	\$1,773	-\$401	\$769,624	\$676,745	\$736,105	\$0	\$736,105	\$59,361

Source: Will Dunning Inc.

A Further Scenario

In the analysis shown above, past and future trends for house prices and the TSX index were based on average annual values. This approach very substantially reduces the impact of the stock market meltdown that happened in the closing months of 2008. For the TSX, the annual value for 2008 is 12,528.77, as compared to the year end value of 8,987.70. If the actual monthly values for the index were used, the average annual rate of increase of the TSX over the 25 years (from the end of 1983 to the end of 2008) would be 5.16% versus the 6.89% rate that was calculated from the annual figures. This difference of 1.73 percentage points, when compounded over prolonged periods, has a very substantial impact.

For house prices, based on the annual averages, the change is 5.41% per year; based on the monthly data the change is 5.29%.

Changing the calculation from annual to monthly values would have a much greater negative impact for investments in stocks than on investments in housing. It might be argued that such an



analysis would give too much weight to very recent events. For illustrative purposes, that analysis is shown in this scenario, but with a substantial adjustment:

- For the projections over the next 25 years, the stock market investments are assumed to increase at the full rate seen over the past 25 years (an annual rate of 5.16%). In other words, the stock market is assumed to recover promptly.
- But, house values are assumed to increase at only one-half of the historic rate (by an annualized rate of 2.64%).

Results of this analysis are summarized in the next table.

- After the initial 25 years (at the end of 2008), the home ownership option has generated equity of about \$282,000. The alternative option of renting and investment in the stock market has an after-tax value of about \$157,000. Home ownership has yielded about \$125,000 more than the stock market investment.
- After the full 50 years, the homeowner has equity of \$541,000, almost double the after-tax value of the stock portfolio (about \$272,000). This superior financial performance for home ownership occurs despite the assumption that the value of housing will grow at only one-half of the historic rate, whereas the stock investments are assumed to achieve capital gains at the full historic rate.

Table 4
Owning a Home Versus Renting an Apartment in Toronto
Summary of Financial Performance
Over a 50 Year Period
Incorporating the Stock Market and House Price Declines of Late 2008

<i>Date – End of...</i>	<i>Home Owner Cost</i>	<i>Renter Cost</i>	<i>Ownership Cost Minus Renter Cost</i>	<i>Portfolio Balance</i>	<i>After Tax Value of Portfolio</i>	<i>Value of Home</i>	<i>Mortgage Balance</i>	<i>Home Equity</i>	<i>Ownership Advantage</i>
1983	\$967	\$473	\$494	\$10,518	\$10,518	\$76,263	\$68,598	\$7,665	-\$2,853
1988	\$1,019	\$618	\$401	\$46,570	\$45,166	\$198,109	\$65,584	\$132,525	\$87,359
1993	\$1,049	\$790	\$259	\$83,118	\$78,827	\$154,784	\$59,182	\$95,602	\$16,775
1998	\$889	\$906	-\$17	\$130,704	\$118,225	\$167,719	\$44,859	\$122,860	\$4,635
2003	\$1,003	\$1,069	-\$66	\$159,444	\$141,583	\$222,155	\$25,439	\$196,716	\$55,133
2008	\$1,116	\$1,134	-\$18	\$174,070	\$156,738	\$281,764	\$0	\$281,764	\$125,027
2013	\$729	\$1,240	-\$511	\$192,838	\$169,494	\$321,036	\$0	\$321,036	\$151,542
2018	\$827	\$1,356	-\$529	\$215,721	\$185,723	\$365,781	\$0	\$365,781	\$180,059
2023	\$940	\$1,483	-\$543	\$244,406	\$206,734	\$416,763	\$0	\$416,763	\$210,030
2028	\$1,071	\$1,621	-\$550	\$281,377	\$234,451	\$474,851	\$0	\$474,851	\$240,400
2033	\$1,225	\$1,773	-\$548	\$330,243	\$271,673	\$541,035	\$0	\$541,035	\$269,362

Source: Will Dunning Inc.

