

**In Income We Trust? An Empirical Examination of
The Canadian Income Trust Market**

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ABSTRACT

The recent phenomenal growth in the Canadian Income Trust (fund) market, from \$17 billion in 1998 to \$70 billion in 2004, was triggered by investors' demand for double-digit yields in an era of low interest rates and equity returns. However, similar to many other comparable asset classes, income trusts are not free of risk. The current favorable tax environment for income trusts is always subject to change while unitholders' unlimited liability is still an unresolved issue. Furthermore, some market observers are arguing that the trust market might be nearing to a speculative bubble stage.

Trusts are also not all equal in both their nature and size of operations and understanding the trusts' underlying business should be an astute investor's first step long before investing in an income fund. In the first part of this thesis we fill in the need for empirical research on the Canadian Income Trust market by examining the risk and return characteristics of various types of income trusts using a battery of financial ratios over the sample period 1998-2003. The results obtained show that utility trusts have the lowest return and risk than the other types of trusts while the oil and gas trusts exhibit the highest return and risk. Moreover, we also compare financial ratios of Standard and Poor's (S&P) rated income trusts to unrated ones. The results lend some support to the premise by the S&P in that ratings serve the investment community by signaling the potential for stable and higher dividend yields.

Subsequently, a comparison of the Canadian Income Trust market to alternative investment assets revealed that with roughly 20% return, the Canadian Income Trust market significantly outperforms other equity and fixed-income securities markets over

our sample period of 1998 to 2003. Despite this large disparity in returns, the income trust sector has approximately the same level of risk as the other asset classes. Also low or negative correlations between the trust market returns and other asset classes suggest that by allocating a portion of an investment portfolio to income trusts investors can enhance their portfolios' long-term return potential through diversification.

The second part of this study analyses the wealth effect of the announcement of several trust-related events by calculating the abnormal returns experienced by unitholders on the announcement dates. These events relate mainly to the taxation of income trust, launch of the S&P/TSX indices, and S&P public stability ratings. The outcomes show that announcements, which contribute towards both the recognition of the unprecedented growth in the income trust market and unitholders' need for information about the income trust market, produced significant cumulative abnormal returns on the event dates.

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*To My Father,
The Late Adnarain Rajen Neeliah*

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CHAPTER 1

INTRODUCTION

The Canadian income fund (trust) market has grown at a phenomenal rate from a market capitalization of (approximately) C\$45 billion in 2002 to C\$70 billion in 2004 in comparison to the sluggish bond and equity markets. The investment communities are mainly attracted to the income trust market because trusts are perceived as “double-digit yield” securities designed to offer stable long-term cash distributions rather than prospects for capital gains. From 1999 to 2003, income trusts have yielded higher returns than government bonds, corporate bonds, both Canadian and U.S equities, and even high-yield (junk) bonds. These high long-term yields satisfy unitholders’ cravings for high cash returns in an era of low interest rates and equity returns. Furthermore, trusts are designed to reduce considerably (if not eliminate) the tax liabilities of their unitholders.

In essence income trusts can offer double-digit yields to unitholders (of which only a small proportion is taxed) mainly due to their structure. An income trust is basically a type of trust which holds securities (or units) of a corporation which in turn owns a business or other income-producing assets. They are mainly structured in two ways - *royalty trusts* (normally oil and gas trusts) and *income funds* (normally business funds). In both the royalty and income fund, a promoter creates a trust/fund through an initial public offering (IPO) of units. Here investors buy “units” from the trusts and are called unitholders. The royalty trust uses the IPO proceeds to purchase a royalty from

the corporation which entitles it to receive royalty income equal to 99% of the corporation's net cash flow. The income fund uses both the IPO proceeds and external financing to purchase all the shares of the operating company. Thus, the income fund and royalty trust receive practically all of the operating companies' income that they distribute to their unitholders and hence reduce the operating companies' tax liabilities. Finally, the income is taxed in the hands of unitholders. Here only 40 to 60% of the income is taxable (depending on the type of trust), the rest being considered as a return of capital which is taxable at a lower capital gain tax rate when the trust units are sold. Both structures are presented in Figure 1.1. Additionally, the management of the corporation and trust can be often accomplished through a separate corporation in both the royalty trust and the income fund. Based on the slight distinction between the two structures, this study uses *trust* and *fund* interchangeably to describe the income trust (fund) market.

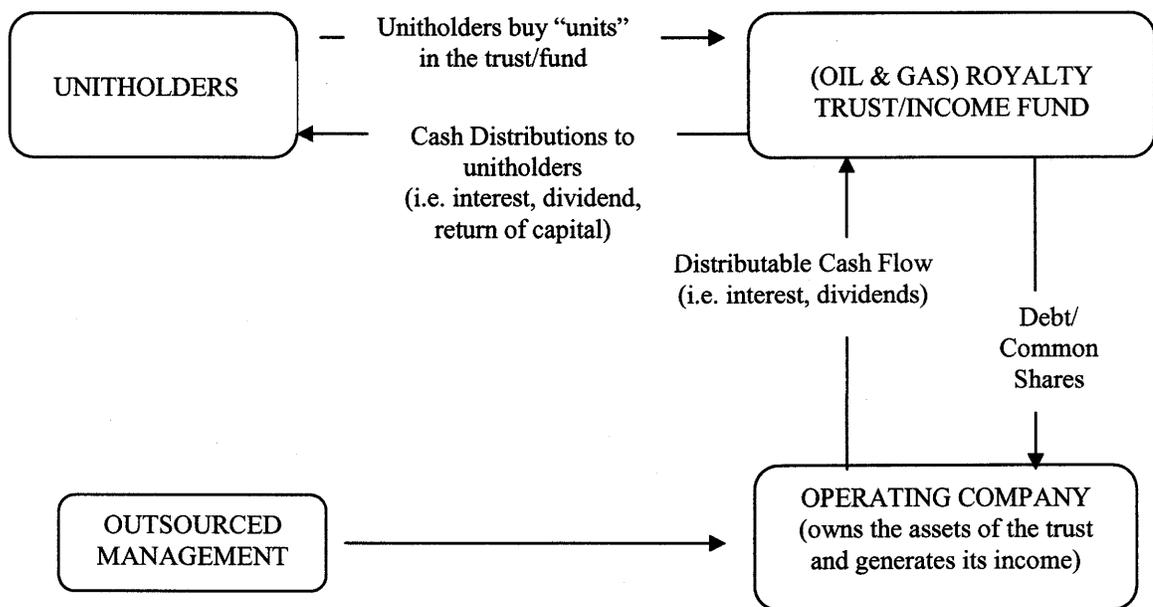


Figure 1.1 - Income Fund/Royalty Trust Structure

1.1 MOTIVATION AND OBJECTIVES

Income trusts with high yields and tax benefits seem to be very promising investment vehicles. However, like many other comparable asset classes, income trusts are risky. First and foremost unitholders face unlimited liability when investing in income trusts, that is the amount of their losses are not restricted to the amount of their invested capital. Actually, this situation clearly explains the lack of institutional interest in the market. Second, the current favorable tax environment for income trusts can change at anytime as policymakers start experiencing the fiscal burden of ever-growing revenue losses under the current tax policy. Third, unlike fixed income securities such as bonds, cash distributions by income trusts are not guaranteed and may be cut at any time. As a matter of fact, several trusts were not able to sustain their regular cash distributions to investors in 2003. Furthermore, even if a trust can maintain its distributions, there still is the risk of capital loss; the gains made from the distributions may be wiped out by a falling share price.

Finally, although many trusts usually provide significantly high yields, they are not all equal in their nature of operations. As an example, business trusts are believed to be the riskiest trusts based on the nature of their operations that range from peat moss production to food supply. The recent growth in the overall sector might suggest that retailers are buying into high yields without adequately differentiating among the trust types. Understanding the underlying business should be an astute investor's first step well before he or she invests in an income fund.

Despite the above mentioned benefits and risks of the trust market, there is a lack of empirical studies that thoroughly examine this sector. The main objective of this

study is to discuss major issues related to the trust sector such as taxation, unlimited liability of unit holders, indices and stability ratings, and to examine the risk/return characteristics of various types of income trusts such as Real Estate Investment Trusts (REITs), oil and gas, utility, business and diversified funds. This study tries to fill the gap in the literature by examining the types of trusts with a sample close to the overall trust population. Furthermore, this study also compares the risk and return of income trusts to other asset classes such as Canadian Equities, U.S Equities, Global Equities and bonds. This part of the study is referred to as a *ratio analysis*.

The second motivation of this study relates to the possibility that some investors might invest in trusts that are favorably rated by Standard and Poor's (S&P) following its claim that rated trusts might be better investments than unrated ones as far as the stability of distributions and corporate governance is concerned. The S&P bases its reasoning on the premise that if unrated trusts were as equally promising as the rated ones, they would have already sought S&P's ratings. In this study, we examine whether superior trusts could be using the rating services to signal to the market the stability of their earnings to separate themselves from others. We should note that S&P rates income trusts relative to only a few *rated* trusts (approximately 30 funds). Even their benchmark stability ratings, which contribute to their previous claim, are based on only 73 trusts (of which 29 are *rated*) as of June 2003, and use only some publicly available information. Since, the S&P's assessment on the income trusts does not allow for a sector-by-sector analysis, we extend our analysis to individual sectors by comparing certain risk-return characteristics of rated and unrated trusts.

Another puzzling question worth examining is that trusts are generating enormous capital gains despite the fact that most of their income is distributed in cash.

Accordingly, even though they are not “supposed” to have any growth potential, they have been appreciating in value. For instance, the holding-period stock return from the S&P/TSX Capped Income Trust Index from October 2002 to July 2004 is approximately 20%. Similarly, the holding-period stock return from the S&P/TSX Capped REITs Index is approximately 8% while that from the S&P/TSX Capped Energy Index is approximately 28% during the same time period.

Thus, another objective of this study is to analyze investors’ sentiments about several issues related to the trust market because only their optimism could trigger such rises in trust prices. Therefore, this study analyses some trust-related announcements involving ratings, taxation and liability issues that may have affected unit prices of different trusts. This part of the study is referred to as an *event study*.

1.2 OUTCOMES OF THE STUDY

Our Ratio Analysis reveals that although distributions from trusts are largely paid from earnings they might include a portion of the initial capital. Also we observe that the price/earning ratio of the overall trust market average is comparable to other equity market averages and does not imply a significant overvaluation and the potential for speculation despite recent popularity of the trusts among investors. We also find that trusts focusing on capital-intensive industries like REITs, utilities, and oil and gas yield a low return on assets (ROA). In contrast, business trusts has the highest ROA since the required assets for their operations are relatively low.

Furthermore, despite significant variation in capital gains, we observe that dividend yields are fairly similar among the types of income funds. The average

dividend yield of the trust sector is 8.41%. Also, we find that the average annual return of the trust market is 20.39% while average annual risk is 26.50% over a sample period of 1998 to 2004. Among the five groups examined, the utility trusts have the lowest risk and return as expected since they are mature companies with relatively stable earnings. On the other hand, oil and gas trusts have the highest total risk and return of the groups since the success of their operations is highly correlated with fluctuations in oil and gas prices. Finally, examination of the evolution of the overall income trust market from 1998 to 2003 reveals that trusts' risk and return, on average, are increasing reflecting investors' enthusiasm in the sector. When we further compare rated trusts by S&P to the unrated ones, the results lend some support to the premise by the S&P in that ratings serve the investment community by signaling the potential for stable and higher dividend yields.

Next, our results of the risk-return analysis indicate that over our sample period 1998-2003, the income trust market, with roughly 20% average annual return, significantly outperformed other equity and fixed-income securities markets. Despite this extraordinary difference in returns, we find that the trust sector has approximately the same level of risk as the Canadian, U.S and Global Equities markets. We further find low or negative correlations between the trust market returns and other common asset classes such as domestic and foreign equities, government and corporate bonds over our six-year sample period. These results suggest that by allocating income trusts to a portion of an investment portfolio investors can (and should) enhance their portfolios' long-term return potential through diversification.

Our Event Study, examining the impact of several announcements (related to taxation of income trusts, limited liability of unitholders and many others) on unitholders' wealth over a 2-day event window show a positive cumulative abnormal return of 1.63% when S&P first announced that it will assign stability ratings to income trusts. Also the launch of S&P/TSX Capped Income Trust Index and its sub-indices namely the S&P/TSX Capped REIT Index and the S&P/TSX Capped Energy Index, and, the Canadian Association of Income trusts, produced a positive abnormal market reaction of 2.09% and 1.27%, respectively. All of these positive reactions in unit prices of income trusts may suggest that the announcements conveyed new information about the importance of the sector and that the effect of the announcement was quickly captured in unit prices.

On the other hand, S&P's first stability ratings resulted in a loss of 1.2% for unitholders. Furthermore, the events which were expected to impact negatively on income trusts were not significant at all. These are the announcements related to the taxation of income trusts, the exclusion of income trusts from the S&P/TSX Composite Index due to the unlimited liability issue, and the introduction of Bill 41 - The Trust Beneficiaries' Liability Act of 2003. Apparently, these announcements did not cause a revision on market participants' expectations on those issues which suggests different motivation for holding these investment vehicles.

An outline of the thesis is as follows. Chapter 2 outlines the background on the Canadian income trust market. Chapter 3 describes the data collection process for the Ratio Analysis and the Event Study, and, the methodology used in this study. Chapter 4 compares the average financial ratios among the types of income trust, as well as compares the rated trusts (by S&P) to the unrated ones. Then, an analysis of the impact

of several trust-related events on each type of income fund, and, on the rated and unrated trusts is performed. Chapter 5 concludes and summarizes all the findings.

CHAPTER 2

BACKGROUND ON CANADIAN INCOME TRUSTS

The majority of the literature on income trusts in Canada is descriptive in nature rather than empirical. Most of the assessments on the trust market involve market participants such as institutional investors, retailers and independent organizations [for example: Standard and Poor's (S&P) and PricewaterhouseCoopers] sharing their views in the financial press on the theoretical differences among the types of trusts, and, their yield and risk characteristics. Additionally, only two studies to date are related to the tax implications of Canadian income trusts [Hayward (2002) and Mintz and Aggarwal (2003)]. Hence, our literature review mostly revolves around a brief introduction to the trust market (Section 2.1), the nature (types) of income trusts (Section 2.2), the benefits and risks of income trusts (Section 2.3), the evolution of trusts during the past few years (Section 2.4), and the recent developments in the trust market (Section 2.5).

2.1 INTRODUCTION TO CANADIAN TRUST MARKET

Hayward (2002) argues that the income trust structure is increasingly viewed as a substitute for the corporate form in both the traditional real estate and oil and gas sector, and non-traditional sectors (general businesses). The proliferation of Canadian income trusts is a result of low demand for equity products and high demand for “yield” products. In a period of stagnant or falling share prices, issuers can expect little demand from investors looking for short-term capital appreciation. But since issuers still have an interest in selling their business by way of an initial public offering, they have to explore new means for financing opportunities. One such means is “repackaging” of an equity product to resemble a fixed-income security (i.e. an income fund) that is attractive to fixed-income investors looking for a relatively secure income stream. Hence, income funds normally pay high regular dividend yields to unitholders as compared to corporations which may not.

There are two main distinctions between an income fund and a corporate structure. The first one lies in the taxation benefits that can be derived from an income trust structure. Income derived from a corporation is normally taxed twice, once at the corporate level and once in the hands of the shareholders. However, an income trust, qualifying as a “mutual fund trust” for Canadian tax purposes, will not pay Canadian taxes on its income that is distributed to its shareholders [Bemstein (2004)]. Thus most trusts maximize the amount of cash flowing from the corporation to the unitholders and hence limit the amount of taxes being paid at the corporation and trust level. Furthermore, unitholders in an income trust structure only pay taxes on 40 - 60% of distribution, the remaining being considered a return of capital. For investors, income

trust may not only increase the level of distributed cash flow to them but also minimize their tax liability.

The second distinction involves the liability status of unitholders of an income fund. In contrast to equity holders, unitholders of income trusts are personally liable for all the loss or action of the trust company. Thus their loss is not limited to the amount of their capital invested in the trusts. Laws to protect unitholders from unlimited liability are at this time being formulated. For instance, the Ontario government is expected in the future to pass Bill 41 – The Trust Beneficiaries’ Liability Act of 2003 that will limit the liability of unitholders.

In this section we discussed the main differences between a corporate and an income trust structure. From an investor’s standpoint, distinguishing between the characteristics of an income trust and an equity corporation will help in their decision towards investing in either of the structures. The next sections will give a detailed description of the types of trusts and benefits and risk of income trusts.

2.2 TYPES OF INCOME TRUSTS

This study classifies income trusts into five categories based on their differing operating characteristics (nature). These are the real estate investment trusts (REITs), the oil and gas trusts (resource), the utility funds (power and pipelines), the business funds and the diversified funds (also commonly called investment funds or portfolios of funds by S&P). It is important to differentiate among their nature in order to understand their risk and return characteristics. The following sections outline the differences among them.

2.2.1 REITs. Real estate investment trusts (REITs) were first introduced into the Canadian marketplace in 1993. The REIT sector is one of the largest industry sectors in the Canadian income fund market with an aggregate market capitalization of C\$9.17 billion as of April 2003 (which represented 18.3% of the total trust market) [Charbon (2003)]. They are one of the purest forms of income trusts as they own direct investments in real estate assets and the cash flow generated from these assets flow directly back to the REIT holders. Hence, under this structure, no third party operating company needs to be established.

REITs, as described in CIPPREC (2003), invest in real estate assets which include hotels, office buildings, residential buildings, retail and industrial properties, and, diversified portfolios of assets. REITs normally offer steady monthly or quarterly cash distributions to unitholders of which only 40% is taxable, the balance being tax-deferred and available to reduce the cost base of the investment. Furthermore, by amortizing their financing costs and capital expenditures, the taxable portion of their distributions to unitholders is reduced. Other benefits of REITs include a highly liquid

market and potential for capital gains and stringent regulations in areas such as leverage and financial reporting.

Charbon (April 2003) reports that REITs can offer an overall moderate level of cash flow stability as their cash flow is generally supported by medium-term lease contracts, stable and creditworthy tenants, and good commercial properties that have intrinsic value. However, the risks associated with REITs include the degree of discretion in the use of real estate assets, the breadth of demand for the assets, length of leases and rent terms (in case of residential and industrial REITs), liquidity of asset sales and supply characteristics of real estate assets. Furthermore, the majority of REITs have professional and active internal management teams. Of the existing 21 Canadian REITs in April 2003, only two of them have external property management.

The literature on REITs in the United States (U.S) is vast ranging from the analysis of whether REITs are real estate or stock, the tax legislation governing REITs, and the risk and return characteristic of REITs. For instance, Mull and Soenen (1997) find a strong positive correlation between the returns of REITs and stocks, noting that REITs in the U.S offer both an inflation hedge and diversification benefits. Furthermore, The Tax Relief Extension Act of 1999 in the U.S specifies that the portion of REITs' income that is distributed to investors each year should be taxed at the investors' level without being subjected to a tax at the REITs' level (provided that REITs distribute 95 percent of its income before the end of its taxable year as deductible dividends paid to shareholders). This tax treatment for U.S REITs is similar to that of Canadian REITs. Brandon and DeLuca (2000), by examining the tax opportunities available for taxable REITs subsidiaries (TRS) as a result of the Tax Relief Extension Act of 1999 (TREA), find that the benefits of TRS exceed their limitations in providing

unique tenant services that should significantly increase REITs' customer loyalties and revenues. In addition, Li and Wang (1995) examine REITs over a twenty-year period ending in 1991 and find that REITs returns are more predictable than stock returns. In addition, since 1990, there has been a reversal from a low level of institutional ownership (over the 1970-1990) to today's increasing number of portfolio managers including REITs in their multi-asset portfolios [Zietz, Sirmans and Friday (2003)].

