

The Structure and Performance of Equity Mutual Funds in an emerging economy: the case of Trinidad & Tobago

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ABSTRACT

The authors of this paper describe and analyse the structure and performance of the equity mutual funds market in an emerging economy, that of Trinidad & Tobago. A comparison is made between mutual funds created, managed and distributed by the locally owned commercial banks and the largest non-bank equity fund, the Income and Growth Fund of the Trinidad and Tobago Unit Trust Corporation. The Sharpe Ratio is employed to assess the relative performance of these mutual funds over the period June 2001 to May 2005. It is shown that the returns on bank equity mutual funds are not significantly different from those of the First Unit Scheme, but that there is a significant difference in the risk involved in the various portfolios. Recommendations are made to implement and enforce regulations with respect to the disclosure of the risk adjusted rate of return on mutual funds so that the average investor can make informed investment decisions with respect to mutual funds or alternative investments.

JEL CLASSIFICATION NUMBERS: G11, G20

KEYWORDS: Bank-based mutual funds, non bank mutual funds, Sharpe Ratio; risk adjusted rate of return, Trinidad & Tobago.

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INTRODUCTION

This paper has three objectives. The first is to describe and analyse the existing structure² of equity mutual funds in Trinidad & Tobago and to compare the structure of the bank-based mutual funds to that of the First Unit Scheme of the Unit Trust Company (UTC) of Trinidad & Tobago, the largest non-bank domiciled equity fund in that country³. The second objective is to compare the performance of bank and non-bank equity funds in Trinidad and Tobago. The third and final objective is to provide policy recommendations and other suggestions for the improvement of the equity-based segment of the mutual funds market as well as of the entire mutual funds industry in Trinidad and Tobago.

The description and analysis of the structure of equity mutual funds in Trinidad and Tobago is based on information obtained from articles, newsletters and financial reports published by local mutual funds' managers; official statistics published by the Central Bank of Trinidad and Tobago and the Trinidad and Tobago Securities Exchange Commission; as well as related research articles and other literature. Performance of the competing funds is measured using a risk adjusted performance measurement ratio proposed by Sharpe (1966).

The mutual funds market in Trinidad and Tobago has experienced spectacular growth in the recent past but remains a sector where little research has been done to explain its performance, pattern of development and emerging risk factors This paper seeks to add to the knowledge pool in this field, focusing specifically on the

² The term "structure" will be taken to mean the regulatory framework governing mutual funds and specifically equity-based mutual funds in Trinidad and Tobago; the corporate structure of the funds; risk management; asset portfolio composition and the other main characteristics of the funds.

³ Most of the literature on bank mutual funds defines these as either proprietary funds of which the bank (or an affiliate of the bank) is the investment adviser managing the assets of the funds; or such funds where the bank or its subsidiary is the custodian, the administrator and the transfer agent for the fund; or funds so named after the bank and distributed to the bank's customers whether directly by the bank or indirectly via a third party. This excludes third party funds for which banks stand as an intermediary between the investment company and its customers.

equity funds which have a longer history and are the fastest growing type of mutual funds in Trinidad and Tobago.

The paper is structured as follows. The next section presents some stylized facts about the Mutual Funds Market in Trinidad & Tobago, and this is followed by a section dealing with the structure of the equity funds market in Trinidad & Tobago. The relative performance of the various funds is then compared, and this is followed by policy recommendations and the conclusion of the paper.

SOME STYLIZED FACTS ABOUT THE MUTUAL FUNDS MARKET IN TRINIDAD & TOBAGO

Mutual funds, also known as Collective Investment Schemes, are used to pool the savings of shareholders and invest these in a portfolio of securities in accordance with the respective fund prospectus and in an effort to diversify and minimise risk. Mutual funds may be open-ended or closed-end investment funds. Open-ended investment funds refer to those collective schemes where shares can be frequently redeemed and sold to the public at net asset value⁴. Closed-end funds refer to shares that are sold in fixed amounts and are traded on the secondary markets. Most of the funds offered for sale globally are open-ended investment funds.

Mutual Funds may also be classified according to the fund's objectives. Funds whose objective is to earn stable and safe returns are often referred to as money market mutual funds. These funds are invested in short-term securities such as Federal or Treasury bills which are guaranteed by the government, certificates of deposit of large commercial banks and commercial paper (local and foreign). Money market funds have tended to compete with the traditional bank deposits by offering market-related returns, lower interest rate spreads, high liquidity and ease of access. The growth in the money market funds and the improvement in the performance of these funds have forced banks to take a greater interest in the

⁴ Net asset value is the market value of net assets (total liabilities deducted from total assets) as a ratio of the number of outstanding shares.

industry. At the other end of the spectrum are growth funds whose objective is to maximize capital gains and these are invested in the stocks of companies.⁵

Since its inception in Trinidad & Tobago in 1982, the mutual funds market has developed in breadth and in depth. Today there are over 60 Collective Investment Schemes registered with the Trinidad and Tobago Securities Exchange Commission.⁶ Table 1 below provides details

Table 1
TYPES OF MUTUAL FUNDS REGISTERED BY THE TRINIDAD AND TOBAGO
SECURITIES EXCHANGE COMMISSION

TYPES OF FUNDS	DESCRIPTION	EXAMPLES
Mutual Fund Family	A group of mutual funds offered by a single investment company. Each fund has different characteristics. Most investment companies offer a variety of funds but what distinguishes a Mutual Fund Family from the group of funds offered by other investment companies is that investors are allowed to transfer money between funds with little or no charges.	AIC Trinidad and Tobago Group of Funds Colonial Life Family of Funds TD Greenline Family of Mutual Funds
Money Market Fund	Money Market funds invest in short term securities such as commercial paper, Treasury bills and certificates of deposits. As such returns on these funds are less volatile than those on growth funds and equity funds.	DB&G Money Market Fund Bourse Money Market Fund The Abercrombie Fund Paria Fund Republic Money Market Fund Roytrin US Dollar Denominated Money Market Fund Scotiabank Money Market Fund Second Unit Scheme UTC US Dollar Money Market Fund
Growth Funds	These funds seek to maximise capital growth in the long run via investments in companies with a history of rapid capital growth. Returns on growth funds are more volatile than money market funds, rising sharply in bullish markets and falling even faster in bearish markets.	DB&G Premium Growth Fund Scotiabank Global Growth Fund Scotiabank Canadian Growth Fund Scotiabank US Growth Fund Savinvest US\$ Capital Growth Fund

⁵ For a complete listing of the types of mutual funds see Moses and Cheney (1989) p 678.