Clearly, many different assumptions could be employed in this analysis. While there is a very high degree of uncertainty about rates of return that might be earned by these two investments in future, this scenario points out that there is considerably less risk for the investment in home ownership.



Concluding Comments

This analysis has considered only the financial aspects of owning versus renting. Of course, housing decisions involve much more than calculating rates of return. Meeting personal needs comes first. For most of us, the personal issues are vastly more important than the investment issues. The personal issues often favour home ownership:

- An average priced home (or even one priced at 75% of the average) offers more space and comfort compared to an average rent two bedroom apartment.
- Home buyers experience the pride of property ownership.
- They have much greater control over their living environment.
- They have much greater certainty about future costs.

The financial analysis assumes that the tenant is disciplined, and will always invest all of the savings and dividends. Few of us are that disciplined, and any “leakages” along the way will cause the financial returns for the tenant to be less than estimated. On the other hand, home ownership amounts to a “forced saving plan” and requires less discipline – by making the required mortgage payments, the home owner will accumulate the housing wealth to the full extent that is estimated.

One of the greatest factors in favour of home ownership has to do with the “life cycle”:

- For the homeowner, the costs are greatest when he/she has the most ability to afford them – during the prime years of a career.
- Later in life, the home owner may have less ability-to-pay because of retirement and children’s education costs. These costs generally occur after the mortgage is completely paid-off and housing costs have been sharply reduced.
- Late in life the tenant faces continually rising rents, when he or she has a limited ability to pay.

It’s not just a place to live - home ownership is part of a sensible financial strategy.

About Trinity Diversified

Trinity Diversified North America Limited is an integrated financial services company with roots stretching back four decades. Trinity, which offers the successful *Paladin Program* of debt elimination and wealth creation to Canadian households, comprises seven separate companies and product offerings that range from real estate, insurance, auto leasing, wealth services, tax planning, debt counseling and home repair services. The companies include FinBank Mortgage and Finance Corp., Trinity Global Insurance Services Inc., Trinity GMAC Real Estate and Trinity Diversified Mechanical Ltd.

More information about Trinity Diversified and its programs is available at www.trinitydiversified.com.



About Will Dunning and Will Dunning Inc.

Will Dunning has been studying housing markets for 27 years. For 16 years he worked at Canada Mortgage and Housing Corporation in various market analysis positions. For his last six years at CMHC he was the manager of the market analysis department at the Toronto Branch, and was responsible for all aspects of economic, demographic, and market analysis for the Greater Toronto Area.

In the fall of 2000 he established Will Dunning Inc., a research company that specializes in the economic and demographic analysis of housing markets.

www.wdunning.com provides various reports and presentations on economic and housing market topics. This includes "*Housing Market Digest*", a monthly review of the housing market of the Greater Toronto Area.

Disclaimer of Liability

This analysis makes projections of a number of critical variables for a period of 50 years. These projections are based on past trends. There is of course, no guarantee that these trends will be maintained in the future. As the mutual fund companies state, "past performance is no guarantee of future performance". Thus, Will Dunning Inc. accepts no responsibility for any analysis or conclusions contained in this report, or arising from it.

Outline of the Methodology

The question posed earlier in this paper - 'would a person (or family) be better off by investing in stocks, rather than "tying-up" their capital in a house?' – implies choosing between:

- Buying a home and living in it, or
- Renting a home or apartment and investing the down payment in the stock market.

The analysis uses a cash flow model that compares those two options. It covers periods of 25 and 50 years, starting at the end of 1983.