REITs is the only asset class in the U.S similar to Canadian REITs. The Canadian income trust market allows trusts to invest in assets different from real estate which include oil and gas, utility, general business and diversified portfolios of assets (diversified trusts). Since this study specifically examines the differences between the characteristics of the different types of trusts in Canada, we do not elaborate more on similar type of investment in the U.S.

2.2.2 Oil and Gas Royalty Trusts (Resource Trusts). Oil and gas income trusts represent some of the first resource income trust products that came to the Canadian market place in the 1980s. Here, the trusts are paid 99% royalties from their operating companies which account as effective tax-deductible expenses of the operating companies. Additionally, unitholders benefit from tax pools at the trusts' levels in the forms of Canadian Oil and Gas Property Expenses, development expenses and capital allowances. Only 60% of trusts' distributions are normally taxable and 40% are treated as return of capital used to reduce the cost base of the investment [Raymond James Equity Research (2003)]. Despite their many tax benefits, the base asset of oil and gas trusts –exhaustible natural resources- deplete over time which makes them riskier than other types of trusts. Furthermore, even though they tend to pay higher yields, these yields are highly volatile in that they depend on variations in commodity prices and

reserves. Similar to REITs, oil and gas trusts have active internal management teams. Examples of oil and gas trusts include Acclaim Energy Income Fund and Bonterra Energy Income Fund.

There have been many collapses in the oil market in the past. Kan (1997) reports that the oil and gas sector returns ranged from high of 24.7% in August 1981 to low of 6.5% in January 1992 (TSE300 Oil and Gas Composite Index) showing a huge history of declining oil and natural gas prices, high costs and enormous debt. For instance, in 1986, deregulation in the oil and gas industry (whereby more emphasis was being put on cash flow as compared to future values) caused a huge decrease in returns in the oil and gas sector.

Similarly, Panaraties (2002) states that the Canadian oil and gas income trust market has been quite volatile from 1997 to 1999 mainly due to deteriorating commodity prices. Income trusts whose revenues are mostly tied to the production, transportation or marketing of natural resources were affected. For instance, crude oil prices began in 1998 at US\$17.50 per barrel, after hitting a high close to US\$28 per barrel early in 1997. Prices continued downward to US\$10 and US\$11 per barrel by December of 1998. As a result, total returns for these energy-related trusts ranged from -25% to -50%. Then, the bear market ended as oil prices began recovery in September 1999 when OPEC's announced production cutbacks in March 1999. Oil and gas prices remained high until 2003 as the oil and gas companies managed to increase their per unit reserves, discounted cash flow value, and production and distributions efficiency.

Other resource trusts are involved in the exploration or production of commodities such as metals, minerals and timber, and differ from the oil and gas royalty trusts in that they do not share the tendency for production to decline as reserves decline.

However, even though they have potential for significant growth due to their assets' longer lives, they still have higher and more variable capital requirements and are more reliant on management's practice to generate cash to finance growth. Examples of other resource trusts are Labrador Iron Ore and Fording Canadian Coal Trust.

2.2.3 Business Funds. The Canadian Income Trust Market was mainly made up of oil and gas trusts and REITs since its inception. Then, Superior Propane income trust, the first general business income trust, entered the Canadian Income trust market in 1996. As of June 2004, there are approximately 42 business funds with a total market capitalization of approximately C\$11 billion. Examples of business trusts include SFK Pulp Fund (a wood pulp fund), KCP Income Fund (a bleach/cleaners sector), Atlas Cold Storage (a cold storage fund) and A&W Royalties Income Fund (a hamburger-restaurant chain fund).

Business trusts, generally known as Income Funds, have operations that range from food catering to peat moss production and sales of newspapers. The difference between the oil and gas royalty trust and business fund is the mechanics by which the tax-efficient transfer of net cash flow from the operating business (corporation) to the trust is made. In the income fund structure, the fund generally owns 100% of the debt and 100% of the equity of the corporation. Hence cash is transferred from the corporation to the trust in terms of dividends and interest that are paid to unitholders. If debt is maximized and equity minimized, the transfer is tax-deductible since it occurs mainly in the form of interest. The business fund may then pay unitholders high dividend yields.

However, the risk of business funds is based on the ability of their operating corporations to generate cash flow. Their risks also depend on the funds' competitive

environment, managements' abilities and growth prospects. Yellow Pages Income Fund is Canada's largest issuance of income trust units with an initial public offerings of C\$1 billion in 2003.

2.2.4 Utility Funds. Utility funds, also known as power and pipeline funds, derive their cash flow (income) from regulated public entities that offer services in pipelines, telecommunications, light, power and water. Historically, telephone companies (e.g. BCE Inc.), Electric Utilities (e.g. TransAlta Corp.), Gas Distribution Utilities (for e.g. Gas Metropolitan) have been heavily regulated in Canada. As a result of this, Kan (1997) reports that in the past, shares of regulated utilities and pipeline companies were less risky than other equities while providing current income in the form of a usually growing stream of dividends. Hence, their predictability of dividend has facilitated their conversion into trust structures over time.

Dominion Bond Rating Service Limited (DBRS) [2003a, b], a rating company of trusts, describes the power and pipeline fund sector as the most stable funds in the Income Fund universe mainly because these funds are providers of essential services which have a relatively inelastic demand. Furthermore, they believe that these funds are well suited as trusts as they have operating lives of more than 25 years and relatively low maintenance capital expenditures. However, the main limitation of power funds include the possibilities of unplanned long-term outages at generation facilities which could negatively impact on their cash flows. And, in the case of pipelines funds, their cash flows (income) are affected by the level of market demand for the transportation of product on their distribution systems.¹

¹ See www.investcom.com for more details.

2.2.5 Diversified Trusts. Diversified trusts invest either in a particular type of income trusts (for example in only REITs) or in a combination (portfolios) of them (REITs, oil and gas trusts etc). These trusts rose in popularity in 2003 and 2004. They claim to offer stable yields because they invest in a diverse set of trust units. However, they are sometimes managed by external or internal management teams that take a large proportion of the cash flows generated by the portfolios as management fees. An example of a diversified trust is Barclays Advantaged S&P/TSX Income Trust Index Fund which is an investment trust created to replicate, to the extent possible, the return of the S&P/TSX Capped Income Trust Index. Similarly, COMPASS Income Fund invests primarily in units of business funds, pipeline and power funds, and REITs.

Last of all, trusts also come in a Limited Partnership (LP) structure. There are many advantages to be derived from an LP structure which consists of a general partner and a limited partner; the general partner manages the partnership while the limited partner provides the investment capital. One advantage of such a structure is that external general partners normally manage the LP to limit the control of internal management teams over the day-to-day operations of the LP. Furthermore, an investor's loss is limited to his or her original investment as an LP structure limits the legal liability of its owners. Last, LPs pay the least amount of corporate tax, making this trust structure very attractive compared to other trust structures.

This section described the nature of five broad categories of trusts namely REITs, oil and gas trusts, utility, business and diversified trusts. This classification of trusts will be used later in our analysis. The next section reviews the benefits and risks of income trusts in general.

2.3 BENEFITS AND RISK OF INCOME TRUSTS

Many investment analysts in the market place have long argued about the risk and benefits of income trusts. Most of the confusion arises on whether to characterize income trusts as fixed-income securities or equity since they normally provide stable dividend yields while the nature of their operations can be risky. Michaud (2004) states that income trusts are well suited for mature industries with a low growth rate. But, with the popularity of income trusts few investors really understand the risks of this type of investment. Many investors describe income trusts as fixed-income securities when in reality they have a lot more in common with equity stocks.

King (2003) and Lloyd and Droppo (2002) summarize the benefits of income trusts as follows. First, firms, especially those that are small or do not have access to the Canadian equity market, are able to realize significant capital gains on the sale of their assets through the income fund market even though they have limited growth potential or regulatory restrictions. The reason is that many investors are prepared to pay vendors more for their assets than the vendors might otherwise receive as they are attracted to these high-yield investments. Furthermore, since income-lovers can obtain a higher return in this market than on the Canadian bond market (following the decline in bonds' interest rates from 1995 to 1998), they shifted their investments from the low-yield bond market to the high-yield income trusts market. Also, higher cash payouts from trusts reduce the cost of monitoring management.

Most importantly, income funds are seen as tax-effective and moderate-risk alternatives to fixed-income securities such as government or corporate bonds. The tax benefits arise from the fact that income funds' distributions are treated as a combination

of interest payments, dividends and capital gains for tax purposes, making the overall tax rate applicable to the unitholders often significantly lower than the tax rate applicable to other steady-yield investments. Furthermore, trusts' unitholders can benefit from return of capital (which should not be confused with the return on capital). This concept is explained as follows. Income trusts normally pay all of their distributable income to unitholders. However, this income is not taxable itself; rather it is taxable in the hands of the unitholders. Hence, the income received by unitholders is made up of one part which is taxable in the year of distribution and of a second part called a return of capital (whereby tax is deferred until the year of disposition of the units) which is taxed at a lower capital gains tax rate. Table 2.2 shows how the return of capital is accounted for.² Suppose an investor purchases units from a particular income fund at a unit price of \$100 each. Assuming that the investor holds the unit for 3 years at the end of which it is sold for \$120, each year he or she receives income of \$10 per unit of which 60% is tax deferred. Hence, the unitholder receives \$30 per unit over the 3 years. However, since each year he or she pays tax on only \$12, the tax deferred portion of annual income is considered a return of capital and is applied to reduce the cost base of the investment. The majority of the tax obligation is deferred until the units are sold in year three at \$120 at which time it is taxed at a more favorable capital gains tax rate. (The lack of data precludes this study from empirically examining the return of capital but it would be an interesting area for future research.).

² This example is adapted from CIPPREC (2003).

Table 2.1 - Return of Capital from Income Trusts

Year	Distribution per unit	Taxable Income per unit	Adjusted cost base per unit
1	\$10	\$4	$\$100 - \$6 = \$94$
2	\$10	\$4	$\$94 - \$6 = \$88$
3	\$10	\$4	$\$88 - \$6 = \$82$
Year of Disposal	\$30	\$12	$\$120 - \$82 = \$38$

McLean (2003) reports that even though the income trust market had grown considerably in 2002, by the end of the fourth quarter, several of the income trust IPOs were halted or cancelled because of market saturation. He argues that the most serious weakness of the income trust market is that these funds are under no obligation to maintain or increase their fixed level of cash flow payouts if they can no longer generate any cash flow from their operations. Furthermore, they need not pay back the initial investments made by investors in the income trusts, reflecting management's discretion as to the expenses that need to be incurred. Hence trusts, especially those that do not have any growth potential, may not sustain the high dividend yields that they once promised to investors. Examples of this serious flaw include Legacy Hotels Real Estate Investment Trust, owner of luxury properties, which cancelled its distribution for the second quarter of 2003 because of the unpredictability of its cash flows. Similarly, Sun Gro Horticulture Income Fund cut its payout by 14% in June 2003 after fall in profits due to rising energy prices. Not wanting to disappoint investors, the trust borrowed money to maintain distribution levels - a move management agreed was not financially prudent. Likewise, SCI Income fund making Simmons mattresses reduced its cash distribution from 20% to 8% in April 2003 (blaming the Iraq war and SARS).

In addition, trusts are highly prone to interest rate risks on two fronts. First, some trusts may have huge amount of debts and increases in the interest rate add to their

service costs. Second, as interest rates go up, other asset classes such as GICs, money market instruments and bonds look more attractive than income trusts' units. For instance, the Raymond James Equity Research (2003) shows that there is an inverse relationship between net sales in the income fund market and Canadian interest rates. The report furthermore shows that interest rate sensitivity and risk of income trusts are inversely related.

Regarding the legal framework of governing income trusts, Erlichman (2002) argues that the legal system for trust is new and untested, implying that trust unitholders have fewer rights than common shareholders. One of the legal and regulatory risks involves the unresolved issue of personal liability of income trust unitholders; unitholders are personally liable for the debts or actions of the trusts' operating companies. Hence, unlike corporate law, trust law does not provide unitholders with limited liability. This unresolved issue limits the amount of institutional investors in trusts to less than half of that of retail investors. For instance, Keith and Klumpp (2003) state that the typical income trust has only 20% to 30% of Canadian institutional investors compared to 55% to 70% of Canadian retail investors, and 10% to 20% of foreign investors-mainly from the U.S.

Another regulatory risk involves the fact that existing bankruptcy law does not apply to income trusts. For instance, there is no legislation which provides trusts with the benefit of a modern financial restructuring regime. Also, a trust is not subject to a receiving order under the Bankruptcy and Insolvency Act. Hence trusts are overly vulnerable in the event of an economic downturn in their respective sectors, as most of them do not accumulate retained earnings to reinvest in plant and equipment or expansion. Erlichman (2002) also highlights the risks arising from the type of

management structure adopted by the trusts. Management can be either internal or external. Trustees of some income trusts normally delegate most, if not all, of their responsibilities and power to management companies which may not act in their best interest. For example the prospectus of General Donlee Income Fund states that the directors of the operating company are anticipated to be the same persons who will act as the trustees of the trust. This clearly demonstrates that too much control over the entire business is being given to the internal managers. Another example involves the external managers of Legacy Hotels REIT who earn an incentive fee based on any rise in the REITs net operating profit (which can reach up to 30% of that increase). However, this fee is not tied to their income distribution - the ultimate goal of the investor. Hence, even though managers earn high profits but do not distribute them to unitholders, they still get their incentive fee.

Finally, even if a trust can maintain its distributions, unitholders face the risk of capital loss; that is their gains made from the trusts' regular distributions may be wiped out by falling share prices. Hallett (2003) reports that some investment analysts see the emergence of an income trust bubble. They argue that the trust market will blow up because there are many companies coming to market which cannot sustain what they are promising. On the other hand, others claim that a bubble occurs when price rises in a period of deteriorating fundamentals and distributions and this is not what the trust sector is currently experiencing.

In this section, we reviewed the benefits and risks of the income trust sector. Next, we will describe the evolution of the trust sector during the past few years and its recent developments.

2.4 EVOLUTION OF CANADIAN TRUST MARKET

The income trust market has been around in the Canadian market place since the 1980s with quite a few oil and gas trusts. However the trust market has expanded considerably from a market capitalization of C\$ 1.93 billion in 1994 to C\$70.6 billion in 2004 as presented in Figure 2.1 [King (2003)].

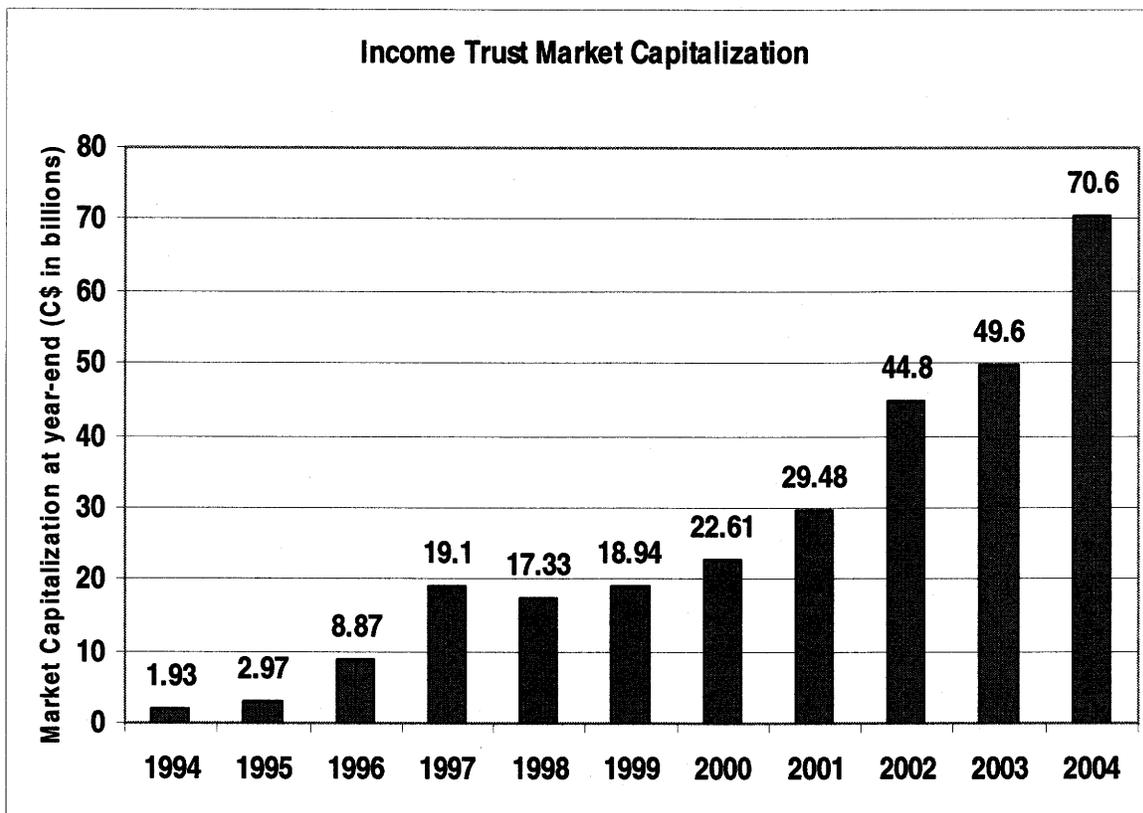


Figure 2.1 – Income Trust Market Capitalization

The number of publicly listed funds rose from 41 in 1998 to 94 in October 2002, representing a market capitalization of approximately C\$44.8 billion. In March 2003, the Canadian income fund market was made up of 138 publicly listed income trusts with a total market capitalization of about C\$49.6 billion. Excluding portfolio and structured funds, there were 112 income funds with a total market capitalization of C\$46.4 billion

[Rabiasz and Charbon, (2003)]. Our study comprises approximately 139 funds with a total market capitalization of C\$70.6 billion as of June 2004. Table 2.1 below shows the number of trusts as of June 2004 for each type of trust and their corresponding market capitalization.

Table 2.2 - Number and Corresponding Market Capitalization of Types of Income Trusts as of June 2004

Types	Market capitalization (approx. C\$ billion)	Number
Real estate investment trusts (REITs)	12.3	23
Oil and gas trusts (energy)	31.5	32
Utility (power and pipelines)	12.2	19
Business trusts	11.3	42
Diversified trusts (portfolios of trusts)	3.3	23
Trust market	70.6	139

The expansion of the income trust market has been triggered by an increase in the number of IPOs from both Canadian and U.S issuers. Rabiasz, Tysall and Connell (2003) report that income trust issuance grew by 114% on a year-over-year basis while, in 2002, corporate debt issuance volume was half of the total borrowing of 2001's C\$89.4 billion, and equity issuance volume was half of 1997's C\$26.5 billion. Similarly, PricewaterhouseCoopers (2003) states that income trusts dominated IPO activity in 2002. They represented over 86% of IPO value and were placed in every sector except in the Life Science and Forestry sector. The general business trust class was the fastest-growing component of the trust sector with 26 Initial Public Offerings (IPOs) coming to market in 2002. However, by the end of 2002, several income trusts IPOs were cancelled because of market saturation due to a lack of demand [McLean (2003)]. Accordingly, in the fourth quarter of 2002, the BMO Nesbitt Burns Trust

Composite Index made a loss of -0.2% while the S&P Composite Index had a return of 7.5% [King (2003)].

Furthermore, there were many conversions of public corporations to trusts, especially from many companies with small market capitalization [Raymond James Equity Research (2003)]. The benefits of converting from a common equity to income trusts include an increase in liquidity, the ability to attract income-oriented investors and the ability to gain from the tax benefits arising from an income trust structure.