⁶ Trinidad and Tobago Securities & Exchange Commission, <http://www.ttsec.org.tt/Collective%20Investment%20Schemes.htm> (accessed January 2, 2006).

		Bourse Capital Growth Fund
Bond Funds	The investment objective of bond funds is to provide current income to shareholders by investing in corporate and government bonds.	Clico Optimal Bond Fund Scotiabank US Dollar Bond Fund
Balanced Funds	Balanced funds seek to provide long term capital growth and current income to shareholders by holding a mix of short term and long term securities, for example stocks, bonds and commercial paper.	The Pan Caribbean Balanced Fund Mutual Global Balanced Fund
Income and Growth Funds	These funds seek growth of both current income and capital by investing in the shares of companies that have a record of solid growth and consistent dividend payment.	Immortelle Income and Growth Fund The Paria Fund Roytrin Mutual Income and Growth Fund Roytrin US Dollar Denominated Income and Growth Fund Chaconia Income and Growth Fund First Unit Scheme
International Funds	International Funds hold primarily foreign securities.	GK Global Fund Republic Global Equity Fund Guardian Asset Management Limited International Series of Mutual Funds
Regional Funds	These funds invest in both short term and long term securities in a particular geographical region.	Republic Caribbean Equity Fund
Equity Funds	These funds invest in a variety of company stocks.	GK Caribbean/US Equity Fund The North American Equity Fund The European Equity Fund
Market Specific Funds	As the name implies these funds invest in specific markets for example the real estate market or the energy sector.	US Dollar denominated First Energy Fund Class "A" Property Fund
Index Funds	The objective of these funds is to replicate the performance of a particular security index.	GK Caribbean Blue Chip Index Fund JMM Select Index Fund Limited Jamaican Dollar denominated Fund

Source: www.ttsec.org.tt

Approximately seventy percent (70%) of funds are distributed by local institutions, including the UTC, commercial banks and their affiliated companies, insurance companies and finance companies. Eight (8) of these mutual funds are local funds, managed and distributed by four local companies including three

commercial banks. Furthermore, the type of Collective Investment Schemes has moved beyond equity funds to money market funds, bond funds, balanced funds, family funds and property funds (See Table to be inserted by Marsha). At the end of 1982 the amount of funds under management in the industry was valued at approximately \$42.05 million.⁷ By the end of March 2005, total funds under management increased to approximately \$25,416.6 million. Table 2 below provides the details⁸.

Table 2
Fund Under Management (TT\$M)

Fund Type	Period				
	2001 Q1	2002 Q1	2003 Q1	2004 Q1	2005 Q1
Money Market Funds	5405.3	8642.2	12664.1	16674.9	18754.8
Growth and Income Funds	1583.1	1521.2	2254.0	4360.7	6661.8
Total Fund Value	6988.4	10163.4	14918.1	21035.7	25416.6

Source: Central Bank of Trinidad and Tobago

Equity mutual funds have grown over the recent years, recording an annualized growth rate of 87.5% from December 2001 to March 2005, compared to the 36.6% recorded by money market funds for the same period⁹. The equity-based segment of the local mutual funds market has grown also with respect to the number of funds distributed and the number of participating institutions. To date there are four TT dollar denominated equity mutual funds, three of which are managed and distributed by subsidiary companies of commercial banks. Despite their numbers, it is non-bank funds that dominate the equity-based segment of the local mutual funds market accounting for 78.6% of assets under management and

⁷ Best and Brown (1992). Unless otherwise stated all figures are denominated in Trinidad and Tobago dollars.

⁸ Seerattan, 2005.

⁹ Seerattan, 2005.

71.77% of total sales of equity mutual funds as of December 2003. Table 3 below provides further details.

TABLE 3
TOTAL SALES AND ASSETS UNDER MANAGEMENT FOR TT
DOLLAR DENOMINATED EQUITY MUTUAL FUNDS:
BANKS vs. NON-BANK

	1999	2000	2001	2002	2003
Total Sales: Banks	96.56	206.31	57.83	196.16	452.69
% of					
total	27.28	42.67	15.19	36.38	28.23
Non-					
bank	257.42	277.23	322.81	343.04	1150.93
% of					
total	72.72	57.33	84.81	63.62	71.77
Total	353.98	483.54	380.64	539.20	1603.62
Assets under					
management: Banks	216.38	323.97	240.13	423.72	784.96
% of					
total	14.59	19.96	16.07	20.69	21.40
Non-					
bank	1,266.45	1,298.82	1,253.86	1,623.94	2,882.79
% of					
total	85.41	80.04	83.93	79.31	78.60
Total	1,482.83	1,622.79	1,493.99	2,047.66	3,667.75

Source: Unitholders' Reports for TT\$ denominated equity funds (various issues).

The dominant position of the UTC probably results not only from the fact that it has been in the market longer and has benefited from the first mover advantage but also because it established a track record of growth and buoyant returns for its unit holders. Additionally, prior to 1996, it enjoyed preferred tax status, where investors' dividends were exempt from income taxes and the company was excluded from paying corporate taxes¹⁰. In 1996 an amendment was passed in Parliament to remove the dividend allowance and other tax exemptions so as to level the playing field. However, the UTC still remains exempt from corporate taxes and this gives the company a synthetic advantage over bank-based mutual funds¹¹.