To compare the two housing options the analysis model makes the following assumptions:

- The home buyer purchases a home priced at \$76,220 (75% of the average price for 1983), and makes a 10% down payment. Closing costs (land transfer tax and legal fees) are set at 2% of the purchase price. A 2% insurance premium is paid for mortgage insurance
- The tenant invests the same amount (down payment plus closing costs) in the TSX index (buying either individual stocks or a mutual fund that is linked to the index), and lives in an average cost two bedroom apartment.
- Housing costs for owners and tenants are assumed to inflate at the rates seen over the past 25 years (using data reported by Statistics Canada, the Toronto Real Estate Board, and Canada Mortgage and Housing Corporation). On average up to the end of 2008, house



values increase by 5.41% per year; rents increase by 3.59% per year. For the projection period, house values and rents are assumed to increase at one-half of the prior rates.

- Condominium fees for home owners and utility costs for home owners and tenants (for Ontario) were calculated by the author using the public use microfile for the 2006 Statistics Canada Survey of Household Spending. Costs for other years were estimated using changes reported by the Consumer Price Index.
- Insurance costs and costs for repairs and maintenance, for home owners and tenants (for Ontario for 1997 to 2007, in conjunction with applicable data for the Consumer Price Index), were used to estimate average annual costs for that period and then estimated for other years.
- Projections for these expenses were made based on: for condominium fees and utility costs - increase at 2.0% per year; insurance costs: increase at the 25 year average rate of 5.7% per year; costs for repairs and maintenance: increase at the 25 year average rate of 2.2% per year.
- Mortgage interest rates are based on:
 - For the first five years, the average posted rate for five year mortgages as of 1983 minus 1 percentage point for lender discounts, or 12.23%. A second five year mortgage is taken, at a rate of 10.65% (the average posted rate for 1988, minus 1 point)
 - After the expiry of the second five year term, it is assumed that the home owner takes one year terms, at the average posted rate for the prior year, minus 1 point. As of 2004 the discount is increased to 1.25 percentage points. For 2009 and beyond, the mortgage interest rate is assumed to be 4.88%, which is the average rate for the past 10 years.
- There are three sources of cash flows into or out of the investment portfolio:
 1. Monthly dividends on the investments. For the 25 year history, dividends are based on actual yield rates reported by Statistics Canada. For the projection period, yields are based on the average of the 25 year history (2.43%). The tenant pays tax on the dividends based on the 2008 maximum effective tax rate (24.0%). For much of the historic period, actual tax rates were higher and therefore this analysis overstates the after-tax value of the portfolio.
 2. The investment portfolio has a 1.50% annual management fee, which is withdrawn from the portfolio. This reduces the rate at which capital gains accrue. The management expense ratio ("MER") was estimated via a survey at www.globefund.com on February 6, 2009, for Canadian equity funds with \$100 million or more in assets. The MER was calculated as a weighted average.
 3. The difference between the cost of owning versus renting is a positive or negative amount. In the initial scenario, for about 13 years, the monthly rent in Toronto is lower than the cost of home ownership, so this represents a positive source of funds for the tenant. For the remaining years, the rent exceeds the home ownership cost, which makes a negative contribution to the portfolio.

When the sum of the cash flows is a positive number, the tenant invests the money. When the sum is negative, the tenant withdraws the amount from the portfolio. In the initial scenario, the tenant starts to withdraw money from the portfolio during 1997. Until 2008, the withdrawals are taken from dividend income. After 2008, the tenant must start to draw from capital, and capital gains taxes are payable (at a tax rate of 23.2%, which is applied to the portions of the withdrawals that correspond to prior capital gains).



In addition to the cash flows:

- There are capital gains on the portfolio. In the initial 25 years, the rate of capital gains is based on the actual (annual) increases in the TSX index. In the projection period, capital gains are derived from the average rate over the past 25 years: in the initial scenario, the rate of increase is assumed to be one-half of the prior rate.
- For the homeowner, housing equity is being accumulated over time, as the mortgage debt is being repaid and the value of the home is rising.

At the end of the analysis periods (and at 5 year intervals along the way) the two scenarios are compared. The difference between housing equity and the value of the portfolio is referred to as “**the Home Ownership Advantage**”. This label was chosen quite deliberately, because the detailed analysis shows that home ownership generates a very substantial financial advantage.