Also, in 2002 and 2003, income trusts based on investments in U.S assets joined the Canadian income trust market. The first U.S based income fund to be issued on the Canadian ground was Heating Oil Partners in 2002. Over the next 18 months, a number of American companies succeeded in raising capital at valuations higher than those available from private market sale in the U.S [Goodwin Procter LLP (2004)]. These include IPC U.S. Income REIT in 2002, and, Alliance Laundry Systems, DG Foods Income Fund, Axia Industries, and Custom Direct and Specialty Foods in 2003. However, Critchley (Jan 13, 2003) reports that Canada cannot handle big income funds deals from the United States. The reasons why Canadian investors shy away from investing in U.S funds were that they could not provide the large capital required by U.S issuers and were concerned with their potential unlimited liability by investing in trusts rather than in common shares. There were also competing Canadian issuers at the same time on the market in which they could have invested. The potential involvement of the U.S tax authorities was also a possible reason that may have backed away Canadian investors.

So far, we gave a brief overview of Canadian income trusts' evolution from 1994 to 2004. The next section follows with the recent developments in the trust sector.

2.5 RECENT DEVELOPMENTS IN THE TRUST MARKET

In this section we describe some recent major developments in the Canadian Income Trust market. The developments relate to the attention given to this market by the Canadian legal system and the financial press. We believe that these developments have shaped investors' perceptions and thus the valuation of trusts' units.

2.5.1 Standard and Poor's Indices and Stability Ratings (S&P)

Standard and Poor's (S&P) launched on October 15, 2002 the S&P/TSX Capped Income trust Index made up of approximately 40 funds with a total market value of over C\$30 billion. Furthermore, it introduced two sub-indexes, namely the S&P/TSX Capped Energy Trust Index, comprised of 21 funds with a total market capitalization of approximately C\$12.8 billion, and the S&P/TSX Capped REIT Index, comprised of 7 companies with a total market value of approximately C\$6.5 billion.

Previously, S&P had announced on April 20, 2001, that it would assign monthly stability ratings to Canadian income funds to satisfy the growing interest of market participants about the stability of those funds. The ratings are based on four factors: (1) structure and governance analysis, (2) business profile analysis, (3) financing profile analysis, and, (4) distribution analysis [Rabiasz, Charbon and Sliusarev (2002)]. The stability rating assigned by S&P to a particular income fund is highly dependent on its cash-generating and cash-distribution ability. The ratings range from SR-1 to SR-7 to show high to low predictability of cash flow.

S&P made *public* its first list of stability ratings on November 28, 2002. The list contained the public ratings of 25 funds which increased to 30 by December 2003. Specifically, as of December 2003, the rated funds included power generation funds that

were rated SR-1 or SR-2, REITs that were rated SR-2, business funds that were rated SR-2 or SR-3, oil and gas (energy) funds that were rated SR-2 or SR-3, and, portfolios of funds (diversified trusts) that were rated SR-1 or SR-3. Rabiasz & Tysall (2003) report that most of the funds are rated only if the trusts' issuers request S&P to publicly do so. Hence, most of them have favorable stability ratings (as mentioned above) as their issuers make such a request to S&P only if they are convinced that the funds will be assigned a favorable rating.

One noticeable point about the stability ratings is that *when the funds are rated, they are rated relative to the other rated funds only*. As a consequence, Charbon and Rabiasz (2003) report that S&P establishes benchmark stability ratings using publicly available information so that it is possible to compare a fund both to funds of the same nature and across the different types of income trusts. However, they cannot publicly disclose those "benchmark" ratings but can indicate their general tendency to the general public. The benchmark stability ratings show that most frequently observed rating category is "SR-4", with an equal number of "SR-2" and "SR-3", and that more funds are rated "SR-5" than "SR-1". Hence, the benchmark stability ratings are not as favorable as the "publicly" rated ones. In June 2003, there were 29 Income funds with public ratings, 44 with internal ratings for benchmark purposes, making a total universe of 73 Income funds with S&P ratings.

2.5.2 Dominion Bond Rating Services (DBRS)³

Dominion Bond Rating Services (DBRS) is another rating agency that rates income funds. It issued its first stability rating on March 17, 2003, for TransAlta Power LP. The stability ratings of DBRS range from STA-1 (high) to STA-7 (low) based on seven factors: operating characteristics, asset quality, financial flexibility, diversification, size and market position, sponsorship/governance, and growth. Of these factors, operating characteristics, financial flexibility, and growth are the most important. As of March 2004, DBRS ranked approximately 30 income funds which included mostly REITs and power and pipelines trusts, and a few business and investment (diversified) funds. Most of the funds are rated STA-1, STA-2 and STA-3. Only two of them are rated STA-4 and one of them STA-5. Same as with S&P, funds seek public ratings from DBRS by paying rating fees and only if they believe that the ratings will be favorable.

2.5.3 Income Tax Treatment of Income Funds

Unitholders may invest considerably in income funds because they are not highly taxed at the trusts' level. However, a change in tax laws by the Canadian Government may reduce investors' interest in the market. Rubin (Aug 15, 2002) reports that the trust boom cost federal and provincial governments C\$1 billion in forgone tax revenue in 2001. Likewise, Hayward (2002) argues that there has been a substantial erosion of the Canadian corporate tax base as income trusts act as investment vehicles to exploit Canadian tax laws. He argues that companies can make substantial tax savings by changing the legal form of the entity. Hence, trusts form a classic example of tax avoidance because businesses are simply growing with financing vehicles in which they

³ Details from www.dbrs.com

have to pay less tax. For instance, an operating company may reduce its taxable income by making interest payments to unitholders. The trust (acting as an intermediary between the operating company and the unitholders) issues a high-yield note to the operating company whereby the interest rate on this note is set to reduce taxable income to near zero. Then most of the interest income is distributed to unitholders, via the income fund, in the form of dividends or interest payments. In the end unitholders' income is only taxed once when it is received (in the form of dividends) or when they sell their units (in the form of returns of capital). The author concludes that the Canada Customs and Revenue Agency (CCRA) could challenge the interest rate charged on the subordinated debt held by the income trust on the grounds that it is not reasonable.

A study prepared for the University of Toronto's Capital Markets Institute by Mintz and Aggarwal (2003) [as cited in Fitzpatrick (2003)] reveals that the booming income trust market is costing governments in Canada about \$600-million a year in forgone revenue and appears to mostly help inefficient firms. Hence, based on the above reports, a potential threat to investors is that both federal and provincial governments may change their tax laws if they are convinced that trusts are generating considerable tax losses for their provinces and Canada.

Karleff (2003a, b, c) reports that this uncertainty about the future tax obligations of unitholders is both present in domestic income funds and U.S.-based income funds. PricewaterhouseCoopers LLP (PWC) in 2003 refused to continue as the auditor of Specialty Foods Group Income Fund (SFG), a fund from the U.S, questioning the manner in which the trust pays most of its distributions. SFG classified \$219-million of notes as debt, making the 14% annual interest payment to unitholders a tax-deductible expense. If the U.S. Internal Revenue Service opts to classify this debt as equity, the

payments will not be deductible leading to a rise in corporate taxes and a shrink in distributions. PWC's move was followed by Deloitte and Touche, BDO Dunwoody LLP and KPMG. This incidence may prove that investors are neither protected from the Canadian government nor from the U.S government with respect to changes in trusts' tax laws.

2.5.4 Unlimited Liability of Unitholders

Unlike shareholders in a public corporation, investors have unlimited liability when investing in income trusts. For this reason, institutional ownership of income trusts is very minimal. Slee (Nov 12, 2002) reports that income trusts will not be included in the S&P/TSX Composite Index because of the unresolved unitholders' limited liability issue. To deal with this matter, the Ontario Government introduced Bill 41 – The Trust Beneficiaries' Liability Act of 2003 to protect unitholders of publicly traded trusts against personal liability [Pincus and Goodman (May 22, 2003)]. The Canadian Institute of Public and Private Real Estate worked closely with Partners of Goodmans LLP in drafting this legislation and were confident that the bill would be approved on the day that the Budget Measures of 2003 were to receive Royal Assent. However, the Ontario Premier called an election in October 2003 which left the bill unsettled. As a consequence, Mills (Dec. 19, 2003) reports that the new government would not introduce the limited liability legislation until spring of 2004 and S&P again confirmed in December 2003 that publicly traded income trusts would not be included in S&P Canadian Composite Index due to the unresolved limited liability. Later, the Globe and Mail (2004) reports that the Alberta government introduced tax legislation in May 2004 to put income trusts on the same footing as corporations by limiting the liability of

unitholders. Hence, Alberta's unitholders are no longer liable for losses of the trust company. It is expected that the Ontario's government will do so in the near future.

2.5.5 Creation of Golden Apple Income Fund

The Ontario Teachers Pension Plan Board established a new subsidiary called Golden Apple Income Fund that would invest in the income trusts market to circumvent the unresolved unlimited liability issue of funds' investors [Willis (Jan. 24, 2003)]. By creating a subsidiary to invest in the trust market, Ontario Teachers Pension Plan Board directs the likelihood of any lawsuits from unitholders towards Golden Apple Income Fund and not the parent company (Teachers). In February 2003, Golden Apple Income Fund invested in Fording Canadian Coal Trust, which was followed by another investment in Calpine Power trust in March 2003. The Ontario Teachers' Pension Plan Board is one of Canada's largest financial institutions responsible for investing the fund's assets and administering the pensions of Ontario's 155,000 elementary and secondary school teachers and 93,000 retired teachers. The creation of such a fund by one of the largest financial institutions in Canada to tap the income trust market, even though the limited liability issue, is still unresolved may send a positive market signal to investors about income funds' promising nature.

2.5.6 Creation of the Canadian Association of Income Funds (CAIF)⁴

Canada Newswire (Feb. 25, 2003) reports that the heads of some leading income funds have come together to create the Canadian Association of Income Funds (CAIF). The CAIF is a trade and lobby association to assist Canadian income funds in addressing issues such as the elimination of the unlimited liabilities of unitholders and of the inequality of treatment between shares and income fund units. Its other challenges

⁴ See details on www.caif.ca

involve lobbying with the Government of Canada for the inclusion of income funds in the S&P/TSX Composite Index and addressing issues such as the management structure of income funds. Furthermore, it also provides public education about income trusts to investors, the industry and the press. We believe that the creation of the CAIF may confirm investors' belief that income trusts are highly valuable and worthwhile to invest in.

This chapter described the types of income trusts and their risk and benefits. It also reviewed the evolution of the trust market and some of the major developments in the Canadian Income Trust market place which we believe could have impacted on trust valuation. Later in our study we will use this classification of the types of income funds to differentiate between them. We will also use some announcements, including S&P stability ratings, taxation of trusts and unlimited liability of unitholders, from Section 2.5 in our event study.

CHAPTER 3

DATA, SAMPLE SELECTION, AND METHODOLOGY

This chapter describes the collection of data and methodology for the ratio analysis and event study respectively. The ratio analysis examines a set of financial ratios from 1998 to 2003 while the event study analyses the impact of ten events on the income trust market.

3.1 RATIO ANALYSIS

The goal of our ratio analysis is to differentiate among the types of income trusts and to compare the rated trusts (by S&P) to the remaining unrated ones. The overall trust market is also analyzed. We obtained our sample of trusts and their financial data from www.gold.globeinvestor.com. At first, approximately 250 funds were retrieved from the website but a closer look showed that approximately 100 of them were investment trusts that were not involved in the operation of any sort of assets or businesses. Therefore, only 139 income trusts that are truly involved in the operations and management of real asset are selected as our sample. These trusts are then classified into 5 types namely 25 real estate investment trusts (REITs), 33 oil and gas trusts, 19 utility trusts, 41 business trusts and 21 diversified trusts.⁵ Diversified trusts are included in the sample only if they invest primarily in either one or several types of income trust.

We examine 12 financial statistics (ratios) for each of the trusts for the period December 31, 1998 to December 31, 2003.⁶ Table 3.1 presents the names and definitions of the ratios used in our study. Our preliminary examination revealed the existence of influential observations in the data set. So we eliminated the outliers in the database by using a method called winsorization.⁷

⁵ Classifying the trusts into the different types is done according to www.investcom.com.

⁶ We collected all of the financial ratios directly from the website but we calculated our own CAPGAIN, TR and STD from the funds' daily prices as shown later.

⁷ To winsorize the data, tail values are set equal to some specified percentile of the data. For example, for a 1% winsorization, the bottom 1% of the values are set equal to the value corresponding to the 1th percentile while the upper 1% of the values are set equal to the value corresponding to the 99th percentile.

Table 3.1 - Description of Financial Ratios⁸

Cash Flow sustainability	
Cash Flow per share (CFPS)	Cash flow from operations divided by common shares outstanding at end of indicated fiscal year.
Earnings per share (EPS)	Earnings before extraordinary items, less preferred-share dividends, divided by average common shares outstanding during an indicated fiscal year.
Dividend per share (DPS)	Dividend paid for the past 12 months divided by weighted average of common shares outstanding as reported by a fund.
Accounting measures: Performance	
Return on Assets (ROA)	Fiscal year's earnings divided by its total assets, expressed as a percentage.
Return on Common Equity (ROCE)	Earnings before extraordinary items, less preferred-share dividends, divided by average common shareholders' equity.
Return on Capital (ROC)	Earnings before extraordinary items, interest expense and income taxes, divided by average capital.
Accounting measure: Risk	
Debt to equity (DTE) (Financial Risk)	Short and long-term interest-bearing debt (including capital lease obligations) divided by shareholders' equity.
Market Measure: Growth	
Price/Earning (P/E)	Current price of a stock divided by the current (or sometimes the projected) earnings per share of the issuing firm.
Market measures: Performance and Risk	
Dividend yields (DIVYIELD)	Annual dividends divided by the purchase price.
Capital gains (CAPGAIN)	(Value of unit price at end of one-year holding period/value of unit-price at beginning of one-year holding period) - 1
Total return (TR)	DIVYIELD + CAPGAIN
Total Risk (STD)	Standard deviation of one-year holding period returns
Coefficient of variation (CV)	STD/TR

⁸ Table A.2.1 in Appendix A presents the summary statistics of the financial ratios from 1998 to 2003.

Under the ratio analysis we calculated the average ratios over the sample period for each type of funds as presented in Table 4.1.⁹ These ratios are used to compare the types of trusts later. Next we conducted an “independent group t-test”¹⁰ to test for the significance of the difference between two types of income trust. This t-test is designed to compare means of same ratios between two groups, such as comparing the mean CFPS between REITs and oil and gas trusts. The null hypothesis tests for no difference between the means of the two variables. If rejected, then there is a statistical difference between the average ratios of the two groups. Next, we compared 24 rated trusts by S&P to 111 remaining unrated ones within each type.¹¹

Next, we compared the total returns (TR) of the trust sector to alternative investments such as Canadian Equities, U.S equities and corporate and government bonds over our sample period of 1998 to 2003. We also calculated correlation coefficients between income trusts and other asset classes to examine whether any diversification benefits can be derived by adding income trusts into a portfolio of different asset classes.

⁹ We also did the same analysis for individual years. These ratios are presented at the Appendix (Tables A.3 to A.13).

¹⁰ Proc t-test procedure of SAS Program is used to perform the “independent group t-test”.

¹¹ The 24 rated trusts by S&P on November 28, 2002 are separated from the unrated ones. Since our data is made up of funds as of December 2003, we had to control for the fact that the remaining trusts did not contain any rated trusts. So we removed some trusts rated by S&P in March 2004 which were not included in the ratings of November 2002 leaving us with 111 unrated trusts. The stability rating list in March 2004 is taken as there are hardly any changes in the ratings of S&P between November 2002 and March 2004 (except for the inclusion of the new rated funds).

3.2 EVENT STUDY

Many events related to some key issues of the trust market have been highly debated in the financial and industry press during the past few years, and to our belief, have shaped investors' sentiments about income funds in one way or another. After an extensive search in the press, ten events/dates are selected ensuring that the closest date related to a particular event is chosen to capture its significance. Table 3.2 presents the events/dates, importance and their expected impacts on trust prices.

To examine the effect of these several announcements on trusts' unit prices, we use a Multivariate Regression Model (MRVM) similar to Schipper and Thompson (1983, 1985), and, Binder (1985a, b) in contrast to the standard event study methodology proposed by Fama et al. (1969) [FFJR].¹² MRVM is an application of the seemingly unrelated regression technique (SUR) previously developed by Zellner (1962). The FFJR approach calculates abnormal returns from a market model in the form of:

$$\tilde{R}_{i,t} = \alpha_i + \beta_i \tilde{R}_{m,t} + \varepsilon_{it} \quad (3.1)$$

where $\tilde{R}_{i,t}$ is the return on security of firm i in period t and $\tilde{R}_{m,t}$ is the return on the market portfolio in that period. Model parameters are estimated during the pre-event estimation period and the abnormal return is calculated as the difference between the actual return during the event period and the expected return. To calculate the abnormal return for a group of firms, the abnormal returns are averaged cross-sectionally and the significance of the average is tested with a cross-sectionally measured standard deviation. Binder (1985b) argues that the FFRJ approach assumes that the residuals are

¹² Other studies using MVRM include Hugues and Ricks (1984), Allen and Wilhelm (1988), Carow and Heron (1998), and Collins, Seung-Woog and Yildirim (2003).

independent and identically distributed when this assumption might not necessarily hold. Firstly, abnormal returns are likely to differ across firms. Secondly, the variance of the residuals differs across firms. Thirdly, the residuals across firms may not be independent if the events occur during the same calendar time period for some firms which are in the same related industry. To overcome these statistical problems, MRVM allows the individual abnormal returns to differ across firms and corrects for contemporaneous dependence of the disturbances and heteroskedasticity across equations.

Our MRVM as presented in (3.2) represents a market model for a particular group i in which dummy variables are included to represent the occurrence or nonoccurrence of an event. Group i consist of stacked funds' daily returns allowing us to pool equation (3.2) for the group. Thus, we estimate MRVMs for each of the following sample (groups) - 152 funds (overall trust market), 25 REITs, 33 oil and gas trusts, 20 utility trusts, 47 business trusts and 27 diversified trusts.¹³ We also estimate the MRVM for 24 rated trusts and 111 unrated trusts. Our sample period is from April 2000 to June 2003.

We use a 2-day event window to capture the significance of the impact of an announcement k on unit prices of trusts. Therefore we include two dummy variables, namely D_k which is equal to 1 on the exact date on which an event occurred or zero otherwise, and, D'_k which is equal to one on the day before an event and zero otherwise. The coefficients associated with the dummy variables measure the event's impact on

¹³ The previous part of the analysis used 139 trusts whereas this part uses 152 funds. This is so because while only 139 funds have financial statistics available, 152 funds have stock data available. Table A.1 in Appendix A lists the income funds for each type used in our ratio analysis and event study. Table A.2.2 in Appendix A presents the number of funds in each type and their corresponding number of observations used in the MRVM 3.2.

unit returns of a particular group i and represent abnormal returns experienced by unitholders as a consequence of a particular event. Since we have ten events for each group i , we have 10 D_k and 10 D'_k in each equation.

We use the daily returns from the S&P/TSX Composite Index $\tilde{R}_{m,t}$ from April 2000 to June 2003 as it is a reasonable benchmark measure of the return behavior of the Canadian stock market. Finally, we include the variable ΔI_t , which represents changes in the overnight money market financing rate issued by the Bank of Canada from April 2000 to June 2003.¹⁴ Investors invest in trusts as their high regular dividend yields act as substitutes for the low interest rate from the Canadian bond market. The responsiveness of investors to an increase or decrease in the overnight interest rate suggests to what extent they may shift their investment from trusts to fixed-income securities. This variable is included in the model to control for any of these effects on unit prices of trusts.

MRVM [Binder (1985a)] is represented as follows for a group i of funds:

$$\dot{R}_{i,t} = \alpha_i + \beta_i \tilde{R}_{m,t} + \delta_i \Delta I_t + \sum_{k=1}^K \gamma_{i,k} D_k + \sum_{k=1}^K \theta_{i,k} D'_k + \tilde{\epsilon}_{i,t} \quad (3.2)$$

where

$\dot{R}_{i,t}$ is the stock return of group i on day t ;

that is MRVM is run for each type of trusts,

the rated and unrated trusts,

and, the trust market as a whole.