¹⁰ Committee Appointed by Cabinet to Review the Financial Sector of Trinidad and Tobago, (2003), p. 26.

¹¹ Committee appointed by Cabinet to review the financial sector of Trinidad and Tobago, p 26.

Commercial banks entered the market as sponsors in 1994, recognising the growth of the mutual fund sector and the prospects it offered for enhanced profitability. Today there are approximately five bank equity mutual funds¹², the most recent being the Immortelle Fund established by First Citizens Bank Limited in September 2005. The equity based funds managed by the commercial funds have also made significant inroads into the market share of the UTC and it is therefore interesting to investigate whether the performance of bank based equity mutual funds have been better than that of the UTC equity mutual fund.

THE STRUCTURE OF EQUITY FUNDS IN TRINIDAD AND TOBAGO

In this section we look at the regulatory framework governing the management and distribution of mutual funds by the major commercial banks of Trinidad and Tobago¹³ and the major non-bank financial institution, the UTC. We also consider other important fund characteristics such as fees and expenses, asset portfolio composition as well as the risks involved in mutual funds and how such risks are managed by the commercial banks and the UTC.

Regulatory Framework

Mutual funds managed and sold in Trinidad and Tobago are governed principally by the Financial Institutions Act of 1993, the Securities Industry Act of 1995 and the various amendments to these Acts. The Financial Institutions Act of 1993¹⁴ specifies that all banks and companies involved in business of a financial nature must be licensed by the Central Bank. Banks are defined as institutions that accept deposits on time, savings and demand accounts and lend such deposits, and

¹² Trinidad and Tobago Securities & Exchange Commission, <http://www.ttsec.org.tt/Collective%20Investment%20Schemes.htm> (accessed January 2, 2006).

¹³ There are four major commercial banks in Trinidad and Tobago. This paper will focus on the equity funds managed and distributed by the two largest since these are the oldest and the ones for which most data are available.

¹⁴ Central Bank of Trinidad and Tobago, http://www.central-bank.org.tt/the_bank/1042.pdf.

financial institutions are defined as businesses that accept special deposits from investors and invest in securities for a reward. Under this act banks are allowed to offer mutual funds in the context of “business of a financial nature” to their customers. Such funds cannot be invested in the bank and investments in any one sector must not equal or exceed 100% of funds.

According to Circular No. 1 of 1994 (Guidelines for the Establishment and Operation of Mutual Funds by Institutions licensed under the Financial Institutions Act of 1993¹⁵), mutual funds must be established only by those businesses licensed under the Financial Institutions Act of 1993 including banks and non-bank financial institutions. These institutions must submit the fund prospectus, trust deed and rules of the proposed funds to the Central Bank. The Circular also requires the disclosure to all customers that the fund is not insured with the Deposit Insurance Corporation and is not guaranteed by the financial institution or the Central Bank, as well as the disclosure of any fees and expenses related to the fund. The Circular furthermore requires financial institutions to publish a statement of the fund’s asset, liabilities and net income at least every six months.

Circular No. 9 of 2004¹⁶ amended Circular No. 1 of 1994 to limit financial institutions to an investment of ten percent (10%) of the net assets of the fund in shares of the said financial institution and its affiliates.

The Securities Industry Act of 1995 requires all securities, including mutual funds and all companies or individuals who seek to sell such securities, to be registered with the Securities and Exchange Commission¹⁷. All financial institutions, including banks offering mutual funds, must register the fund prospectus with the Commission before distributing securities. The fund prospectus should contain all

¹⁵ Central Bank of Trinidad and Tobago, http://www.central-bank.org.tt/financial_stability/3038.pdf

¹⁶ Central Bank of Trinidad and Tobago, http://www.central-bank.org.tt/financial_stability/3037.pdf

¹⁷ Trinidad and Tobago Securities & Exchange Commission, <http://www.ttsec.org.tt/ttsia.htm>.

relevant information so that a prospective investor could make inferences about the financial position of the security and the profits and/or losses of the company. The prospectus must also include the rights of the investor. All financial institutions are required to inform their customers of all the fees and risks entailed in purchasing the mutual funds, including the announcement that the mutual funds are not covered by the Deposit Insurance Act.

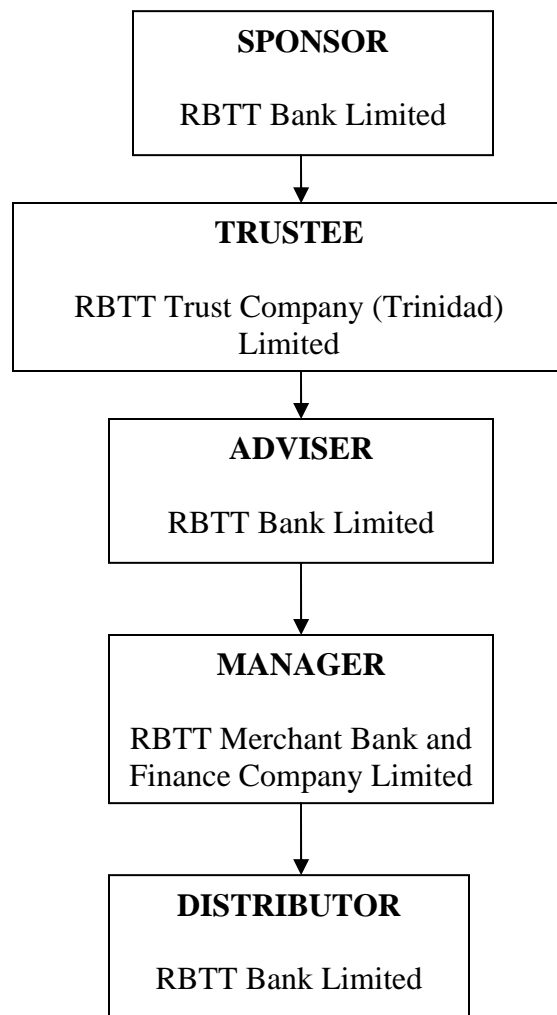
This Act caters refers to all securities and there is no specific laws for mutual funds, equity funds and more so bank-based equity funds in Trinidad and Tobago. The Trinidad and Tobago Unit Trust Act of 1980 only establishes the UTC and covers the operation of the UTC and not specifically the operation of mutual funds. The circulars that address mutual funds specifically are not legally binding. With the continuous growth in mutual funds and the expected growth in bank equity mutual funds, it is only fitting that appropriate regulations for the industry be established.

Corporate Structure

Figure 1 below shows the corporate structure for the Roytrin TT dollar Denominated Income and Growth Fund offered by RBTT Bank Limited, which is typical of bank-based equity funds. The sponsor¹⁸ is RBTT Bank Limited itself whereas the sponsor for the First Unit Scheme comprises a group of institutions, including the Central Bank of Trinidad and Tobago, the National Insurance Board, commercial banks such as RBTT Bank Limited and Republic Bank Limited, non-bank financial institutions such as RBTT Trust Company, RBTT Merchant Bank and Finance Company and Republic Finance and Merchant Bank

Figure 1
THE CORPORATE STRUCTURE OF
ROYTRIN TT DOLLAR DENOMINATED INCOME AND GROWTH
FUND

¹⁸ The sponsor of a mutual fund provides the initial capital for the fund and is responsible for the naming of the fund, outlining the fund's policies and objectives, and the identification of the other personnel lower down the corporate ladder such as the investment adviser, manager and distributor.



Source: Roytrin Mutual Fund Unitholders' Report as at December 31, 1994.

Limited and life insurance companies.¹⁹ The trustee for the UTC comprises individuals who also sit on the boards of directors of commercial banks. The UTC is the investment adviser, manager and distributor for the First Unit Scheme whereas RBTT Bank Limited is the adviser and manager for the Roytrin TT dollar Denominated Income and Growth Fund.

¹⁹ UTC, *Annual Report and Accounts 2001: 1982-2002 Celebrating 20 years of Success*. (Port of Spain: UTC, 2001), 64.

The structure of the bank equity funds considered here is therefore different in marked ways from the Income and Growth Fund managed and distributed by the UTC. Whereas the commercial banks and their subsidiaries perform all corporate functions of their equity funds, many of these functions in the First Unit Scheme are performed by entities not controlled by the UTC. This corporate structure is closer to the best practice where independent or unaffiliated entities perform the functions of sponsor, investment manager and trustee to minimize the possibility of any conflict of interest. One final distinction in the structure of bank equity funds and that of the First Unit Scheme is that the latter carries a Guaranteed Reserve Fund.

Fee Structure for Equity based funds

Funds sponsored by the same institution basically had similar fee structures as Table 4 below illustrates.

Table 4
Fee Structure of Selected Mutual Funds

Fee	UTC		RBTT		REPUBLIC	
	GI	MMF	GI	MMF	GI	MMF
Investment Manager	2.00%	2.00%	2.00%	2.00%	1.00%	1.00%
Advisor	NA	NA	NA	NA	0.60%	0.60%
Trustee	NA	NA	2.00%	2.00%	0.15%	0.15%
Distributor	NA	NA	NA	NA	0.25%	0.25%
Total Fee	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

Source: Prospectuses of Funds

Note: Figures are percentage of assets under management and represent the maximum allowable fees.

Unitholders of the UTC growth and income fund are subject to a management charge of up to 2% of the value of funds under management. All expenses are met from this fee and the only other fee facing the investor is front end or sales fee in the growth and income fund. Interest income was exempt from taxes until 1997 with the introduction of the Finance Act which subjected unitholders to a 15% tax on interest income. This tax has been reduced to 5% to date.

Investors in RBTT's TT dollar denominated income and growth Fund are subject to management fees at a rate of 2% per annum calculated on the average net asset value of the fund for the respective calendar year. Other additional expenses in excess of the 2.00% on average total assets include administrative expenses which, at December 2004, amounted to TT\$252,020.²⁰ Unlike other funds, there is no front-end or sales charge and back-end or redemption charges. However, there is a minimum withdrawal limit of TT\$250,000 to control liquidity risks. The fund was not subject to taxes on interest income and capital gains until 1996 when 15% tax was charged on interest income annually. At present, the fund is exempt from corporation tax and a tax of 5% on interest income is charged except in those cases where the shareholder is a company, an individual over the age of 60, a pension fund plan or a non-resident unit holder (in which case interest income is taxed in accordance with the laws of the country in which the unit holder resides).

Republic Bank's fund has a variety of charges such as investment management, advisor, trustee and distributor fees but they gross at 2%. The trustee of the fund, which is Republic Finance and Merchant Bank Limited, is paid a quarterly fee at an annual rate of 0.15% or less of the average net asset value. The adviser, manager and distributor, Republic Bank Limited, is paid fees, respectively, of no more than 0.60%, 1.00% and 0.25% of the average net asset value. In contrast to RBTT's fund, Republic's growth and income fund charges front end fee or sales charge equivalent to, but not to exceed, 5% of the net asset value per outstanding share in the fund while the money market fund charges a back end fee. Other fees and expenses include legal and audit fees, publication costs, and vat and income taxes which are additional to the 2.00% overall on average net asset value. Tax on interest income was initially 10% but as of 2001 reduced to 5%. Tax is charged on interest income except in such cases where the unitholder is either a company or an individual over the age of 60.