α_i is the unpriced risk for a group i ;

¹⁴ Series V39050 www.bankofcanada.ca.

- β_i is the systematic risk measure for group i ;
- $\tilde{R}_{m,t}$ is the rate of return on the S&P/TSX Composite Index on day t ;
- δ_i is the coefficient showing the impact of a change in the overnight interest rate on group i ;
- ΔI_t is the change in the overnight interest rate offered by the Bank of Canada on day t ;
- $\gamma_{i,k}$ is the coefficient of the information dummy showing the impact of the k^{th} announcement (event) on group i on the exact date of the announcement,
- D_k is the event dummy which equals to 1 on the exact date of the k^{th} announcement and 0 otherwise;
- $\theta_{i,k}$ is the coefficient of the information dummy showing the impact of the k^{th} announcement on group i one day before the event;
- D'_k is the event dummy which is equal to 1 on the day before the k^{th} announcement and 0 otherwise;
- $\tilde{\varepsilon}_{i,t}$ is a residual error term for group i on day t .

Finally, we test for the null hypothesis of $\gamma_{i,k} + \theta_{i,k} = 0$, that is the cumulative abnormal return for each group equals zero for each k^{th} announcement, by using an F-test. We obtained the cumulative abnormal returns from an announcement k by adding the abnormal returns over our 2-day event window. Rejecting the null hypothesis implies that the k^{th} event had a significant impact on a particular group of funds.

Chapter 4 presents the findings of the ratio analysis and event study.

Table 3.2 - Events and their Expected Impact on Trust Unit Prices

Dates and names	Events	Importance	Expected sign
April 20, 2001 – S&P’s stability ratings	S&P announces that it will assign monthly stability ratings to Canadian income funds.	May show S&P’s interest in the trust market - sends the positive signal that trust market is expanding and that investors need more information about it.	Positive
August 15, 2002 – Cost of forgone tax revenues	Income trust boom has cost Federal and provincial governments C\$1 billion in forgone tax revenues in 2001.	May show the uncertainty associated with the future tax legislation governing income trusts – shift from low to high amount of taxable income.	Negative
October 15, 2002 – Launch of trusts’ indices	S&P launched the S&P/TSX Income trust Index and sub-indexes	May show acceptance by the investment community of this potentially promising market.	Positive
November 12, 2002 – Unitholders’ unlimited liabilities	Income trusts will not be included in the S&P/TSX Composite Index because of the unresolved unitholders’ unlimited liability issue.	May show investors’ discontent about their unlimited liabilities when investing in trusts.	Negative
November 28, 2002 – First S&P public stability ratings	S&P made <i>public</i> its first stability ratings of income funds.	May show whether or not the trust market is promising based on the overall ratings of trusts.	Positive or negative
January 13, 2003 – Uncompleted new offerings by U.S companies	Canadian investors shied away from U.S assets	May show Canadian investors’ preference of domestic trusts over U.S trusts.	Positive
January 24, 2003 – Launch of subsidiary by Ontario Teachers Pension Plan	Ontario Teachers Pension Plan Board launched a new subsidiary called Golden Apple Income Fund to invest in the income trusts market.	May show that one of the largest pension boards in Canada is interested in the trust market – signals that the trust market is promising.	Positive
February 25, 2003 – Creation of the CAIF	Heads of leading income funds came together to create the Canadian Association of Income Funds (CAIF).	Move towards the acceptance of the growing trust market.	Positive
March 17, 2003 – DBRS first stability ratings	Dominion Bond Rating Service (DBRS) recognized the market need for stability ratings of income trusts when it issued its first stability rating for TransAlta Power Limited Partnership.	May suggest that another trustworthy organization is paying attention to the trust market.	Positive
May 22, 2003 – Bill 41	The Ontario Government started to introduce Bill 41. – The Trust Beneficiaries’ Liability Act 2003.	May show that measures are taken to limit the liability of unitholders.	Positive

CHAPTER 4

EMPIRICAL RESULTS

4.1 RATIO ANALYSIS

This section compares types of income trusts by examining their financial ratios. More specifically, the types' risk and return characteristic are analyzed (Section 4.1.1). Then it assesses the statistical differences between types of income trusts, and the rated and unrated trusts within each type (Section 4.1.2). Finally, the returns of the trust sector are compared to alternative asset classes (Section 4.1.3).

4.1.1 COMPARISON OF AVERAGE RATIOS ACROSS TYPES OF TRUSTS - 1998 TO 2003

This part of the study compares 5 types of income trusts, in terms of their cash flow generating ability, performance, risk and growth, by using a battery of average financial ratios. Table 4.1 shows the means of the financial ratios for each type of income trust obtained by averaging the means for a particular type of trust from 1998 to 2003.

One of the attractions of the income fund market is its ability to distribute cash (in the form of dividends) to its unitholders on a regular basis. In fact investors compare income funds to fixed-income securities without considering the fact that these funds are based on underlying businesses or operations which may not sustain their cash flow

distributions over time. Table 4.1 presents the average cash flow ratios (CFPS) for each type of income funds. On average, CFPS for the trust market is \$1.22 with oil and gas trusts having the highest CFPS among the groups (\$2.05). Considering high oil and gas prices over the past several years, this result does not come as a surprise. Furthermore, the results show that average earnings are \$0.76 per share while dividends are \$0.92 per share suggesting that although distributions are largely paid from earnings they might also include a portion of the initial capital.

Debt to Equity ratio is an important indicator of financial health to investors because higher level of debt can hinder their ability to earn a profit, as a significant portion of the trust's revenues could be directed toward the repayment of interest and principal on its debt. Thus, low levels of debt relative to equity are generally seen as a positive indicator of overall financial stability. Regarding this ratio, Table 4.1 shows that the REITs have, on average, the highest DTE (1.11) compared to the industry average (0.50). This is consistent with the fact that REITs usually contract huge amount of debt to finance their capital expenditures compared to the other types of trusts.

The P/E ratios can be both an indication of the growth potential of an income trust or an overvaluation of its unit price. It is observed from Table 4.1 that the P/E ratios of the different types of trusts are very close to each other except for the diversified trusts. The overall trust market average (16.97) is comparable to other equity market averages (more specifically the S&P/TSX Composite Index, which range from 15% to 20% as of June 2004). This finding suggests that there is no significant overvaluation and potential for speculative bubble despite recent popularity of the trusts among investors.

We also performed a risk/return analysis based on the availability of the financial ratios. Fundamentally, there is a reward on average for bearing risk. Hence, if a trust has on average a higher risk, this should be accompanied by a higher return level. This study examines both accounting measures and market measures of return and risk. ROA is a useful indicator of how profitable a company is relative to its total assets. Table 4.1 shows that the average ROA for the trust market is 7.03%. Capital-intensive industries (like REITs, utilities, and oil and gas) usually yield a low return on assets, since they have to own such expensive assets to do business and have to pay a lot to maintain these assets. Business trusts in our sample have the highest ROA (8.76%) as expected since the required assets for their operations are relatively low. Moreover, a business that has a high return on equity (ROCE) is more likely to be one that is capable of generating cash internally. Not surprisingly, oil and gas, and business trusts have the highest ROCE (9.85% and 9.16%, respectively) and CFPS (\$2.05 and \$1.23 respectively).

The market measures of performance include total returns (TR) which is the sum of dividend yield and capital gains, and risk (STD). Despite significant variation in capital gains, we observe that dividend yields are fairly similar among the types of income funds. These results show that trusts are competing to keep their dividend payments at a certain level to attract investors that demand high fixed income compared to the stock market where not all stocks pay dividends, nor should they. The average dividend yield for the trust sector is 8.41% over our sample period 1998 to 2003.

The overall return for the trust market is found to be 20.39% per year which is accompanied by a total risk of 26.5%. The utility trusts have the lowest average risk among the groups as expected since they are mature companies with relatively stable earnings. Their low risk level is also accompanied by the lowest return of the groups

(12.77%). On the other hand, oil and gas trusts have the highest risk (41.74%) and returns (36.65%) reflecting the risky nature of their business that is highly correlated with fluctuating commodity prices as described earlier. The positive relation between risk and return can be observed clearly in the ranking of groups. This relation is also depicted in Figure 4.1 which plots the risk and return levels of trust types relative to the trust market. Table 4.1 also shows the coefficient of variation (CV) for trust groups. The CV is calculated as the ratio of standard deviation to total returns; a lower CV indicates a better risk/return trade-off. We observe that utility trusts have the lowest CV (thanks to having the lowest total risk) followed by the diversified trusts. On the other hand, REITs have the highest CV partly due to their low level of total return.

Table 4.1 - Average Financial Ratios for Types of Income Trusts and Overall Trust Market - 1998 To 2003

Types	Cash Flow Sustainability						Accounting Performance Measure					
	Cash flow per share (CFPS)	N	Earnings per share (EPS)	N	Dividend per share (DPS)	N	Return on assets (ROA) (%)	N	Return on common equity (ROCE) (%)	N	Return on capital (ROC %)	N
REITs	1.22	95	0.69	95	0.91	95	6.22	95	4.99	95	6.43	95
Oil & Gas	2.05	144	0.85	144	1.29	144	7.42	144	9.85	144	10.41	144
Utility	0.94	61	0.53	61	0.90	61	4.36	61	3.61	61	4.57	61
Business	1.23	115	0.49	115	0.72	115	8.76	115	9.16	115	10.20	115
Diversified	0.69	57	1.22	57	0.78	57	8.41	57	5.17	57	8.67	57
Trust Market	1.22	472	0.76	472	0.92	472	7.03	472	6.55	472	8.06	472

Types	Growth		Risk				Market Performance Measures					
	Price/Earnings (P/E)	N	Debt to equity (DTE)	N	Total Risk (STD %)	N	Dividend yield (DIVYIELD) (%)	N	Capital gains (CAPGAIN) (%)	N	Total Returns (TR) (%)	Coefficient of variation (CV)
REITs	18.44	95	1.11	95	30.76	67	8.57	95	8.18	83	16.75	1.82
Oil & Gas	18.26	144	0.51	144	41.74	100	9.85	144	26.80	115	36.65	1.14
Utility	21.49	61	0.33	61	12.00	45	8.19	61	4.58	57	12.77	0.91
Business	19.93	115	0.46	115	34.56	66	7.32	115	15.67	103	22.99	1.52
Diversified	6.70	57	0.08	57	13.47	31	8.10	57	4.68	38	12.78	1.03
Trust Market	16.97	472	0.50	472	26.51	309	8.41	472	11.98	396	20.39	1.30

Table 4.1 presents the average ratios for each type of trust obtained by averaging the yearly ratios of each group over sample period 1998 to 2003. The ratios for the types of trusts are also averaged to calculate those for the overall trust market. A fund's financial ratios are defined as follows. CFPS - Cash flow from operations divided by common shares outstanding at end of indicated fiscal year; EPS - Earnings before extraordinary items, less preferred-share dividends, divided by average common shares outstanding during an indicated fiscal year; DPS - Dividend paid for the past 12 months divided by the weighted average of common shares outstanding as reported by a fund; P/E - Current price of a stock divided by the current (or sometimes the projected) earnings per share of the issuing firm; ROA - Fiscal year's earnings divided by its total assets, expressed as a percentage; ROCE - Earnings before extraordinary items, less preferred-share dividends, divided by average common shareholders' equity; ROC - Earnings before extraordinary items, interest expense and income taxes, divided by average capital; DTE - Short and long-term interest-bearing debt (including capital lease obligations) divided by shareholders' equity; DIVYIELD - annual dividends divided by the purchase price; CAPGAIN - (Value of unit price at end of one-year holding period/value of unit-price at beginning of one-year holding period) - 1; Average Total Risk (STD) - average of Standard deviation of one-year holding period returns of each type of trust and trust market from 1998 to 2003; TR = average DIVYIELD + average CAPGAIN in each year and for each type; CV = average STD/average TR. N represents the number of observations used in the computation of the ratios. Details of the financial ratios for each year and type are presented in Appendix A.3 to A.13.

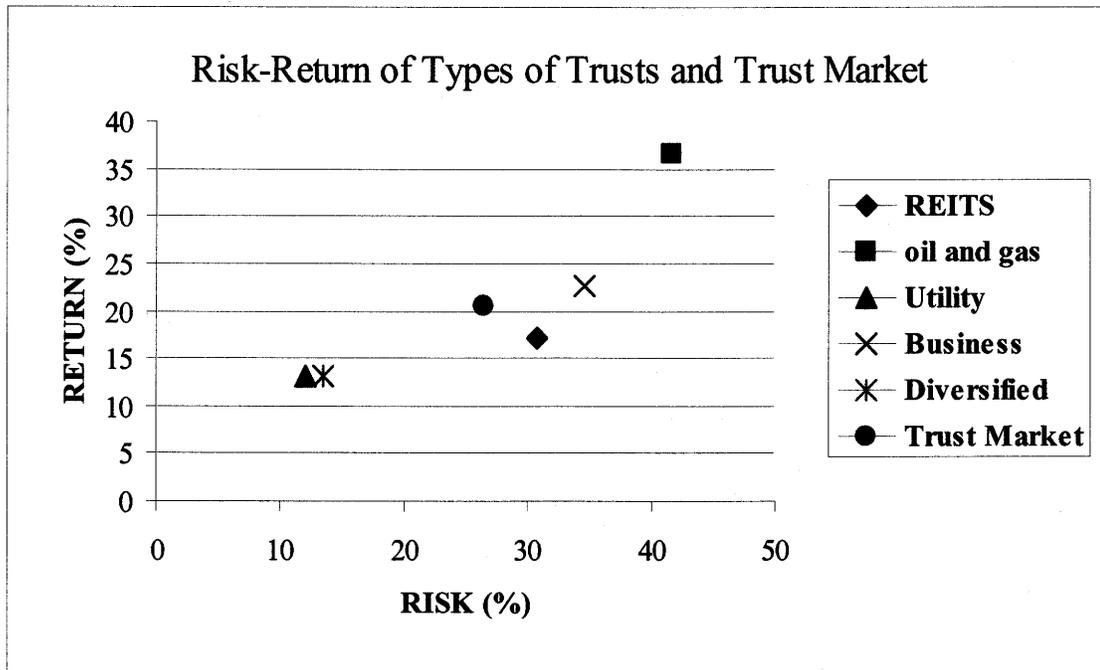


Figure 4.1 Risk-Return Relationships among Types of Trusts and Trust Market
 The average total return (TR) and the average STD from 1998 to 2003 for each type are plotted. The average TR and STD for the overall trust market is also plotted.

4.1.2 STATISTICAL DIFFERENCES IN RATIOS BETWEEN TYPES OF TRUSTS

Income trusts should be compared within themselves as well as to other alternative investments to determine the extent to which two types of trust differ from each other. Our five types of income funds differ in their nature of operation and we expect to find some differences between their financial ratios. We also calculated the difference in the average market capitalization for each type of trusts. Differences in market capitalization may explain some of the differences in the financial ratios. Furthermore, we expect any significant differences in their stock returns to be accompanied by significant differences in their total risks. Table 4.2 presents the significances of the differences in the average ratios between types of income trusts.

We observe that there are statistical differences in size among the types of funds except for the cases of REITs and utility trusts, and, oil and gas and utility trusts. We also observe that there are statistical differences in CFPS for all types of trusts except between REITs and business trusts. Hence, even though REITs have higher market capitalizations than business trusts, they generate the same level of cash flow per share. Average DTE, on the other hand, differs across all types except for the oil and gas and business trusts. This result, that business trusts are smaller in size than oil and gas trusts but have similar amount of debt as them, suggests that the burden of interest payments and debt repayments may be higher for the business unitholders than for the oil and gas ones.

Furthermore, we observe that even though there is no difference in size between oil and gas trusts and utility trusts, the former is generating and distributing more cash per share (\$1.11 CFPS and \$2.32 DPS) than the latter. This result may suggest that oil

and gas trusts have gained from rising commodity prices in the last few years whereas the operations of utility trusts have remained stable. However, we find that significantly higher cash distributions of oil and gas trusts are also accompanied by higher risk (STD being significantly different at the 1% level) compared to the utility trusts.

Oil and gas trusts and diversified trusts differ in their ratios. The same factors that distinguishes the oil and gas trusts from the utility trusts are also observed here suggesting that diversified trusts' lower cash distributions and appreciation in value (CAPGAIN significantly lower at 1% level) than the oil and gas trusts may be compensated by their lower risk. Furthermore, diversified trusts invest in portfolios of trusts which can minimize their risk compared to the business trusts; the latter having significantly higher risk than the former.

Furthermore, we find that while utility trusts have lower CFPS by \$-0.29 than business trusts, they distribute higher DPS by \$0.18 and DIVYIELD by \$0.87. Since business trusts are statistically riskier (STD of -0.23 significant at 1% level) than the utility trusts, we may suggest that the risky nature of business trusts are contributing to the fact that business trusts are not distributing as much cash as the utility trusts. Finally, as expected, we found that the statistical differences in capital gains of the groups of funds are also matched by statistical differences in their risk.

Table 4.2 – Statistical Differences in Ratios between Types of Income Trust

Ratio	REITs vs. oil and gas	REITs vs. utility	REITs vs. business	REITs vs. diversified	O&G vs. utility	O&G vs. business	O&G vs. diversified	utility vs. business	utility vs. diversified	Business vs. diversified
CFPS	-0.82 (-5.89)***	0.29 (2.7)***	0.00 (0.00)	0.54 (5.11)***	1.11 (6.92)***	0.82 (5.89)***	1.36 (8.53)***	-0.29 (-2.71)***	0.25 (1.87)*	0.54 (5.13)***
EPS	-0.16 (-1.34)	0.16 (1.91)*	0.20 (2.32)**	-0.53 (-2.59)***	0.32 (2.71)***	0.36 (3.01)***	-0.37 (-1.68)*	0.04 (0.51)	-0.69 (-3.38)***	-0.73 (-3.55)***
DPS	-0.38 (-3.1)***	0.01 (0.14)	0.19 (2.82)***	0.13 (1.25)	0.39 (2.93)***	0.56 (4.6)***	0.51 (3.45)***	0.18 (2.08)**	0.12 (1.02)	-0.06 (-0.54)
P/E	0.18 (0.05)	-3.05 (-0.92)	-1.49 (-0.4)	11.74 (4.16)***	-3.23 (-1.1)	-1.67 (-0.49)	11.56 (4.87)***	1.56 (0.5)	14.79 (7.64)***	13.23 (5.03)***
DTE	0.61 (7.72)***	0.79 (8.67)***	0.66 (7.17)***	1.04 (14.47)***	0.18 (2.64)***	0.05 (0.76)	0.43 (11.23)***	-0.13 (-1.52)*	0.25 (4.27)***	0.38 (6.19)***
ROA	-1.20 (-0.65)	1.86 (1.04)	-2.54 (-1.58)*	-2.19 (-0.66)	3.06 (1.6)*	-1.34 (-0.77)	-0.99 (-0.29)	-4.40 (-2.62)***	-4.05 (-1.21)	0.35 (0.11)
ROCE	-4.86 (-1.45)	1.38 (0.44)	-4.17 (-1.49)*	-0.18 (-0.03)	6.24 (1.81)*	0.69 (0.22)	4.68 (0.86)	-5.55 (-1.9)**	-1.56 (-0.29)	3.99 (0.78)
ROC	-3.98 (-1.9)*	1.86 (1.00)	-3.77 (-2.14)**	-2.24 (-0.64)	5.84 (2.71)***	0.21 (0.1)	1.74 (0.48)	-5.63 (-3.06)***	-4.10 (-1.16)	1.54 (0.44)
DIVYIELD	-1.28 (-1.5)*	0.38 (0.66)	1.25 (1.93)*	0.47 (0.56)	1.66 (1.95)**	2.53 (2.82)***	1.76 (1.67)*	0.87 (1.36)*	0.10 (0.11)	-0.77 (-0.87)
CAPGAIN	-0.18 -1.58*	0.03 (0.46)	-0.07 (-0.38)	0.03 (0.74)	0.21 (2.67)***	0.11 (1.44)	0.21 (3.06)***	-0.10 (-2.44)***	-0.01 (-1.16)	0.10 (1.57)***
RISK (STD)	-0.11 (-0.55)	0.19 (1.01)	-0.04 (-0.20)	0.17 (0.93)	0.30 (3.88)***	0.07 (0.75)	0.28 (3.16)***	-0.23 (-3.61)***	-0.02 (-0.28)	0.21 (3.26)***
MCAP	-454.3 (-2.05)**	-108.8 (-0.63)	259.8 (2.44)**	387.17 (3.14)***	345.53 (1.45)	714.09 (4.62)***	841.46 (4.21)***	368.56 (3.45)***	495.93 (4.19)***	127.37 (1.92)*

Table 4.2 presents the difference between mean values of selected ratios between two types of fund over our sample period from 1998 to 2003 along with t-statistics in parentheses showing the significances of differences. Definitions of the ratios are as in Table 3.1 (Chapter 3). A positive value of the differences in mean, for instance, between REITs and oil and gas trusts implies that REITs have a higher ratio than the oil and gas trusts. For example CFPS of “REITs” compared to “oil and gas” represents the difference in the means of CFPS for “REITs” and “oil and gas”. Oil and gas = “O&G”. The means are estimated by averaging the ratios for funds of a particular type over the sample period. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively. Details are found in Appendix A (Tables A.14-A.24).

Next, we examine the differences between S&P's rated and unrated trusts. S&P weighs the cash generating ability of funds (operational stability) as a predominant factor in assessing the relative risks of rated trusts to other rated funds. They rank the income funds from SR-1 to SR-7, that is, from high to low predictability of cash flows. However, their stability ratings only compare *rated trusts* to other *rated trusts*. Hence it does *not* compare the rated trusts to a set of unrated trusts but argues that

"..it is undeniable that public ratings currently are concentrated in the top three categories of the seven-grade scale... investors should assume that unrated funds would very likely warrant ratings in the middle to lower part of the scale ('SR-4' to 'SR-7') for the simple reason that if a fund could have achieved a higher rating it would likely have done so already (Rabiasz and Tysall, 2003, pp. 2)."

Even though S&P provide "benchmark" stability ratings, whereby income trusts are compared to other rated and unrated trusts, they state that there is no considerable set of actual ratings to clearly grade the income trusts on a sector-by-sector basis. Hence, this study compares the financial ratios of S&P's 24 rated trusts to 112 unrated trusts to examine whether S&P's above claim that rated trusts may be better investment than the unrated ones is justified.

Table 4.3 presents the differences in the statistical ratios of rated and unrated trusts within each type of trust and between the overall rated and unrated income trust market.

Table 4.3 – Statistical Differences in Ratios between Unrated and Rated Trusts

Ratios	Unrated vs. Rated Trust Market	Unrated vs. Rated REITs	Unrated vs. Rated Oil & Gas	Unrated vs. Rated Utility	Unrated vs. Rated Business	Unrated vs. Rated Diversified
CFPS	-0.14 (-0.85)	0.24 (2.63)***	-1.31 (-2.97)***	0.09 (0.41)	0.37 (1.76)*	-0.24 (-0.85)
EPS	-0.26 (-2.17)**	-0.16 (-1.31)	-1.06 (-3.37)***	-0.12 (-1.05)	0.34 (1.95)*	-0.1 (-0.18)
DPS	-0.42 (-3.3)***	0.00 (0.00)	-1.35 (-3.84)***	-0.25 (-2.05)**	0.07 (0.51)	-0.09 (-0.27)
P/E	-5.94 (-1.86)*	1.82 (0.37)	-9.00 (-1.02)	-7.12 (-2.16)**	-14.23 (-0.68)	-0.05 (-0.02)
DTE	0.23 (3.35)***	-0.05 (-0.16)	0.18 (2.92)***	0.4 (3.00)***	0.11 (0.49)	0.02 (0.58)
ROA	2.22 (1.31)	1.66 (0.35)	0.94 (0.3)	1.33 (0.58)	5.35 (3.83)***	-3.44 (-0.35)
ROCE	3.25 (1.11)	1.85 (0.21)	0.73 (0.13)	4.89 (1.28)	7.13 (2.58)***	-4.54 (-0.3)
ROC	3.16 (1.71)*	1.86 (0.38)	2.56 (0.74)	1.53 (0.64)	6.56 (4.26)***	-4.32 (-0.41)
DIVYIELD	-1.3 (-2.07)**	0.13 (0.14)	-2.67 (-1.55)*	-0.39 (-0.44)	-3.79 (-1.87)*	-1.4 (-0.71)
CAPGAIN	0.11 (2.67)***	0.05 (0.52)	0.22 (2.42)**	0.03 (0.28)	0.11 (0.83)	0.02 (0.39)
RISK (STD)	0.29 (3.24)***	0.19 (0.93)	0.36 (3.48)**	-0.09 (1.45)	N/A	0.14 (2.70)***

Table 4.3 presents the difference between mean values of selected ratios between the unrated and rated funds over our sample period 1998-2003 within each type and for the trust market, along with t-statistics in parentheses showing the significance of difference in means. A positive value of the differences in mean, for instance, between unrated and rated REITs implies that unrated REITs have higher ratios than rated REITs. For example CFPS of “REITs” compared to “oil and gas” represents the difference in the means of CFPS between “REITs” and “oil and gas”. The means are estimated by averaging the ratios for funds of a particular group over the sample period 1998 to 2003. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively. The details of the ratios are found in Tables A.25-A.30.

A negative number indicates that the ratios of the unrated trusts are lower than those of the rated trusts. The first column of the table shows that rated trusts are earning and distributing significantly higher cash flows (\$0.26 and \$0.42 per share respectively) than the unrated trusts. This finding is further supported by higher dividend yields for the same group. However, capital gains for rated trusts is found to be significantly lower, indicating that the unitholders of unrated trusts are compensated for lower cash distributions by greater capital gains. The stable nature of rated trust returns is also reflected in lower level of total risk as calculated by the standard deviation of annual returns. The above results lend some support to the premise by the S&P in that rating might better serve the investment community by signaling the potential for stable yields.

Another interesting observation is related to the difference in capital structure of rated and unrated trusts. The results indicate that unrated firms employ significantly higher debt (i.e. higher DTE) in financing their operations. This could partly explain the lower level of earnings and distributions by unrated funds as a significant portion of their income is allocated to cost of borrowing in the form of interest payments to debt holders.

Similar analysis on different sectors yields the following observations. Except for CFPS, being rated by the S&P does not seem to affect financial ratios for REITs. The comparison of ratios of oil and gas and utility trusts follows a similar pattern by the overall market as we previously discussed. As anticipated by the S&P, we find that higher dividend payments are associated with rated oil and gas, and utility trusts relative to the unrated ones. The accounting measures of performance (ROA and ROC) are the only ratios that differ between rated and unrated business trusts, the latter having higher return. Finally we find that there are no statistical differences in the ratios of the unrated

and rated diversified trusts except for the risk; the rated ones exhibit lower risk as found for the overall market.

4.1.3 Comparing Income Trust Sector to other Investments Classes

Having compared the types of trust in the previous section, we now compare the trust sector to other investments classes. Income trusts are appealing to investors for their outstanding returns relative to the rest of the Canadian Equity market. For instance, Marshall (2004) reports that the total return of the S&P/TSX Capped Income Trusts was 22.7% for the four-year period ending June 2004 while the S&P/TSX Capped Composite Index return was 2.1% during that same period.

Based on our sample period of 1998 to 2003, we compare the total returns (TR) of the trust market (classified also into types of trusts) to both the Canadian and U.S Equity Markets, Global Market, corporate and government bonds, high yield bonds and cash (as presented in Table 4.4). We observe that the average total return of the Canadian income trusts from 1998 to 2003 was 20.39% with average risk of 18.06%. We observe that trusts' average returns are approximately thrice the total returns of Canadian Equities, government and corporate bonds, and, high yield bonds. Furthermore, their yield is approximately 6 times greater than yields received by Canadian investors from U.S equities. However, we observe that risk of income trusts is comparable to the risk of other equity securities over the same time period. Hence, the implication of the findings for the risk-lover investors is that, given the approximately same level of risk of the equity markets compared to the trust market, they can (and should) invest in the trust sector given the significant differences in returns. Investors can also invest specifically in oil and gas trusts because they have the highest total return of the types of trust

provided they want to bear the additional risk. Furthermore, since the number of observations for each asset class is limited, we do not statistically test for the differences between the return (and risk) of the trust market and each of the asset classes.

We also examine the correlation coefficients of the trust market with the other markets. Correlation is an adequate measure of diversification as it shows how the performance of two asset classes moves together through time. A correlation can range from -1 to 1. Low or negative correlations indicate both return and diversification because when one asset class is up, the other is down.

Table 4.5 presents the correlation coefficients between any two asset classes. It is observed that the trust sector has a very low positive correlation with Canadian Equities and bond markets. Furthermore, the trust market is negatively correlated with the U.S and Global equity markets. These results suggest that by allocating income trusts to a portion of an investment portfolio investors can (and should) enhance their portfolios' long-term return potential through diversification.

However, our finding should not be generalized because of our limited sample period and availability of data for the trust market. The trust market has a history of two decades when compared to the stock markets' long time existence during which they witnessed the crash of 1929 when the Dow dropped 50%, or the Black Monday (crash on Monday October 19, 1987) when the Dow Jones Industrial Average lost 22% of its value in one day. Similarly, the stock market downturn of 2002 was part of a larger bear market that took the NASDAQ 75% from its highs and broader indices down 30%. In line with our reasoning here, several market observers speculate that some companies got turned into trusts for no other reason than that the market was hot and that this market will blow up. They argued that there are many companies coming to market

which cannot sustain what they are promising. Whether the trust market is in a bubble phase can be an interesting subject for future research.

Table 4.4 – Risk and Return Comparison of the Income Trust Sector to Alternative Investments

Type	TR (%) 1998	TR (%) 1999	TR (%) 2000	TR (%) 2001	TR (%) 2002	TR (%) 2003	Average Total Return (TR%) 1998-2003	Standard deviation of returns from 1998-2003
REITs	-15.14	13.52	17.2	18.41	41.82	26.43	16.75	18.72
Oil and gas	-29.63	35.38	81.22	13.26	47.18	71.84	36.65	40.69
Utility	-6.55	-3.57	24.95	25.73	9.24	29.55	12.77	15.81
Business	-1.3	4.57	-0.07	34.35	39.08	59.51	22.99	25.23
Diversified	-4.59	16.04	23.74	19	9.15	14.84	12.78	9.88
Trust sector	-11.44	13.19	29.41	22.15	29.29	40.44	20.39	18.06
Canadian Equities	-1.6	31.7	7.4	-12.6	-12.4	24.3	6.13	18.65
U.S Equities	37.6	14.2	-5.7	-6.4	-23.1	4.3	3.48	20.82
Global Equities	33.5	18.3	-9.6	-11.3	-20.5	31	6.90	23.55
Corporate Bonds	8.2	-0.2	9.1	9.3	8.6	8.5	7.25	3.67
Government Bonds	9.4	-1.4	10.6	7.7	8.8	6.1	6.87	4.33
High Yield Bonds	9	-3.4	-2.3	11.8	-2.6	6.3	3.13	6.70
All Bonds	9.2	-1.1	10.3	8.1	8.7	6.7	6.98	4.14
Cash	4.7	4.7	5.5	4.7	2.5	2.9	4.17	1.18

Table 4.4 compares the total returns (TR) of types of income trust and the overall trust market to a selection of alternative asset classes. The total returns (TR) for types of income trust are calculated by adding the dividend yields to the capital gains of funds in each year from 1998 to 2003. The total return for the trust market is calculated by averaging the total return for all types for each year from 1998 to 2003. Average total return for all asset classes are obtained by finding the mean of TR from 1998 to 2003. The standard deviation of TR for all asset classes is calculated over sample period 1998 to 2003. Total returns of the other asset classes for each year from 1998 to 2003 are obtained from the following indices. Canadian Equities: S&P/TSX, U.S equities: S&P 500, Global equities: MSCI World, Corporate Bonds: Scotia Corporate Bond Index, Government Bonds: Scotia Government Bond Index, All bonds: Scotia Universe Bond Index, cash: Canadian 91-day T-Bill, High Yield Bonds: Lehman High Yield Bond Index.

Table 4.5 – Coefficient of Correlation among Asset Classes

	Trust sector	Canadian Equities	U.S Equities	Global Equities	Corporate Bonds	Government Bonds	High Yield Bonds	All Bonds	Cash
Trust sector	1								
Canadian Equities	0.14	1							
U.S Equities	-0.79	0.36	1						
Global Equities	-0.41	0.62	0.86	1					
Corporate Bonds	0.24	-0.69	-0.31	-0.31	1				
Government Bonds	0.04	-0.72	-0.21	-0.34	0.93	1			
High Yield Bonds	-0.27	-0.35	0.36	0.31	0.47	0.29	1		
All Bonds	0.08	-0.72	-0.23	-0.33	0.96	0.997	0.34	1	
Cash	-0.45	0.08	0.40	0.03	-0.17	0.004	0.06	-0.03	1

The coefficient of correlation measures the relationship between two data sets that are scaled to be independent of the unit of measurement. The population correlation calculation returns the covariance of two data sets divided by the product of their standard deviations.

4.2 EVENT STUDY

It is very important for investors to assess the impact of some events (announcements) on the value of their investment in a particular stock as their wealth changes in parallel to any change in the value of the stock price. Hence, this study analyses the wealth effect of the announcement of several trust-related events by calculating the abnormal returns experienced by unitholders on the announcement date. These events relate mainly to the taxation of income trust, launch of the S&P/TSX indices, S&P public stability ratings and several others as summarized in Table 3.2. We have to note that this type of announcements in general provide less information than corporate announcements since they are often subject to more information leakage or market anticipation. Therefore, depending on timing and nature of the information release, the abnormal returns on each event date capture wealth effects only to the extent the market is surprised by the new information arrival, or they reflect the value of revisions in unitholders' expectations.

Section 4.2.1 examines the impact of some events on the types of income trusts and the overall trust market by running the SUR model for each of the groups.

4.2.1 Share Price Response for Income Trust Market

Table 4.6 summarizes the cumulative abnormal returns (CAR) over a 2-day event window $(-1, 0)$ on the types of income trust and the trust market as a whole. The hypothesis, $\gamma_{i,k} + \theta_{i,k} = 0$, the cumulative abnormal return (CAR) for each type and trust market equals zero for announcement k is tested.

Table 4.6 - Share Price Response to Events for Types of Trust and Trust Market

Table 4.6 presents the multivariate regression model for each group consisting of 152 funds (overall trust market), 25 REITs, 33 oil and gas trusts, 20 utility trusts, 47 business trusts and 27 diversified trusts over our sample period from April 2000 to June 2003. The estimated model is:

$$\hat{R}_{i,t} = \alpha_i + \beta_i \tilde{R}_{m,t} + \delta_i \Delta I_t + \sum_{k=1}^K \gamma_{i,k} D_k + \sum_{k=1}^K \theta_{i,k} D'_k + \tilde{\epsilon}_{i,t}$$

The null hypothesis of $\gamma_{i,k} + \theta_{i,k} = 0$, that is the cumulative abnormal return for each group equals zero for each k^{th} announcement is tested; their f-statistic appear in parentheses. Furthermore, the coefficients for the change in interest rate and for the systematic risk of each type and trust market are presented; their t-statistics appear in parentheses.

Events	Trust market	REITs	Oil and gas	Utility	Business	Diversified
α_i	0.0007 (8.05)***	0.0009 (3.27)***	0.001 (5.37)***	0.0007 (5.13)***	0.0007 (3.87)***	0.0002 (1.42)
β_i	0.0181 (2.98)***	0.09 (3.63)***	0.1421 (9.5)***	0.0656 (5.8)***	0.0747 (4.56)***	0.0628 (4.47)***
δ_i	0.09388 (11.52)***	0.0200 (1.09)	0.0185 (1.64)*	0.0096 (1.14)	0.0237 (1.91)*	0.0131 (1.29)
S&P announces it will assign stability ratings	0.0163 (4.9)**	-0.0046 (0.15)	0.0175 (6.1)***	-0.0005 (0.01)	0.0210 (6.16)***	-0.0048 (0.44)
Cost of forgone tax revenues	-0.0098 (0.35)	-0.0039 (0.14)	0.0050 (0.59)	0.0008 (0.03)	-0.0059 (0.93)	-0.0039 (0.63)
Launch of trusts' indices	0.0209 (15.72)***	0.0227 (4.72)**	0.0111 (2.89)*	0.0064 (1.99)	0.0160 (6.71)***	0.0049 (0.96)
Unitholders' unlimited liabilities	0.0040 (0.02)	-0.0003 (0.00)	0.0046 (0.50)	-0.0170 (14.33)***	0.0020 (0.11)	0.0020 (0.17)
S&P's first stability ratings	-0.0069 (3.62)*	-0.0075 (0.53)	-0.0121 (3.56)*	0.0018 (0.17)	-0.0062 (1.08)	-0.0007 (0.03)
Uncompleted new offerings by U.S companies	0.0138 (4.41)**	0.0028 (0.08)	0.0093 (2.18)*	0.0033 (0.53)	0.0089 (2.39)*	0.0049 (1.27)
Launch of subsidiary by Teachers	0.0016 (0.21)	-0.0057 (0.34)	-0.0014 (0.05)	0.0017 (0.14)	-0.0034 (0.34)	0.0050 (1.30)
CAIF	0.0127 (4.06)**	-0.0022 (0.05)	0.0154 (6.16)***	0.0046 (1.03)	0.0032 (0.31)	0.0094 (4.92)**
DBRS first stability rating	-0.0062 (9.24)***	-0.0055 (0.32)	-0.0210 (11.78)***	-0.0142 (10.56)***	-0.0037 (0.43)	-0.0025 (0.35)
Bill 41	0.0028 (0.07)	0.0002 (0.00)	0.0007 (0.01)	0.0029 (0.43)	-0.0012 (0.05)	0.0040 (0.98)
Adjusted R ²	2.83%	1.46%	5.98%	7.99%	1.76%	2.21%

***, **, * represent 1%, 5%, 10% level of significance

The announcement by S&P that it will assign monthly stability ratings to Canadian income trusts on April 20, 2001 is expected to have a positive impact on trusts' market prices. This first move by S&P shows the recognition of the unprecedented growth in the sector and provides market participants with essential information that will enable sound investment decision-making. The results indicate that the CAR for the overall trust market is positive as expected and statistically and economically significant (1.63%). Looking at individual sectors, the unitholders of business trusts experienced CAR of 2.10% while the unitholders of oil and gas trusts experienced CAR of 1.75%, both significant at the 1% level. These results suggest that the announcement by S&P conveyed new information about the importance of the sector and the effect of the announcement was quickly captured in unit prices.

Another event of high importance is the launch of S&P/TSX Income Trust indices, namely the S&P/TSX Income Trust Index and its two sub-indices; the S&P/TSX Energy Index and S&P/TSX REIT Index. We expect a positive market reaction to this event as this suggests a huge step taken towards the acceptance of the income trust market. As expected this event produced CAR of 2.27% for REITs, 1.11% for oil and gas trusts, and, 1.60% for the business trusts. Overall, the trust market experienced a positive reaction of 2.09% to the launch of S&P income trust indices over the 2-day event window.

We do not have any expectations on the sign of abnormal returns for the announcement of S&P's first public stability ratings since we have no ex-ante knowledge on the actual ratings. To the extent that these ratings cause up or down revisions on investors' expectations on income funds we should observe positive or negative reaction to this event. We observe that this event produced CAR of -0.69% and

-1.2% for the overall market and the oil and gas trusts respectively; both being marginally significant at the 10% level. This event did not produce any significant wealth effect for the unitholders of the other groups.