²⁰ RBTT Bank Limited, *Roytrin Mutual Funds Unitholders' Report As at December 31, 2004*. (Port of Spain: RBTT Bank Limited, 2004), 14.

It is quite clear that competition has driven the fee structure of funds under consideration to mirror that of competitors but there are slight differences in terms of the inclusion or omission of front and back end charges, as well as, the fact that additional expenses to the total fees (See Table 3) mentioned in the prospectuses may be deducted from the funds in the case of the bank managed funds. This can have an impact on the net returns of the funds to investors.

Risk Management

No less than 60% of funds under management in Republic's growth and income fund must be invested in equity securities and no more than 10% of such investment must be the shares of any one company. Most portfolio managers are also restricted to a ten percent limit for investments in any one company. Additionally, managers of equity-based funds also invest in money market or short-term instruments so that risk is well diversified.

Most bank equity mutual funds are subject to liquidity risk as unitholders or shareholders are not prevented from redeeming units held in these funds. Given this, RBTT growth and income fund tries to hold at least 15% of total funds in short term securities even though the fund is equity based. Roytrin Unit holders are also restricted to a cash redemption limit of TT\$250,000 in any ninety day period to control liquidity risks.

Unlike the other funds, UTC First Unit Scheme carries a price guarantee condition which simply assures unitholders nothing less than their initial amount invested in the fund once such investment is held in the fund for a period of at least three years. A Guarantee Reserve Fund was established as outlined in Section 26(1) and (2) of the UTC Act so as to finance the Guarantee Pricing Plan which was first introduced in January 1985²¹. In 2004 TT\$1million of the

²¹ UTC, *Unit Trust Corporation Annual Report 2002* (Port of Spain: UTC, 2002), A21.

investment income of the First Unit Scheme was allocated to the Guarantee Reserve Fund.²² This three-year limit together with the Guarantee Reserve fund effectively controls liquidity risks.

Asset Portfolio Composition

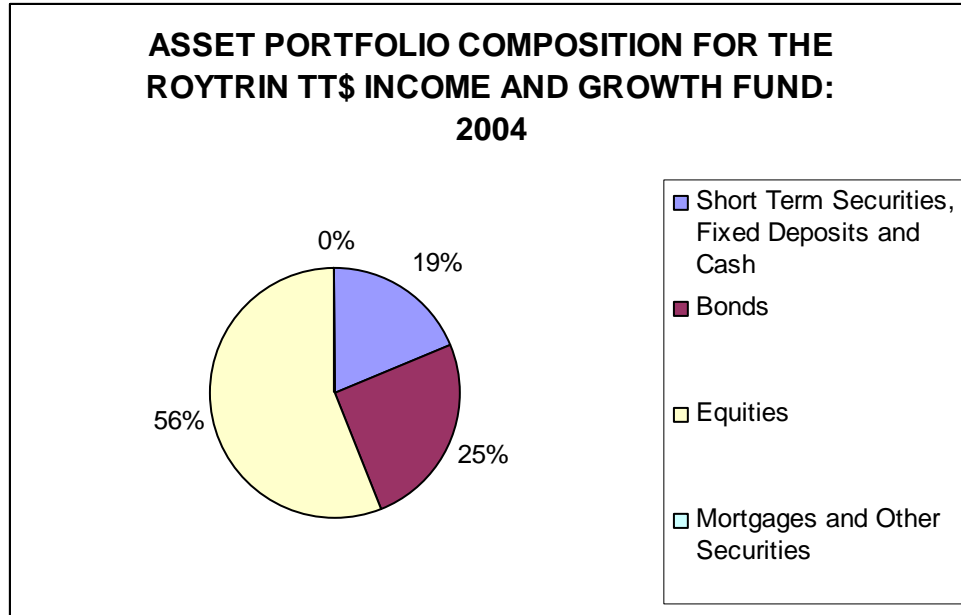
Figures 2, 3 and 4 show the asset portfolio composition of, respectively, the Roytrin TT dollar denominated Income and Growth Fund, the Republic Caribbean Equity Fund and the UTC's First Unit Scheme²³. What is noticeable with each fund is that, although the funds are described as equity-based, the portfolios are made up of short-term securities, debt instruments and local, regional and international company stocks. For instance, the Roytrin TT dollar denominated Income and Growth Fund invested only 56% of the resources under management in the shares of companies as at December 2004. This is a 40% growth in the percentage of assets held in equity securities since December 1994, approximately nine years after the establishment of the fund.²⁴ In December 1994, the majority of assets held in the fund consisted of money market or short-term instruments (41%) and bonds (43%) although the fund is equity based. Short-term securities as of December 2004 accounted for 19% of total assets in the portfolio while bonds accounted for 25%. Similar patterns are present in UTC's growth and income fund.

Figure 2

²² UTC, *Unit Trust Corporation Annual Report 2004* (Port of Spain: UTC, 2004), A8.

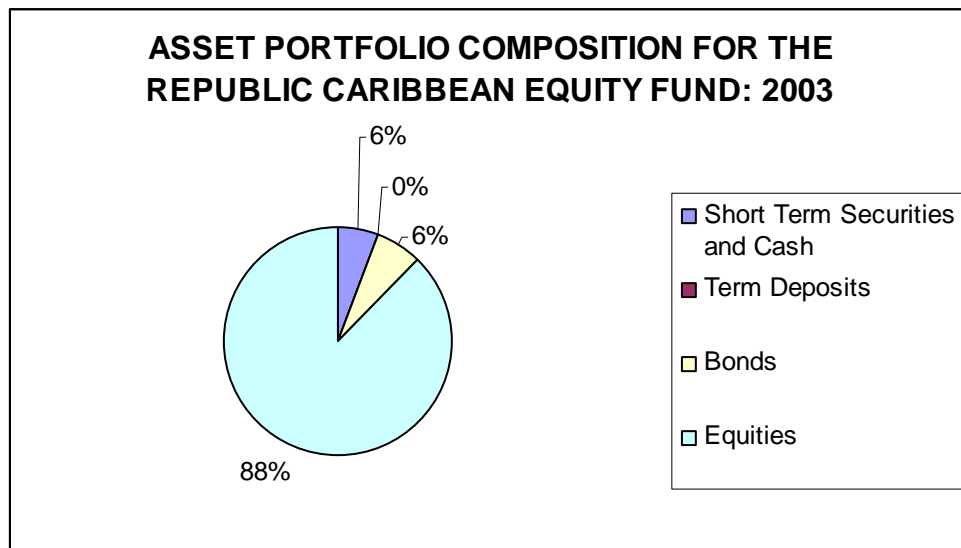
²³ Time series of the portfolio compositions are given in the Appendix.