A negative market reaction is expected to the announcement that income trusts will not be included in the S&P/TSX Composite Index because of the unresolved unitholders' unlimited liability issue. This announcement might have revived the concerns of investors on this issue. However, only unitholders of utility trusts experienced a negative abnormal return of 1.70% on this date. Not surprisingly, the insignificant abnormal return on the overall trust market suggests that this announcement actually did not revise the investors' sentiment that a quick resolution for the unlimited liability was not on the horizon.

We expect a positive market reaction to the announcement that there were uncompleted new offerings by U.S issuers suggesting Canadian investors' preference for domestic funds with their limited capital. Another possible explanation could be that Canadians may not favor the potential involvement of the U.S tax authorities. The abnormal return for the overall market was 1.38% at the 5% significance level. Furthermore, the unitholders of oil and gas trusts and business trusts earned CARs of 0.93% and 0.89% respectively; their f-statistics being significant at the 10% levels.

The creation of the Canadian Association of Income Funds (CAIF) by the heads of some leading income funds is expected to produce a positive market reaction. This move could show investors' need to acquire information on a potentially promising investment, and, their ongoing support for a trade and lobby organization that is deemed to work for the best interest of all unitholders. As expected, this announcement produced

significant abnormal returns of 1.27% for the overall market, 1.54% for the oil and gas trusts, and 0.94% for the diversified trusts.

A positive market reaction is expected to DBRS' issue of its first stability rating to TransAlta Power LP which may suggest that investors value this move by DBRS (after S&P) to rate income funds. However, this event produced a loss of 2.10% for oil and gas trusts' unitholders and a negative CAR of 1.42% for the utility trusts' unitholders. This negative abnormal returns experienced by unitholders of trusts could be explained by the fact that the stability rating assigned to TransAlta Power LP by DBRS was an STA-2 while that previously assigned by S&P was SR-1. Hence, this downward revision in the stability ratings of TransAlta Power LP may have dropped investors' confidence about the stability of the trust market in terms of returns and cash flow, especially for the utility trust market as TransAlta Power LP is a utility trust. Also, the overall trust market had a negative reaction of 0.62% to this event. The f-statistics associated with these coefficients are all significant at the 1% level.

No significant market reaction was observed to the announcement on the tax revenue loss due to income trusts and to the introduction of Bill 41. Apparently, these announcements did not cause a revision on market participants' expectations on the tax and liability issues. Finally it is observed that there is very limited reaction in unit prices from the REITs and diversified trusts to the events. The lack of responsiveness from REITs could be explained by the fact that this type of trusts has been around for a long time and so these events may not affect them as much as they affect the new trust types.

4.2.2 Share Price Responses for Rated and Unrated Trusts

We believe that investors are highly prone towards investing in the rated trusts based on their favorable ratings. Therefore, the rated trusts prices may be relatively less responsive to the ten events than are the unrated trusts. Furthermore, since there is a relatively large amount of information available to unitholders of the rated trusts compared to unrated trusts, additional new information concerning those trusts may not generate as significant an impact. Thus rated trusts' prices may not be responsive to the events as are the unrated ones. In this section, we test whether or not the cumulative abnormal return (CAR) for the rated and unrated trusts equals zero for each event k .

We observe, in Table 4.7, that unrated trusts are more responsive to the events under examination. The announcement that the Canadian income trust market cannot handle U.S funds produced an abnormal return of 1% for the rated funds. This may show Canadian investors preference for domestic rated funds. Also, the announcement on DBRS's first stability rating produced a loss of 1% to unitholders of rated trusts while the launch by Teachers Pension Fund of its subsidiary generated -0.61% abnormal return (only significant at 10% level).

The unitholders of unrated trusts react positively to the announcement by S&P that it will assign stability ratings to income trusts (abnormal return of 1.10%), and, to the launch by S&P of its income trust indices (abnormal return of 1.4%). However, they incurred a loss of -0.75% on the announcement by S&P's first stability ratings which may suggest that many of the investors could have shifted their investment from the unrated trusts to the favorably rated ones. Furthermore, the announcement that there were uncompleted new offerings by U.S companies produced an abnormal return of

0.59% which is significant at only the 10% level. Finally, as expected, the creation of Canadian association of income funds generated a positive abnormal return of 0.69% at the 5% level of significance to unitholders of unrated trusts, and DBRS first stability ratings produced a loss of 0.88%. Finally we also observe that the event related to the announcement of cost of forgone tax losses and Bill 41 did not cause any revision in unitholders' expectations for both the rated and unrated trusts about those issues.

Table 4.7 Share Price Response to Events for Rated and Unrated Trusts

Table 4.7 presents the multivariate regression model for each group consisting of 24 rated funds and 111 unrated funds over our sample period from April 2000 to June 2003. The estimated model is:

$$\hat{R}_{i,t} = \alpha_i + \beta_i \tilde{R}_{m,t} + \delta_i \Delta I_t + \sum_{k=1}^K \gamma_{i,k} D_k + \sum_{k=1}^K \theta_{i,k} D'_k + \tilde{\epsilon}_{i,t}$$

The null hypothesis of $\gamma_{i,k} + \theta_{i,k} = 0$, that is the cumulative abnormal return for each group equals zero for each k^{th} announcement is tested; their f-statistic appear in parentheses. Furthermore, the coefficients for the change in interest rate and for the systematic risk of each type and trust market are presented; their t-statistics appear in parentheses.

Events	Rated	Unrated
α_i	0.000519 (4.23)***	0.000811 (7.22)***
β_i	0.07493 (7.16)***	0.09935 (10.2)***
δ_i	0.011597 (1.46)*	0.019432 (2.67)***
S&P announces it will assign stability ratings	0.000197 (0.00)	0.011086 (5.28)**
Cost of forgone tax revenues	0.004077 (0.87)	-0.00309 (0.64)
Launch of trusts' indices	0.00567 (1.71)	0.01415 (13.36)***
Unitholders' unlimited liability	-0.00432 (1.03)	0.000469 (0.02)
S&P's first stability ratings	0.000732 (0.03)	-0.00752 (4.05)**
Uncompleted new offerings by U.S companies	0.010114 (6.17)***	0.005974 (2.67)*
Launch of subsidiary by Teachers	-0.0061 (2.24)*	-0.00048 (0.02)
CAIF	0.003418 (0.7)	0.006968 (3.73)**
DBRS first stability rating	-0.01008 (6.12)***	-0.0088 (6.15)***
Bill 41	0.002393 (0.34)	0.00035 (0.01)
Adjusted R ²	6.42%	2.68%

***, **, *, represent 1%, 5%, 10% level of significance

Section 4.2.1 and 4.2.1 showed that, as expected, the announcement by S&P that it will announce future stability ratings, the launch of the trust indices, and, the creation of the CAIF, produced significant cumulative abnormal returns. These findings suggest that unitholders' consider income trusts as valuable investments. However we do not find any significant market reaction to the announcement that trusts have cost the governments of Canada C\$1 billion, and, the introduction of Bill 41 suggesting that investors did not revise their expectations concerning this issue.

CHAPTER 5

CONCLUSION

The Canadian income trust market has grown at a phenomenal rate from \$17 billion in 1998 to approximately \$70 billion in 2004 primarily due to low interest rates and weak equity returns. Similarly, the number of income trusts listed on the Toronto Stock Exchange has doubled in the past three years. Trusts are attractive to Canadian investors as they offer long-term “double-digit yield” securities rather than prospects for capital gains. Furthermore, they are designed to reduce considerably (if not eliminate) the tax liabilities of both unitholders and the trusts.

However, like many other comparable asset classes, income trusts are not free of risk. First, unitholders face unlimited liability when investing in trusts and trusts’ current tax environment is also subject to change from a favorable to an adverse one. Second, trusts neither guarantee their regular cash distributions nor investors’ initial capital. Finally, some market observers are arguing that the trust market might be nearing to a speculative bubble stage. They warn investors about the possibility of significant capital losses due to sharp price declines as in the case of technology sector in the late 1990s.

The risk and return characteristics of income trusts depend on the nature and size of their operations and on the regulatory environment in which they operate. Hence our Ratio Analysis examines the risk/return characteristics of various types of income trusts

(namely REITs, oil and gas trusts, utility trusts, business trusts and diversified trusts). It also compares the risk and return characteristics of rated (by S&P) and unrated trusts as well as trusts to alternative investments such as Canadian equities, U.S equities, and bonds. The findings are as follows.

We found that average annual earnings per share are \$0.76 while dividends per share are \$0.92 for the overall trust sector suggesting that although distributions are largely paid from earnings they might also include a portion of the initial capital. Furthermore, REITs have the highest debt to equity ratio (1.11) compared to the industry average (0.50). This is consistent with the fact that REITs usually contract huge amount of debt to finance their capital expenditures compared to the other types of trusts. Also we observe that the price/earning ratio of the overall trust market average (16.97) is comparable to other equity market averages and does not imply a significant overvaluation and potential for speculative bubble despite recent popularity of the trusts among investors.

Also, capital-intensive trusts like REITs, utilities, and oil and gas yield a low return on assets, since they have to own expensive assets to do business and pay a lot to maintain these assets. In contrast, business trusts has the highest ROA (8.76%) since the required assets for their operations are relatively low.

Furthermore, despite significant variation in capital gains, we observe that dividend yields are fairly similar among the types of income funds. These results suggest that trusts are competing to keep their dividend payments at a certain level to attract investors that demand high fixed income compared to the stock market where not all stocks pay dividends. The average dividend yield of the trust sector is 8.41%.

Average annual return of the trust market is 20.39% while average annual risk is 26.50% over our sample period of 1998 to 2004. Among the five groups examined, the utility trusts have the lowest average risk and return since they are mature companies with relatively stable earnings. On the other hand, oil and gas trusts have the highest total risk and return of the groups reflecting the risky nature of their business that is highly correlated with fluctuating commodity prices.

Accordingly, when we examined the statistical differences between the types of trusts, we concluded that the extent of the differences in the financial ratios is wider between the oil and gas and utility trusts, suggesting that oil and gas trusts may have benefited from rising commodity prices in the last few years whereas the operations of utility trusts have remained stable. Furthermore, we observe that diversified trusts have significantly lower cash distributions and appreciation in value than the oil and gas trusts.

Comparison of the rated and unrated trusts of the overall trust market support the S&P's claim in that rating might better serve the investment community by signaling the potential for stable and higher dividend yields.

Next, our results of the risk-return analysis indicate that over our sample period 1998-2003, the income trust market with roughly 20% average annual return significantly outperformed other equity and fixed-income securities markets. Despite this extraordinary difference in returns, we find that the trust sector has approximately the same level of risk as the Canadian, U.S and Global Equities markets. We further find low or negative correlations between the trust market returns and other common asset classes such as domestic and foreign equities, government and corporate bonds over our six-year sample period. These results suggest that by allocating income trusts

to a portion of an investment portfolio investors can (and should) enhance their portfolios' long-term return potential through diversification.

Our next objective involves examining the wealth effect of several announcements, related to S&P's stability ratings, taxation of trusts and unitholders unlimited liability and others, by calculating the abnormal returns experienced by unitholders on the event dates. The findings of our Event Study are as follows.

As expected, a positive rise in trust prices of 1.63% was observed when S&P first announced that that it will assign stability ratings to income trusts. Similarly, the launch of S&P/TSX indices, and, the creation of the Canadian Association of Income Funds (CAIF) produced a positive trust market reaction of 2.09% and 1.27%, respectively. In addition, the cumulative abnormal return for the overall market was 1.38% when it was announced that there were uncompleted new offerings by U.S issuers, suggesting Canadian investors' preference for domestic funds. All of these expected positive reactions in unit prices of income trusts may suggest that unitholders consider Canadian income trusts as valuable investments.

However, S&P's first stability ratings and DBRS first stability ratings resulted in a loss of -0.69% and -0.62% for the overall trust market respectively. Furthermore no significant market reaction was observed to the announcement on the tax revenue loss due to income trusts and to the introduction of Bill 41 (The Trust Beneficiaries' Liability Act). Apparently, these announcements did not cause a revision on market participants' expectations on the tax and liability issues.

Next, when we compare the reaction of rated trusts prices and unrated trust prices to the events, we observe that the unrated trusts prices are more responsive to the events than the rated ones. The announcement of uncompleted new offerings by U.S

companies produced a cumulative abnormal return of 1% for unitholders of rated trusts which may suggest that investors favour Canadian rated Income trusts to U.S income trusts.

On the other hand, the prices of unrated trusts reacted positively to the announcement by S&P that it will assign stability ratings to income trusts and to the launch by S&P of its income trust indices. However, they incurred a loss of -0.75% on the announcement of S&P's first stability ratings which suggest that investors may have shifted their investment from the unrated trusts to the favorably rated ones.

This study has tried to differentiate between groups of income trusts and to examine the markets' reaction to the many issues of the trust market including the taxation, unlimited liability of unitholders, and, stability ratings of S&P. Future research may analyze the concept of return *of* capital of income trusts. Furthermore, other issues such as corporate governance of income trusts may be worth examining.

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APPENDIX A

Table A.1 - List of Funds used in the Ratio Analysis and Event Study

Table A.1 lists the funds used in both the ratio analysis and event study. Their types are also indicated namely REITS, oil and gas trusts (O & Gas), utility trusts (Util), business trusts (Bus) and diversified trusts (Div). The funds in bold are the ones used in the ratio analysis only. Furthermore, an (R) next to a fund's name indicates that the fund is rated by S&P as of November 28, 2002. However, an (E) next to a fund's name indicates that the fund is excluded from the remaining unrated trusts for comparison purposes in the ratio analysis. The market capitalization (MCAP) and number of observations for each fund (OBS) used in the event study are also presented.

Income Funds	Ticker	MCAP	Type	OBS.	Income Funds	Ticker	MCAP	Type	OBS
Alexis Nihon	<u>AN.UN-T</u>	231	REITs	105	Taylor NGL LP	<u>TAY.UN-T</u>	121	Util	775
Allied Properties	<u>AP.UN-T</u>	82	REITs	64	Transcanada Power LP (R)	<u>TPL.UN-T</u>	1,228	Util	775
CAP	<u>CAR.UN-T</u>	352	REITs	775	Transalta Power Lp (R)	<u>TPW.UN-T</u>	605	Util	775
Calloway	<u>CWT.UN-T</u>	166	REITs	775	Associated Brands IF	<u>ABF.UN-T</u>	133	Bus	130
Cominar	<u>CUF.UN-T</u>	469	REITs	-	IAT Air Cargo Trust	<u>ACF.UN-T</u>	50	Bus	775
General Dundee	<u>D.UN-T</u>	540	REITs	775	AFT IF	<u>AFT.UN-T</u>	157	Bus	290
Firm Cap Mtg Invest Tr.(R)	<u>FC.UN-T</u>	107	REITs	775	Arctic Glacier IF	<u>AG.UN-T</u>	268	Bus	775
Atlas Cold Storage IF.	<u>FZR.UN-T</u>	303	REITs	775	A&W Revenue Royalties	<u>AW.UN-T</u>	94	Bus	319
Home Equity Income Tr.(R)	<u>HEQ.UN-T</u>	145	REITs	199	ACS Media IF	<u>AYP.UN-T</u>	204	Bus	10
Cdn. Hotel Income Properties	<u>HOT.UN-T</u>	391	REITs	775	Badger IF	<u>BAD.UN-T</u>	196	Bus	775
H&R	<u>HR.UN-T</u>	1,363	REITs	775	BFI Canada IF	<u>BFC.UN-T</u>	498	Bus	271
InnVest	<u>INN.UN-T</u>	455	REITs	206	Boston Pizza Royalties	<u>BPF.UN-T</u>	106	Bus	213
IPC US	<u>IUR.UN-T</u>	340	REITs	357	Big Rock Brewery Inc.Tr.	<u>BR.UN-T</u>	72	Bus	775
Legacy Hotels	<u>LGY.UN-T</u>	708	REITs	775	Boyd Group Income Fund	<u>BYD.UN-T</u>	60	Bus	58
Morguard	<u>MRT.UN-T</u>	389	REITs	775	Connors Bros. Income Fund	<u>CBF.UN-T</u>	251	Bus	387
TGS N.A.	<u>NAR.UN-T</u>	150	REITs	115	Chemtrade Logistics IF	<u>CHE.UN-T</u>	425	Bus	461
Northern Property	<u>NPR.UN-T</u>	177	REITs	247	Clearwater Seafoods IF	<u>CLR.UN-T</u>	338	Bus	203
O&Y	<u>OYR.UN-T</u>	495	REITs	476	Contrans Income Fund	<u>CSS.UN-T</u>	297	Bus	775
Public Storage Cdn. Properties	<u>PUB-T</u>	99	REITs	775	Consumers Waterheater Fund (R)	<u>CWI.UN-T</u>	634	Bus	108
Residential Equities	<u>REE.UN-T</u>	n/a	REITs	775	Davis & Henderson IF	<u>DHF.UN-T</u>	649	Bus	357
Cdn. REIT	<u>REF.UN-T</u>	734	REITs	775	Prime Restaurants Royalty	<u>EAT.UN-T</u>	59	Bus	209
RioCan (R)	<u>REI.UN-T</u>	2,671	REITs	775	Movie Distribution IF	<u>FLM.UN-T</u>	188	Bus	-
Retirement Residences	<u>RRR.UN-T</u>	977	REITs	529	Foremost Industries IF	<u>FMO.UN-T</u>	101	Bus	775