²⁴ See Table A1 in the Appendix.



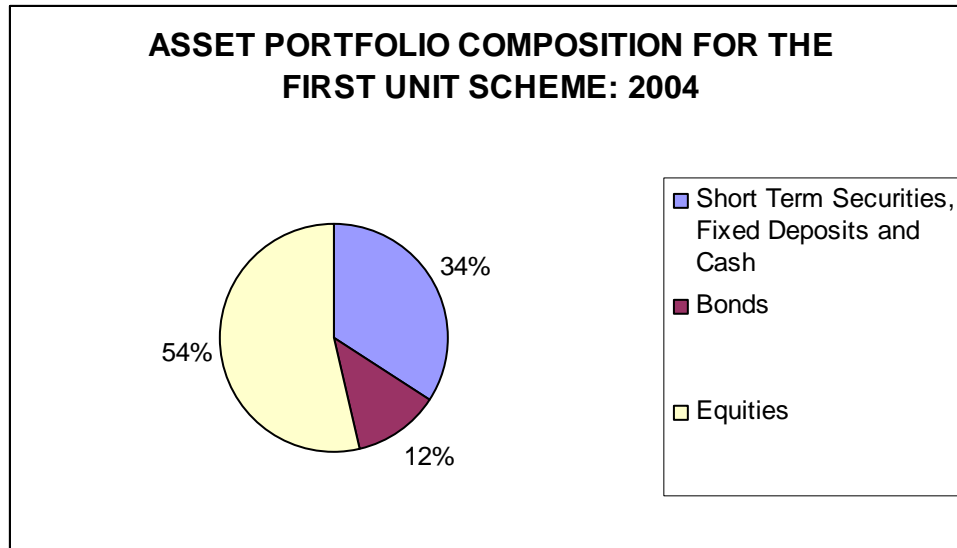
Source: Roytrin Mutual Funds Unitholders' Report 2004.

Figure 3



Source: Republic Caribbean Equity Fund Financial Report 2003.

Figure 4



Source: Trinidad and Tobago Unit Trust Corporation Annual Report 2004.

In contrast, equities always had a larger weighting in the Republic Caribbean Equity Fund when compared to the other growth and income funds considered. In December 1999 equities accounted for 77.48% of the total value of investments.²⁵ By December 2003, the stocks of local and regional companies comprised 87.8% of total assets in the Republic Caribbean Equity Fund. Government and corporate bonds accounted for another 6.44% and money market instruments and cash, 5.76% (See Figure 3 and Table A2 in Appendix).

It is somewhat surprising that the UTC holds less of its portfolio assets in more risky equities than the two commercial banks given the emphasis in the literature on the more “prudent” behaviour of banks (Del Guercio 1996, Frye 2001). In 2004, equities held in the First Unit Scheme accounted for 53.54% of total assets in the fund. Money market instruments, fixed deposits and cash accounted for 34.17% of total assets in the portfolio while bonds make up the rest of the portfolio.

Despite their differences, there are similarities between the First Unit Scheme and bank equity mutual funds. Both types of funds have the same investment

²⁵ See Table A2 in the Appendix.

objectives and unitholders are similarly taxed. Both types of funds are prone to similar risks and such risks are managed in a similar manner. Funds are invested in similar types of assets the only difference is that the portfolio managers and investment advisers of the First Unit Scheme seem to be more risk averse investing a smaller percentage of their resources in equities, whereas the literature reserve this characteristic for banks who are thought to be more risk averse than non-bank sponsors. As we will see in the next section, however, these structural features have important effects on the risk/return dynamics of these funds and their consideration is central to the evaluation of the performance of these funds.

THE RELATIVE PERFORMANCE OF BANK AND NON-BANK EQUITY FUNDS IN TRINIDAD AND TOBAGO

In this section, the performance of the two bank-based funds will be compared to each other and to the performance of the UTC's Income and Growth Fund²⁶ using daily data over the period June 1st 2001 to May 31st 2005²⁷. The unadjusted rates of return²⁸ on the three funds were computed daily²⁹ using the following formula³⁰:

$$R_t = (NAV_t - NAV_{t-1}) / NAV_{t-1}$$

where NAV_t is the Net Asset Value³¹ per unit share of the fund at the end of period t.

Table 5 below displays some basic descriptive statistics based on the rates of return (unadjusted) of the three equity-based mutual funds. Comparable statistics are also given for the 90-day Treasury Bill (T-Bill), which is taken as the risk-free

²⁶ The names of the bank-based funds used in this section are not revealed to respect the disclosure requirement policies of these banks.

²⁷ This time period is used due to the inaccessibility of prior data and its incorporative property in that all funds were established and fully functioning during this time period.

²⁸ In calculating the returns, it was assumed that all dividends and capital gains were reinvested in the funds and fund expenses were deducted from net asset value.

²⁹ For days on which no value of NAV was available, it was assumed that the last observed value remained unchanged. There were very few cases where this assumption was necessary.

³⁰ An alternative formula is $R_t = \ln(NAV_t / NAV_{t-1})$

³¹ The net asset value of a fund is the market value of the assets held in a fund less fund liabilities. It is expressed as a ratio of the total number of shares outstanding in the fund.

rate of interest, and two indices that measure trading on the Trinidad & Tobago Stock Exchange: the Composite Index (CI) and the All Trinidad and Tobago Stock Index (ATTSI)³².

TABLE 5
DESCRIPTIVE STATISTICS FOR THREE EQUITY MUTUAL FUNDS IN TRINIDAD AND TOBAGO

Rates of return on:	Mean (%)	Standard Deviation (%)	Skewness	Kurtosis	p-value for Jarque-Bera test
Bank Fund 1	0.0484	0.2492	0.6288	33.75	0
Bank Fund 2	0.0936	0.8404	1.506	272.1	0
UTC Fund	0.0503	0.3331	-3.406	66.19	0
T-bill	0.0144	0.0031	2.562	9.480	0
CI	0.1019	0.3417	4.443	45.06	0
ATTSI	0.1143	0.4069	4.309	45.02	0

Sample size is 1042.

There is a clear trade off between risk and return, as is predicted by the Capital Asset Pricing Model (CAPM): bank fund 2 has the highest return but also the highest risk, while bank fund 1 has the lowest risk and the lowest return of the three portfolios. The two benchmarks used also outperformed the three funds on a simple total return basis but this is expected since most funds have only part of their portfolios invested in equities which are expected to have higher returns than the other major component of their portfolios - money market instruments or bonds (See Figures 2, 3 and 4). This is also borne out by the fact that the Bank fund 2, which had the highest proportion of equities in its portfolio, had the highest total return of the funds under consideration. The total return of the two

³² CI is calculated over a range of local, regional and international stocks whereas ATTSI is calculated over only local stocks. Data on the value of the indices are provided three times per week (Tuesdays, Wednesdays and Fridays). It is assumed that the values remain unchanged from the previous day for those days that data are unavailable, a common practice amongst traders.

benchmarks would also be higher because they do not account for the costs related to acquiring a portfolio of equities that mimics the return distribution of the market from which the benchmarks (stock market indices) were derived.

Bank Funds 1 and 2 are positively skewed while the UTC fund is negatively skewed. All funds have positive kurtosis suggesting that their distributions are peaked but not normal. The rate of return for Bank Fund 2 has a very high kurtosis meaning that the variance of this fund may be due to infrequent and extreme deviations. The Jarque-Bera convincingly establishes the non-normality of the distributions. The standard deviation may not be the best measure of risk when the distribution of returns is skewed and seems to be non-normal (Fong 1997). As such one must be careful in the interpretation of the results of the Sharpe ratio calculated in the following section.

As a preliminary step, tests were performed to determine whether or not there is a significant difference in the returns (test for equality of means) and risks (test for equality of variances) attributable to the three funds. The results of the tests are displayed in Table 6 below.

Table 6
Tests of Equality of Means and Variances of Bank and UTC Funds

Funds used in test	P-value for test of Equality of Means	P-value for test of Equality of Variances
Bank funds 1 and 2 and UTC Fund	0.0983	0
Bank funds 1 and 2	0.0963	0
Bank fund 1 and UTC Fund	0.8819	0
Bank fund 2 and UTC Fund	0.1225	0

The null hypothesis that there is no difference in risk is soundly rejected in all cases considered. However there is relatively convincing evidence that there is no significant difference in the returns, especially if we choose a “safe” significance level like 5%. There is some very mild evidence (at about the 10% level of

significance) that there is a difference in the returns of bank funds 1 and 2. Given all this, a rational investor should rank the portfolios by the risk involved (since the average total returns are statistically the same), and the ranking, in order of preference, should be bank fund 1, the UTC fund and bank fund 2.

Use of The Sharpe ratio³³ confirms this ranking. Table 7 shows this ratio together with the basic descriptive statistics associated with the risk premiums of the fund portfolios under consideration as well as the Stock Exchange portfolios. It is noteworthy that all funds under performed the “market benchmark” (the portfolios implied by the Stock Exchange indices), which suggests that the fund managers are not trying to mimic the performance of the benchmarks chosen. Moreover, even in the case of Bank fund 2, which has the highest proportion of equities in its portfolio, much of the equity is from companies listed on stock exchanges outside of Trinidad and Tobago and therefore one would expect the return distribution of this fund to be different from the return distribution of the indices chosen.

TABLE 7
RISK ADJUSTED RATES OF RETURN FOR THREE LOCAL EQUITY
MUTUAL FUNDS AND THE COMPOSITE INDEX

Mutual Funds	Mean Risk Premium	Standard Deviation	Skewness	Kurtosis	J-B p-value	Sharpe Ratio
Bank Fund 1	0.0341	0.2496	0.6219	33.74	0	0.136838
Bank Fund 2	0.0792	0.8405	1.4943	272.0	0	0.094241
Non-Bank Fund	0.0360	0.3334	-3.402	66.11	0	0.108076
Composite Index	0.0874	0.3417	4.400	45.02	0	0.255780
All Index	0.1000	0.4072	4.310	44.98	0	0.245515

³³ This is the ratio of the portfolio risk premium to the standard deviation of the portfolio. The risk free rate of return used is the average issue rate for 90 day Treasury bills.

Other evaluation techniques such as the one proposed by Jensen (1968) or by Treynor (1965) could not be used since their effectiveness depends critically on the return distribution of the fund mimicking the return distribution of market benchmarks. Correlation calculations for the returns on the funds and the returns on two local market indices (the CI and the ATTSI) shown in Table 8 below clearly show that these indices do not mirror the performance of these bank and non-bank equity funds. This conclusion supports that derived by Seerattan (2005).