Royal Host	<u>RYL.UN-T</u>	126	REITs	775	FP Newspapers IF	<u>FP.UN-T</u>	88	Bus	249
Summit	<u>SMU.UN-T</u>	911	REITs	775	Gateway Casinos IF	<u>GCI.UN-T</u>	462	Bus	121
Acclaim Energy Trust	<u>AE.UN-T</u>	958	O & Gas	519	General Donlee IF	<u>GDI.UN-T</u>	45	Bus	265
ARC Energy Trust	<u>AET.UN-T</u>	2,669	O & Gas	775	Sun Gro Horticultural IF	<u>GRO.UN-T</u>	172	Bus	291
Advantage Energy IF	<u>AVN.UN-T</u>	692	O & Gas	775	Halterm IF	<u>HAL.UN-T</u>	41	Bus	775
APF Energy Trust Units	<u>AY.UN-T</u>	460	O & Gas	775	Specialty Foods Group	<u>HAM.UN-T</u>	115	Bus	49
Bonterra Energy Income Trust	<u>BNE.UN-T</u>	270	O & Gas	775	Versacold IF	<u>ICE.UN-T</u>	207	Bus	775
CCS Income Trust	<u>CCR.UN-T</u>	783	O & Gas	775	KCP IF	<u>KCP.UN-T</u>	233	Bus	188
Cathedral Energy Services	<u>CET.UN-T</u>	58	O & Gas	775	The Keg Royalties IF	<u>KEG.UN-T</u>	91	Bus	246
Canadian Oil Sands Trust (R)	<u>COS.UN-T</u>	3,566	O & Gas	775	Livingston Intl IF	<u>LIV.UN-T</u>	256	Bus	323
Enterra Energy Corp	<u>EENC-Q</u>	268	O & Gas	594	Menu Foods IF	<u>MEW.UN-T</u>	435	Bus	253
Crescent Point Energy Trust	<u>CPG.UN-T</u>	345	O & Gas	-	Newalta Income Fund	<u>NAL.UN-T</u>	485	Bus	775
Enerplus Resources Fund	<u>ERF.UN-T</u>	3,551	O & Gas	775	North West Company Fund	<u>NWF.UN-T</u>	399	Bus	775
Fording Canadian Coal Trust	<u>FDG.UN-T</u>	2,538	O & Gas	58	Oceanex Income Fund	<u>OAX.UN-T</u>	108	Bus	775
Focus Energy Trust	<u>FET.UN-T</u>	543	O & Gas	184	PBB Global Logistics	<u>PBB.UN-T</u>	99	Bus	257
Freehold Royalty Trust	<u>FRU.UN-T</u>	483	O & Gas	775	Parkland Income Fund	<u>PKI.UN-T</u>	216	Bus	775
Central Gold Trust	<u>GTU.UN-T</u>	49	O & Gas	-	PRT Forest Regen. IF	<u>PRT.UN-T</u>	68	Bus	775
Harvest Energy Trust	<u>HTE.UN-T</u>	243	O & Gas	116	Rainmaker Income Fund	<u>RNK.UN-T</u>	46	Bus	775
Labrador Iron Ore Royalty (R)	<u>LIF.UN-T</u>	513	O & Gas	775	ROW Entertainment IF	<u>ROW.UN-T</u>	189	Bus	-
NAL Oil & Gas Trust	<u>NAE.UN-T</u>	572	O & Gas	775	Rogers Sugar Income Fund	<u>RSI.UN-T</u>	356	Bus	775
Noranda Income Fund (R)	<u>NIF.UN-T</u>	570	O & Gas	265	SCI Income Trust	<u>SMN.UN-T</u>	79	Bus	775
Peyto Energy Trust	<u>PEY.UN-T</u>	1,346	O & Gas	775	Superior Plus IF	<u>SPF.UN-T</u>	1,731	Bus	775
Pengrowth Energy Trust (R)	<u>PGF.UN-T</u>	2,449	O & Gas	775	Swiss Water Decaf Coffee	<u>SWS.UN-T</u>		Bus	208
Paramount Energy Trust	<u>PMT.UN-T</u>	491	O & Gas	73	TransForce Income Fund	<u>TIF.UN-T</u>	700	Bus	775
Petrofund Energy Trust	<u>PTE.UN-T</u>	1,173	O & Gas	775	Tree Island Wire Income Fund	<u>TIL.UN-T</u>	192	Bus	133
Provident Energy Trust	<u>PVE.UN-T</u>	978	O & Gas	775	Westshore Terminals IF(R)	<u>WTE.UN-T</u>	511	Bus	775
PrimeWest Energy Trust (R)	<u>PWL.UN-T</u>	1,210	O & Gas	775	Sleep Country Canada	<u>Z.UN-T</u>	202	Bus	26
SFK Pulp Fund	<u>SFK.UN-T</u>	552	O & Gas	203	Barclays Adv S&P/TSX Income Tr	<u>BAI.UN-T</u>	203	Div	6
Shiningbank Energy Income Fund	<u>SHN.UN-T</u>	989	O & Gas	775	Brompton Stable Income Fund (R)	<u>BSR.UN-T</u>	92	Div	114
Trinidad Energy Services	<u>TDG.UN-T</u>	238	O & Gas	656	Citadel HYTES Fund	<u>CHF.UN-T</u>	166	Div	529
TimberWest Forest Corp.	<u>TWF.UN-T</u>	1,034	O & Gas	775	Citadel Multi Sector Income Fd	<u>CMS.UN-T</u>	277	Div	68
Ultima Energy Trust	<u>UET.UN-T</u>	411	O & Gas	775	COMPASS Income Fund	<u>CMZ.UN-T</u>	316	Div	278
Vermilion Energy Trust	<u>VET.UN-T</u>	1,105	O & Gas	775	Commercial & Industrial Trust	<u>COI.UN-T</u>	64	Div	229
Viking Energy Royalty Trust	<u>VKR.UN-T</u>	568	O & Gas	775	Citadel SMaRT Fund	<u>CRT.UN-T</u>	127	Div	424
Wellco Energy Services	<u>WLL.UN-T</u>	125	O & Gas	197	Citadel Div. Inv. Trust	<u>CTD.UN-T</u>	232	Div	775

Amtelecom Income Fund (E)	<u>AMT.UN-T</u>	70	Utility	54	diversiTrust Income Fund (E)	<u>DTE.UN-T</u>	94	Div	121
Algonquin Power Income Fund (R)	<u>APF.UN-T</u>	628	Util	775	Diversified Income Trust II	<u>DTT.UN-T</u>	32	Div	130
Bell Nordiq Income Fund (R)	<u>BNO.UN-T</u>	414	Util	273	EnerVest Diversified Income	<u>EIT.UN-T</u>	676	Div	775
Boralex Power Income Fund (R)	<u>BPT.UN-T</u>	581	Util	316	Faircourt Income Split Trust	<u>FCI.UN-T</u>	28	Div	58
Calpine Power Income Fund (R)	<u>CF.UN-T</u>	512	Util	184	First Premium Oil & Gas	<u>FPG.UN-T</u>	13	Div	775
Clean Power Income Fund (R)	<u>CLE.UN-T</u>	321	Util	383	MINT Income Fund	<u>MID.UN-T</u>	42	Div	775
Enbridge Income Fund	<u>ENF.UN-T</u>	369	Util	-	Brompton MVP Income Fund	<u>MVP.UN-T</u>	80	Div	213
Fort Chicago Energy Partners	<u>FCE.UN-T</u>	958	Util	775	MAXIN Income Fund	<u>MXZ.UN-T</u>	76	Div	26
Great Lakes Hydro Inc. Fd. (R)	<u>GLH.UN-T</u>	746	Util	775	Mydas Fund	<u>MYF.UN-T</u>	256	Div	320
Gaz Metro LP (E)	<u>GZM.UN-T</u>	2,369	Util	775	Pathfinder Income Fund	<u>PAZ.UN-T</u>	129	Div	154
Heating Oil Partners	<u>HIF.UN-T</u>	200	Util	253	Cdn. Resources Income Trust	<u>RTU.UN-T</u>	79	Div	-
Innergex Power Income Fund (R)	<u>IEF.UN-T</u>	199	Util	-	Saxon Diversified Value Trust	<u>SAX.UN-T</u>	27	Div	130
Inter Pipeline Fund (R)	<u>IPL.UN-T</u>	1,022	Util	775	Citadel S-1 Income Trust (R)	<u>SDL.UN-T</u>	61	Div	658
Keyspan Facilities IF(E)	<u>KEY.UN-T</u>	194	Util	-	Sentry Select Divers. Inc. Tr. (R)	<u>SDT.UN-T</u>	500	Div	775
Northland Power Income Fd (R)	<u>NPL.UN-T</u>	520	Util	775	Strategic Energy Fund	<u>SEF.UN-T</u>	30	Div	261
Pembina Pipeline Income Fund	<u>PIF.UN-T</u>	1,100	Util	775	Sentry Select Focused G&I	<u>SFG.UN-T</u>	84	Div	335
Energy Savings Income Fund	<u>SIF.UN-T</u>	1,219	Util	517	STARS Income Fund	<u>STZ.UN-T</u>	79	Div	363
Brompton VIP Income Trust	<u>VIP.UN-T</u>	98	Div	317	Triax Resource LP	<u>TRF.UN-T</u>	33	Div	750

Table A.2.1 – Summary statistics of Financial Ratios from 1998 to 2003

Statistics	CFPS	EPS	DPS	P/E	DTE	ROA	ROCE	ROC	DivYield	CAPGAIN
N	472	472	472	472	472	472	472	472	472	396
MIN	-0.35	-2.31	0	1.93	0	-45.21	-88.74	-47.37	0	-0.81
MAX	6.57	4.72	4.8	157.84	3.31	34.27	62.16	46.78	30.25	5.26
MEAN	1.37	0.73	0.96	17.72	0.54	7.22	7.32	8.59	8.55	0.14
STD	1.10	0.99	0.89	24.49	0.61	14.96	25.87	16.88	6.35	0.52

Table A.2.2 - Number of funds in each Type and their Corresponding Number of Observations used in the MRVM 3.2

Types	Number of Funds	No. of observations (daily returns)
REITs	25	14 438
Oil and Gas	33	18 996
Utility	20	9 657
Business	47	20 203
Diversified	27	9 295
Total no. of funds and daily returns	152	72 589

Table A.3 Cash Flow per Share (CFPS) from 1998 to 2003

CFPS is defined as cash flow from operations divided by common shares outstanding at the end of indicated fiscal year.

Cash flow per share (C\$)		1998	1999	2000	2001	2002	2003
REITs	n	4	15	16	18	27	15
	Mean	1.56	1.19	1.23	1.20	1.27	1.12
	std	0.48	0.40	0.40	0.57	0.59	0.39
Oil and gas	n	11	26	26	29	33	19
	Mean	0.72	1.52	2.80	2.39	1.96	2.12
	std	0.60	1.23	1.87	1.56	1.52	1.30
Utility	n	2	9	9	10	17	14
	Mean	1.44	0.68	0.88	0.91	1.02	0.99
	std	0.98	0.57	0.74	0.72	0.91	0.64
Business	n	9	13	13	15	40	25
	Mean	1.00	1.02	1.21	1.40	1.27	1.25
	std	0.83	0.56	0.46	0.48	0.45	0.60
Diversified	n	6	7	8	11	23	2
	Mean	0.21	0.35	0.56	0.88	0.90	0.37
	std	0.42	0.43	0.50	0.78	0.76	0.71
Trust Market		0.99	0.95	1.33	1.36	1.28	1.17

Table A.4 -Earning per Share (EPS) from 1998 to 2003

EPS is defined as earnings before extraordinary items, less preferred-share dividends, divided by average common shares outstanding during an indicated fiscal year.

Earnings per share (C\$)		1998	1999	2000	2001	2002	2003
REITs	n	4	15	16	18	27	15
	Mean	0.74	0.65	0.68	0.79	0.62	0.73
	std	0.69	0.48	0.89	0.57	0.52	0.50
Oil and gas	n	11	26	26	29	33	19
	Mean	-0.47	0.47	1.63	1.05	0.48	1.38
	std	0.93	0.68	1.15	1.04	1.27	1.40
Utility	n	2	9	9	10	17	14
	Mean	0.81	0.40	0.64	0.44	0.55	0.56
	std	1.01	0.45	0.41	0.37	0.52	0.27
Business	n	9	13	13	15	40	25
	Mean	0.26	0.19	0.54	0.62	0.56	0.51
	std	0.50	0.86	0.48	0.59	0.37	0.92
Diversified	n	6	7	8	11	23	2
	Mean	-0.95	0.87	2.08	1.52	1.31	2.88
	std	1.10	0.78	0.85	1.67	1.33	0.47
Trust Market		0.08	0.51	1.11	0.88	0.70	1.21

Table A.5 - Average Dividend per Share (DPS) from 1998 to 2003

DPS is defined as dividend paid for the past 12 months divided by the number of common shares outstanding as reported by a fund. The number of shares often is determined by a weighted average of shares outstanding over the reporting term.

Dividend per share (C\$)			1998	1999	2000	2001	2002	2003
REITs	n		4	15	16	18	27	15
	Mean		0.95	0.95	0.95	0.95	0.78	1.01
	std		0.68	0.38	0.41	0.44	0.50	0.35
Oil and gas	n		11	26	26	29	33	19
	Mean		0.58	0.97	1.41	1.49	1.19	1.81
	std		0.65	1.13	1.68	1.58	1.11	1.30
Utility	n		2	9	9	10	17	14
	Mean		1.46	0.79	0.92	0.92	0.91	0.85
	std		0.98	0.67	0.63	0.64	0.54	0.22
Business	n		9	13	13	15	40	25
	Mean		0.47	0.63	0.61	0.63	0.70	1.01
	std		0.56	0.63	0.62	0.55	0.46	0.42
Diversified	n		6	7	8	11	23	2
	Mean		0.58	0.52	0.71	0.98	0.87	0.44
	std		0.33	0.39	0.48	0.78	0.89	0.45
Trust Market			0.81	0.77	0.92	0.99	0.89	1.02

Table A.6 - Average Return on Assets (ROA) from 1998 to 2003

ROA is defined as a fiscal year's earnings divided by its total assets, expressed as a percentage.

ROA (%)			1998	1999	2000	2001	2002	2003
REITs	n		4	15	16	18	27	15
	Mean		9.95	0.52	5.34	8.82	7.13	7.13
	std		7.38	19.04	14.01	5.97	11.58	3.21
Oil and gas	n		11	26	26	29	33	19
	Mean		-9.93	5.28	19.47	5.69	5.89	9.17
	std		23.21	11.84	7.83	21.92	14.47	10.89
Utility	n		2	9	9	10	17	14
	Mean		6.73	-1.51	5.66	5.03	3.35	7.72
	std		8.22	16.65	2.77	2.45	14.00	3.93
Business	n		9	13	13	15	40	25
	Mean		4.50	2.62	9.24	11.21	11.46	7.43
	std		6.26	11.57	5.87	6.25	12.63	13.49
Diversified	n		6	7	8	11	23	2
	Mean		-19.75	14.15	14.97	17.61	5.90	24.79
	std		19.19	12.72	27.01	13.97	24.88	5.24
Trust Market			-1.70	4.21	10.94	9.67	6.75	11.25

Table A.7 - Average Return on Common Equity (ROCE) from 1998 to 2003

ROCE is defined Earnings before extraordinary items, less preferred-share dividends, divided by average common shareholders' equity.

ROCE (%)		1998	1999	2000	2001	2002	2003
REITs	n	4	15	16	18	27	15
	Mean	8.00	-5.42	3.54	9.50	6.19	8.55
	std	9.88	34.39	25.03	7.21	20.48	5.51
Oil and gas	n	11	26	26	29	33	19
	Mean	-21.48	4.34	28.82	6.56	7.71	18.27
	std	40.98	21.63	14.34	40.89	29.42	18.13
Utility	n	2	9	9	10	17	14
	Mean	7.28	-6.12	6.64	5.02	1.99	8.35
	std	8.80	31.14	2.79	2.55	24.66	4.86
Business	n	9	13	13	15	40	25
	Mean	3.14	-2.74	9.21	12.27	13.71	8.34
	std	6.96	22.16	7.65	10.05	20.06	25.13
Diversified	n	6	7	8	11	23	2
	Mean	-28.19	15.06	11.04	18.81	0.18	29.46
	std	33.44	14.05	42.29	14.49	42.71	10.91
Trust Market		-6.25	1.02	11.85	10.43	5.96	14.59

Table A.8 - Average Return on Capital (ROC) from 1998 to 2003

ROC is defined as earnings before extraordinary items, interest expense and income taxes, divided by average capital.

ROC (%)		1998	1999	2000	2001	2002	2003
REITs	n	4	15	16	18	27	15
	Mean	10.24	0.46	5.50	9.13	7.42	7.36
	std	7.21	19.89	14.62	6.07	12.11	3.31
Oil and gas	n	11	26	26	29	33	19
	Mean	-10.12	6.85	25.40	9.19	8.11	12.52
	std	24.70	13.47	11.99	25.34	17.44	15.28
Utility	n	2	9	9	10	17	14
	Mean	7.16	-1.53	5.98	5.18	3.49	8.10
	std	8.78	17.45	2.85	2.54	14.63	4.08
Business	n	9	13	13	15	40	25
	Mean	5.38	2.41	11.26	13.56	12.92	9.08
	std	7.50	15.27	7.80	8.05	14.45	15.07
Diversified	n	6	7	8	11	23	2
	Mean	-21.09	14.92	15.55	17.90	6.27	25.40
	std	20.07	13.44	28.26	14.10	26.45	5.17
Trust Market		-1.69	4.62	12.74	10.99	7.64	12.49

Table A.9 - Average Debt to equity (DTE) from 1998 to 2003

DTE is defined as short and long-term interest-bearing debt (including capital lease obligations) divided by shareholders' equity.

DTE		1998	1999	2000	2001	2002	2003
REITs	n	4	15	16	18	27	15
	Mean	0.76	0.98	0.96	0.89	1.32	1.40
	std	0.54	0.40	0.48	0.49	0.91	0.72
Oil and gas	n	11	26	26	29	33	19
	Mean	0.67	0.56	0.50	0.47	0.51	0.40
	std	0.92	0.38	0.33	0.34	0.39	0.35
Utility	n	2	9	9	10	17	14
	Mean	0.01	0.17	0.24	0.18	0.44	0.52
	std	0.01	0.19	0.21	0.16	0.50	0.67
Business	n	9	13	13	15	40	25
	Mean	0.50	0.64	0.71	0.58	0.35	0.31
	std	0.47	0.79	0.88	0.83	0.54	0.41
Diversified	n	6	7	8	11	23	2
	Mean	0.01	0.07	0.07	0.06	0.10	0.16
	std	0.02	0.13	0.12	0.10	0.12	0.23
Trust Market		0.39	0.48	0.49	0.43	0.55	0.56

Table A.10 - Price/Earning (P/E) from 1998 to 2003

PE is defined as the current price of a stock divided by the current (or sometimes the projected) earnings per share of the issuing firm.

P/E		1998	1999	2000	2001	2002	2003
REITs	n	4	15	16	18	27	15
	Mean	25.50	26.29	13.28	19.43	16.53	16.44
	std	1.91	2.74	6.63	6.50	3.56	0.16
Oil and gas	n	11	26	26	29	33	19
	Mean	16.74	27.76	11.49	9.48	24.58	17.85
	std	44.60	47.49	14.86	10.27	28.46	7.63
Utility	n	2	9	9	10	17	14
	Mean	41.24	21.30	19.38	32.50	17.44	17.20
	std	31.25	20.63	11.37	17.76	8.06	5.43
Business	n	9	13	13	15	40	25
	Mean	32.57	33.61	17.45	15.16	19.15	13.68
	std	44.60	47.49	14.86	10.27	28.46	7.63
Diversified	n	6	7	8	11	23	2
	Mean	2.71	5.30	6.06	7.09	8.52	3.11
	std	1.91	2.74	6.63	6.50	3.56	0.16
Trust Market		23.75	22.85	13.53	16.73	17.24	13.65

Table A.11 - Dividend Yield (DIVYIELD) from 1998 to 2003

DIVYIELD is defined as the annual rate of return on an investment, expressed as a percentage. It is the annual dividends divided by the purchase price.

Dividend Yield (%)		1998	1999	2000	2001	2002	2003
REITs	n	4	15	16	18	27	15
	Mean	9.49	10.64	9.74	8.37	7.23	7.66
	std	6.52	4.89	4.21	3.82	3.65	1.67
Oil and gas	n	11	26	26	29	33	19
	Mean	8.86	8.45	8.87	12.52	9.44	10.32
	std	9.66	8.10	9.08	12.19	7.54	5.64
Utility	n	2	9	9	10	17	14
	Mean	10.45	9.17	9.35	7.88	7.64	7.39
	std	4.33	5.00	3.52	2.94	2.76	1.56
Business	n	9	13	13	15	40	25
	Mean	4.88	7.60	6.60	6.92	7.10	9.05
	std	5.95	7.49	6.59	6.98	4.17	3.38
Diversified	n	6	7	8	11	23	2
	Mean	11.21	9.30	9.93	8.59	6.34	4.71
	std	6.52	6.50	6.02	5.76	4.66	4.54
Trust Market		8.98	9.03	8.90	8.86	7.55	7.83

Table A.12-Capital gains (CAPGAIN %) for types of trusts and trust market over sample period from 1998 to 2003

Type	N	1998	N	1999	N	2000	N	2001	N	2002	N	2003	1998-2003
REITs	10	-24.62	13	2.88	15	7.45	16	10.05	19	34.58	10	18.77	8.18
Oil and gas	18	-38.49	20	26.93	21	72.35	22	0.74	24	37.74	10	61.52	26.80
Utility	6	-17.00	7	-12.74	10	15.60	10	17.85	12	1.60	12	22.16	4.58
Business	14	-6.17	19	-3.03	19	-6.67	19	27.44	22	31.98	10	50.47	15.67
Diversified	4	-15.80	5	6.74	5	13.81	7	10.41	10	2.81	7	10.13	4.68
Trust sector	52	-20.42	64	4.15	70	20.51	74	13.30	87	21.74	49	32.61	11.98

Table A.12 presents the capital gains for types of trusts over sample period from 1998 to 2003. The capital gains are calculated for each fund in a year as follows: (unit price at end of year – unit price at beginning of year)/unit price at beginning of year that is a one-year holding period return is calculated for each fund. Then the capital gains for each fund are averaged by type and year. The trust market yearly capital gains are calculated by averaging the capital gains for all types of trusts. N=number of funds used in calculation.