TABLE 8
CORRELATION COEFFICIENTS FOR THREE EQUITY MUTUAL FUNDS IN TRINIDAD AND TOBAGO

Return on Fund:	Correlation with CI	Correlation with ATTSI
Bank Fund 1	0.033756	0.035313
Bank Fund 2	0.518138	0.554215
UTC Fund	0.023466	0.030356

Sample Size is 1042.

POLICY RECOMMENDATIONS

As it stands today, there is no defined regulatory structure for mutual funds and more so bank equity mutual funds in Trinidad and Tobago. Although the UTC Act, the Financial Institutions Act and the Securities Exchange Commission Act tap into the area of mutual funds, these acts do not cover the entire industry and more so the nature of the industry. There is no defined regulator for the mutual funds industry. Though the Securities Exchange Commission regulates the capital market under which mutual funds fall, banks and their subsidiaries are regulated by the Central Bank, in which case conflict arises. It is our recommendation that specific regulations be put in place and that such legislation should cover the following areas:

- ❖ Information disclosure. Legislation should demand the reporting of risk-adjusted rates of return rather than the normal and unadjusted rate of return. This way unitholders and potential investors would not be misinformed as regards to the actual performance of the fund.
- ❖ Risk disclosure. The Central Bank Circular No.1 of 1994 requests that financial institutions managing and distributing mutual funds disclose the risks involved in these funds. Any omnibus legislation for the mutual funds industry must include a provision for full and truthful disclosure of all risks as well as the disclosure of possible loss of principal investment.
- ❖ Introduce standards for financial reporting along the lines of the Global Investment Performance Standards.
- ❖ Introduce a comprehensive legislative framework to cover all mutual funds.
- ❖ Introduce standards with respect to corporate governance, especially the decentralisation of corporate functions.
- ❖ Limits and standards on asset portfolio composition

One non-policy recommendation that can be made is the development of an appropriate index for the mutual funds market, one that mirrors the returns on the various funds in the local industry. In section 4 it was shown that the existing indices were inappropriate benchmarks for assessing the performance of bank and non-bank equity mutual funds and as such, the research had to rely on a non-benchmark model and is therefore limited by such a model. Hopefully with legislation and the establishment of appropriate benchmarks, the structure and performance of local equity mutual funds can be reassessed and the limitations of this research paper could be overcome.

CONCLUSION

Generally, the structure of bank equity mutual funds is similar to that of non-bank equity mutual funds.³⁴ Both types of funds have similar total fees although the fee structure may differ slightly in terms of the various types of fees and whether some additional expenses are charged to the fund. Generally, the asset portfolios of funds are similar as equities make up the largest share of the asset portfolio, followed by bonds and money market securities. The return dynamics of the funds are affected, however, by the relative dominance of these asset classes with funds with a larger proportion of equities having higher total returns and risks. The ability of fund managers to charge additional expenses to the fund above and beyond the fixed fees outlined in the prospectuses can have an impact on return performance.

The major difference in terms of the corporate structure between the UTC and the bank-based funds did not seem to have an impact on relative performance since the expected impact of this normally comes through differences in the total fee ratio³⁵. In this case, although there were differences in the fee structure, the total fee ratios were relatively similar except for back end fees for one fund and additional expenses to the fees outlined in the prospectuses of the two bank based funds being charged to the funds. These did not appear to have an impact on relative performance.

On the average, the return on the three equity funds is similar but the risk attached to each one differs. The Sharpe Ratio is used to determine an appropriate ranking of the three funds. Whereas other studies have used the Jensen and Treynor measures to assess the performance of mutual funds, this could not be done in the case of Trinidad and Tobago. The local benchmarks prove to be unsuitable and

³⁴ The structure of non-bank equity mutual funds was determined by the assessment of the First Unit Scheme of the UTC since it is the only locally domiciled equity fund managed and distributed by a locally owned non-bank financial institution.

³⁵ Funds where the trustee, investment manager and advisor are connected are expected to have higher fees as there could be some collusion.

since few investment managers invest in international funds, international indices would also be inappropriate. The most appropriate measure therefore for assessing the performance of mutual funds in Trinidad and Tobago would be a one that is independent of a benchmark, such as the Sharpe Ratio.

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Table A1
Asset Portfolio Composition of the Roytrin TT Dollar Income & Growth Fund (%): 1994-2004

	1994	1995	1996	1997*	1998	1999	2000	2001	2002	2003	2004
Short Term Securities, Fixed Deposits and Cash	41.00	52.92	28.11	31.59	48.00	6.35	8.00	2.12	15.00	19.40	19.00
Bonds	43.00	26.94	38.19	32.58	24.00	34.67	30.00	50.59	39.00	27.30	25.00
Equities	16.00	20.14	33.70	35.83	23.00	56.29	60.00	43.75	44.00	53.00	56.00
Mortgage and Other Securities	0.00	0.00	0.00	0.00	5.00	2.69	2.00	3.54	2.00	0.30	0.00

Source: Roytrin Mutual Funds Unitholders' Annual Reports.

Table A2
Asset Portfolio Composition of the Republic Caribbean Equity Fund (%):
1999-2003

	1999	2000	2001	2002	2003
Short Term Securities and Cash	19.59	14.41	4.30	2.29	5.76
Term Deposits	2.93	36.08	13.90	9.58	0.00
Bonds	0.00	4.03	0.00	2.74	6.44
Equities	77.48	45.48	81.80	85.39	87.80

Source: Annual Financial Reports for the Republic Caribbean Equity Fund.

Table A3
Asset Portfolio Composition of the UTC's First Scheme (%): 1994-2004

	1994	1995	1996	1997	2000	2001	2002	2003	2004
Short Term Securities, Fixed Deposits and Cash	19	27.55	19.8	31.1	1.58	23.42	3.79	23.67	34.17
Bonds	39	25.48	33	17.6	19.41	17.68	27.03	17.43	12.29
Equities	42	46.97	47.2	51.3	79.01	58.9	69.18	58.9	53.54