Table A.13: Total risk for types of trusts and trust market over sample period 1998 to 2003

Risk (STD) in percentage	N	1998	N	1999	N	2000	N	2001	N	2002	N	2003	Average	
REITs	2	13.62	12	12.18	14	9.58	15	21.34	19	121.58	5	6.29	67	30.76
Oil and gas	7	25.13	20	32.24	21	76.33	22	23.25	23	46.78	7	46.72	100	41.74
Utility	2	28.99	6	8.50	9	5.62	9	11.86	12	7.27	7	9.81	45	12.00
Business	6	39.34	12	22.58	12	40.74	12	38.32	19	50.26	5	16.17	66	34.56
Diversified	4	28.80	5	8.17	5	8.60	7	11.50	10	10.30		N/A	31	13.47
Trust sector	21	27.18	55	16.74	61	28.17	65	21.25	83	47.24	24	19.75	309	26.51

Table A.13 presents the total risk calculated for each type of trust from 1998 to 2003. The total risk is the standard deviation of one-year holding period returns.

Table A.14 Statistical differences in market capitalizations between types of trust

Type	N	MCAP Mean (mil)	Type	N	MCAP Mean (mil)	Difference in means (mil)	t-stats	Sig.
REITs	23	531.09	Oil and gas	32	985.38	-454.3	-2.05	**
REITs	23	531.09	Utility	19	639.84	-108.8	-0.63	
REITs	23	531.09	Business	42	271.29	259.8	2.44	**
REITs	23	531.09	Utility	23	143.91	387.17	3.14	***
Oil and gas	32	985.38	Utility	19	639.84	345.53	1.45	
Oil and gas	32	985.38	Business	42	271.29	714.09	4.62	***
Oil and gas	32	985.38	Diversified	23	143.91	841.46	4.21	***
Utility	19	639.84	Business	42	271.29	368.56	3.45	***
Utility	19	639.84	Diversified	23	143.91	495.93	4.19	***
Business	42	271.29	Diversified	23	143.91	127.37	1.92	***

Table A.14 presents the difference in the average market capitalization (MCAP) of one type of income trusts to another. The means are obtained by averaging the MCAP of types of trusts in June 2003. N = number of funds of a particular type. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.15 Statistical differences in average ratios between REITs and oil and gas trusts from 1998 to 2003

Table A.15 Differences in average ratios between REITs and oil and gas trusts							
Ratios	N	Mean - REITs	N	Mean - Oil and gas	Difference in means	t-value	Sig.
CFPS	95	1.23	144	2.05	-0.82	-5.89	***
EPS	95	0.69	144	0.85	-0.16	-1.34	
DPS	95	0.91	144	1.29	-0.38	-3.1	***
P/E	95	18.44	144	18.26	0.18	0.05	
DTE	95	1.11	144	0.51	0.61	7.72	***
ROA	95	6.22	144	7.42	-1.20	-0.65	
ROCE	95	4.99	144	9.85	-4.86	-1.45	
ROC	95	6.43	144	10.41	-3.98	-1.9	*
DIVYIELD	95	8.57	144	9.85	-1.28	-1.5	*
CAPGAIN	83	0.08	115	0.26	-0.18	-1.58	*
RISK (STD)	6	0.31	6	0.42	-0.11	-0.55	

This table presents the difference between mean values of selected ratios for "REITs" and "oil and gas trusts" along with t-statistics which show the significance of difference.

N = number of observations used in calculation.

*, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.16 Statistical differences in average ratios between REITs and utility trusts from 1998 to 2003

Table A.16 Differences in average ratios between REITs and utility trusts							
Ratios	N	Mean - REITs	N	Mean - Utility	Difference in means	t-value	Sig.
CFPS	95	1.23	61	0.94	0.29	2.7	***
EPS	95	0.69	61	0.53	0.16	1.91	*
DPS	95	0.91	61	0.90	0.01	0.14	
P/E	95	18.44	61	21.49	-3.05	-0.92	
DTE	95	1.11	61	0.33	0.79	8.67	***
ROA	95	6.22	61	4.36	1.86	1.04	
ROCE	95	4.99	61	3.61	1.38	0.44	
ROC	95	6.43	61	4.57	1.86	1	
DIVYIELD	95	8.57	61	8.19	0.38	0.66	
CAPGAIN	83	0.08	57	0.05	0.03	0.46	
RISK (STD)	6	0.31	6	0.12	0.19	1.01	

This table presents the difference between mean values of selected ratios for “REITS” and “utility” along with t-statistics which show the significance of difference.

N = number of observations used in calculation.

*, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.17 Statistical differences in average ratios between REITs and business trusts from 1998 to 2003

Table A.17 Differences in average ratios between REITs and business trusts							
Ratios	N	Mean - REITs	N	Mean - business	Difference in means	t-value	Sig.
CFPS	95	1.23	115	1.23	0.00	-0.01	
EPS	95	0.69	115	0.49	0.20	2.32	**
DPS	95	0.91	115	0.72	0.19	2.82	***
P/E	95	18.44	115	19.93	-1.49	-0.4	
DTE	95	1.11	115	0.46	0.66	7.17	***
ROA	95	6.22	115	8.76	-2.54	-1.58	*
ROCE	95	4.99	115	9.16	-4.17	-1.49	*
ROC	95	6.43	115	10.20	-3.77	-2.14	**
DIVYIELD	95	8.57	115	7.32	1.25	1.93	*
CAPGAIN	83	0.08	103	0.15	-0.07	-0.38	
RISK (STD)	6	0.31	6	0.35	-0.04	-0.20	

This table presents the difference between mean values of selected ratios for “REITS” and “business” along with t-statistics which show the significance of difference. N = number of observations used in calculation.

*, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.18 Statistical differences in average ratios between REITs and diversified trusts from 1998 to 2003

Table A.18 Differences in average ratios between REITs and diversified trusts							
Ratios	N	Mean - REITs	N	Mean - Diversified	Difference in means	t-value	Sig.
CFPS	95	1.23	57	0.69	0.54	5.11	***
EPS	95	0.69	57	1.22	-0.53	-2.59	***
DPS	95	0.91	57	0.78	0.13	1.25	
P/E	95	18.44	57	6.70	11.74	4.16	***
DTE	95	1.11	57	0.08	1.04	14.47	***
ROA	95	6.22	57	8.41	-2.19	-0.66	
ROCE	95	4.99	57	5.17	-0.18	-0.03	
ROC	95	6.43	57	8.67	-2.24	-0.64	
DIVYIELD	95	8.57	57	8.10	0.47	0.56	
CAPGAIN	83	0.08	38	0.05	0.03	0.74	
RISK (STD)	6	0.31	5	0.13	0.17	1.93	

This table presents the difference between mean values of selected ratios for “REITs” and “diversifieds” along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.19 Statistical differences in average ratios between oil and gas and utility trusts from 1998 to 2003

Table A.19 Differences in average ratios between oil and gas and utility trusts							
Ratios	N	Mean - oil and gas	N	Mean - utility	Difference in means	t-value	Sig.
CFPS	144	2.05	61	0.94	1.11	6.92	***
EPS	144	0.85	61	0.53	0.32	2.71	***
DPS	144	1.29	61	0.90	0.39	2.93	***
P/E	144	18.26	61	21.49	-3.23	-1.1	
DTE	144	0.51	61	0.33	0.18	2.64	***
ROA	144	7.42	61	4.36	3.06	1.6	*
ROCE	144	9.85	61	3.61	6.24	1.81	*
ROC	144	10.41	61	4.57	5.84	2.71	***
DIVYIELD	144	9.85	61	8.19	1.66	1.95	**
CAPGAIN	115	0.26	57	0.05	0.21	2.67	***
RISK (STD)	6	0.41	6	0.12	0.30	3.38	***

This table presents the difference between mean values of selected ratios for “oil and gas” and “utilities” along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.20 Statistical differences in average ratios between oil and gas and business funds from 1998 to 2003

Table A.20 Differences in average ratios between oil and gas and business trusts							
Ratios	N	Mean - oil and gas	N	Mean - business	Difference in means	t-value	Sig.
CFPS	144	2.05	115	1.23	0.82	5.89	***
EPS	144	0.85	115	0.49	0.36	3.01	***
DPS	144	1.29	115	0.72	0.56	4.6	***
P/E	144	18.26	115	19.93	-1.67	-0.49	
DTE	144	0.51	115	0.46	0.05	0.76	
ROA	144	7.42	115	8.76	-1.34	-0.77	
ROCE	144	9.85	115	9.16	0.69	0.22	
ROC	144	10.41	115	10.20	0.21	0.1	
DIVYIELD	144	9.85	115	7.32	2.53	2.82	***
CAPGAIN	115	0.26	103	0.15	0.11	1.44	
RISK (STD)	6	0.42	6	0.35	0.07	0.75	

This table presents the difference between mean values of selected ratios for “oil and gas” and “business” along with t-statistics which show the significance of difference. N = number of observations used in calculation. *,**,*** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.21 Statistical Differences in average ratios between utility and business funds from 1998 to 2003

Table A.21 Differences in average ratios between utility and business trusts							
Ratios	N	Mean - utility	N	Mean - business	Difference in means	t-value	Sig.
CFPS	61	0.94	115	1.23	-0.29	-2.71	***
EPS	61	0.53	115	0.49	0.04	0.51	
DPS	61	0.90	115	0.72	0.18	2.08	**
P/E	61	21.49	115	19.93	1.56	0.5	
DTE	61	0.33	115	0.46	-0.13	-1.52	*
ROA	61	4.36	115	8.76	-4.40	-2.62	***
ROCE	61	3.61	115	9.16	-5.55	-1.9	**
ROC	61	4.57	115	10.20	-5.63	-3.06	***
DIVYIELD	61	8.19	115	7.32	0.87	1.36	*
CAPGAIN	57	0.05	103	0.15	-0.10	-2.44	***
RISK (STD)	6	0.12	6	0.35	-0.23	-3.61	***

This table presents the difference between mean values of selected ratios for “utility” and “business” along with t-statistics which show the significance of difference. N = number of observations used in calculation. *,**,*** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.22 Statistical differences in average ratios between oil and gas trusts and diversified trusts from 1998 to 2003

Table A.22 Differences in average ratios between oil and gas trusts and diversified trusts							
Ratios	N	Mean - oil and gas	N	Mean - diversified	Difference in means	t-value	Sig.
CFPS	144	2.05	57	0.69	1.36	8.53	***
EPS	144	0.85	57	1.22	-0.37	-1.68	*
DPS	144	1.29	57	0.78	0.51	3.45	***
P/E	144	18.26	57	6.70	11.56	4.87	***
DTE	144	0.51	57	0.08	0.43	11.23	***
ROA	144	7.42	57	8.41	-0.99	-0.29	
ROCE	144	9.85	57	5.17	4.68	0.86	
ROC	144	10.41	57	8.67	1.74	0.48	
DIVYIELD	144	9.85	57	8.10	1.76	1.67	*
CAPGAIN	115	0.26	38	0.05	0.21	3.06	***
RISK (STD)	6	0.42	5	0.13	0.28	3.16	***

This table presents the difference between mean values of selected ratios for “oil and gas” and “diversified” along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.23 Statistical differences in average ratios between utility and diversified trusts from 1998 to 2003

Table A.23 Differences in average ratios between utility and diversified trusts							
Ratios	N	Mean - utility	N	Mean - diversified	Difference in means	t-value	Sig.
CFPS	61	0.94	57	0.69	0.25	1.87	*
EPS	61	0.53	57	1.22	-0.69	-3.38	***
DPS	61	0.90	57	0.78	0.12	1.02	
P/E	61	21.49	57	6.70	14.79	7.64	***
DTE	61	0.33	57	0.08	0.25	4.27	***
ROA	61	4.36	57	8.41	-4.05	-1.21	
ROCE	61	3.61	57	5.17	-1.56	-0.29	
ROC	61	4.57	57	8.67	-4.10	-1.16	
DIVYIELD	61	8.19	57	8.10	0.10	0.11	
CAPGAIN	57	0.05	103	0.05	-0.01	-1.16	
RISK (STD)	6	0.12	5	0.13	-0.015	-0.28	

This table presents the difference between mean values of selected ratios for “utility” and “diversified” along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.24 Statistical differences in average ratios between business and diversified trusts from 1998 to 2003

Table A.24 Differences in average ratios between business and diversified trusts							
Ratios	N	Mean - business	N	Mean - diversified	Difference in means	t-value	Sig.
CFPS	115	1.23	57	0.69	0.54	5.13	***
EPS	115	0.49	57	1.22	-0.73	-3.55	***
DPS	115	0.72	57	0.78	-0.06	-0.54	
P/E	115	19.93	57	6.70	13.23	5.03	***
DTE	115	0.46	57	0.08	0.38	6.19	***
ROA	115	8.76	57	8.41	0.35	0.11	
ROCE	115	9.16	57	5.17	3.99	0.78	
ROC	115	10.20	57	8.67	1.54	0.44	
DIVYIELD	115	7.32	57	8.10	-0.77	-0.87	
CAPGAIN	103	0.15	38	0.05	0.10	1.57	***
RISK (STD)	6	0.36	5	0.13	0.21	3.26	***

This table presents the difference between mean values of selected ratios for “business” and “diversified” along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.25 Statistical Differences in average ratios between unrated and rated trusts over sample period of 1998 to 2003

Table A.25 Differences in average ratios between unrated and rated trusts - whole trust market							
Ratios	N	Mean - unrated	N	Mean - rated	Difference in means	t-value	Sig.
CFPS	382	1.35	90	1.49	-0.14	-0.85	
EPS	382	0.68	90	0.95	-0.26	-2.17	**
DPS	382	0.88	90	1.3	-0.42	-3.3	***
P/E	382	16.59	90	22.54	-5.94	-1.86	*
DTE	382	0.58	90	0.36	0.23	3.35	***
ROA	382	7.65	90	5.43	2.22	1.31	
ROCE	382	7.95	90	4.7	3.25	1.11	
ROC	382	9.2	90	6.04	3.16	1.71	*
DIVYIELD	382	8.3	90	9.6	-1.3	-2.07	**
CAPGAIN	303	0.17	86	0.07	0.11	2.67	***
RISK (STD)	6	0.45	6	0.16	0.29	3.24	**

This table presents the difference between mean values of selected ratios between unrated and rated trusts in the market along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.26 Statistical Differences in average ratios between unrated and rated REITs over sample period of 1998 to 2003

Table A.26 Differences in average ratios between unrated and rated REITs							
Ratios	N	Mean - unrated	N	Mean - rated	Difference in means	t-value	Sig.
CFPS	83	1.26	12	1.02	0.24	2.63	***
EPS	83	0.67	12	0.82	-0.16	-1.31	
DPS	83	0.91	12	0.91	0	-0.01	
PE	83	18.67	12	16.85	1.82	0.37	
DTE	83	1.11	12	1.16	-0.05	-0.16	
ROA	83	6.43	12	4.77	1.66	0.35	
ROCE	83	5.22	12	3.37	1.85	0.21	
ROC	83	6.67	12	4.81	1.86	0.38	
DIVYIELD	83	8.59	12	8.46	0.13	0.14	
CAPGAINS	72	0.12	11	0.07	0.05	0.52	
RISK (STD)	6	0.298	4	0.10	0.19	0.93	

This table presents the difference between mean values of selected ratios between unrated and rated "REITs" along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.27 Statistical Differences in average ratios between unrated and rated oil and gas trusts over sample period of 1998 to 2003

Table A.27 Differences in average ratios between unrated and rated oil and gas trusts							
Ratios	N	Mean - unrated	N	Mean - rated	Difference in means	t-value	Sig.
CFPS	121	1.84	23	3.14	-1.31	-2.97	***
EPS	121	0.68	23	1.74	-1.06	-3.37	***
DPS	121	1.07	23	2.42	-1.35	-3.84	***
P/E	121	16.83	23	25.82	-9	-1.02	
DTE	121	0.54	23	0.35	0.18	2.92	***
ROA	121	7.57	23	6.63	0.94	0.3	
ROCE	121	9.96	23	9.23	0.73	0.13	
ROC	121	10.82	23	8.26	2.56	0.74	
DIVYIELD	121	9.43	23	12.1	-2.67	-1.55	*
CAPGAIN	90	0.3	25	0.08	0.22	2.42	**
RISK (STD)	6	0.49	5	0.12	0.36	3.5	***

This table presents the difference between mean values of selected ratios between unrated and rated "oil and gas" along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.28 Statistical Differences in average ratios between unrated and rated utility trusts over sample period of 1998 to 2003

Table A.28 Differences in average ratios between unrated and rated utility trusts							
Ratios	N	Mean - Unrated	N	Mean - rated	Difference in means	t-value	Sig.
CFPS	22	0.99	39	0.9	0.09	0.41	
EPS	22	0.46	39	0.57	-0.12	-1.05	
DPS	22	0.74	39	0.99	-0.25	-2.05	**
P/E	22	16.94	39	24.06	-7.12	-2.16	**
DTE	22	0.58	39	0.19	0.4	3	***
ROA	22	5.21	39	3.88	1.33	0.58	
ROCE	22	6.74	39	1.84	4.89	1.28	
ROC	22	5.55	39	4.02	1.53	0.64	
DIVYIELD	22	7.95	39	8.33	-0.39	-0.44	
CAPGAINS	16	0.1	35	0.07	0.03	0.28	
RISK (STD)	4	0.11	6	-0.005	-0.09	1.45	

This table presents the difference between mean values of selected ratios between unrated and rated "utility" along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.29 Statistical Differences in average ratios between unrated and rated business funds over sample period of 1998 to 2003

Table A.29 - Differences in average ratios between unrated and rated business trusts							
Ratios	N	Mean - unrated	N	Mean - rated	Difference in means	t-value	Sig.
CFPS	108	1.25	7	0.87	0.37	1.76	*
EPS	108	0.51	7	0.17	0.34	1.95	*
DPS	108	0.73	7	0.66	0.07	0.51	
P/E	108	19.07	7	33.3	-14.23	-0.68	
DTE	108	0.46	7	0.35	0.11	0.49	
ROA	108	9.08	7	3.73	5.35	3.83	***
ROCE	108	9.59	7	2.46	7.13	2.58	
ROC	108	10.6	7	4.04	6.56	4.26	***
DIVYIELD	108	7.09	7	10.88	-3.79	-1.87	*
CAPGAINS	97	0.15	6	0.04	0.11	0.83	0.4342
RISK (STD)	N/A		N/A				

This table presents the difference between mean values of selected ratios between unrated and rated "business" along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.

Table A.30 Statistical Differences in average ratios between unrated and rated diversified trusts over sample period of 1998 to 2003

Table A.30 Differences in average ratios between unrated and rated diversified trusts							
Ratios	N	Mean - unrated	N	Mean - rated	Difference in means	t-value	Sig.
CFPS	48	0.65	9	0.89	-0.24	-0.85	
EPS	48	1.21	9	1.3	-0.1	-0.18	
DPS	48	0.77	9	0.85	-0.09	-0.27	
P/E	48	6.69	9	6.74	-0.05	-0.02	
DTE	48	0.08	9	0.06	0.02	0.58	
ROA	48	7.87	9	11.3	-3.44	-0.35	
ROCE	48	4.45	9	8.99	-4.54	-0.3	
ROC	48	7.99	9	12.31	-4.32	-0.41	
DIVYIELD	48	7.88	9	9.28	-1.4	-0.71	
CAPGAINS	28	0.06	9	0.03	0.02	0.39	
RISK (STD)	5	0.16	2	0.03	0.12	2.70	**

This table presents the difference between mean values of selected ratios between unrated and rated "diversified trusts" along with t-statistics which show the significance of difference. N = number of observations used in calculation. *, **, *** represent the significance levels at 10, 5, and 1 percents respectively.