Crummer SunTrust Portfolio Investment Strategy

David Kim  
Rollins College

Susan Kreis  
Rollins College

Wael Saeed  
Rollins College

Tiffany Slaughter  
Rollins College

Zhiqiang Zeng  
Rollins College

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Crummer SunTrust Portfolio
Investment Strategy

Prepared for:

FIN609 – Portfolio Management
Dr. Edward A. Moses
March 30, 2000

Prepared by:
David Kim
Susan Kreis
Wael Saeed
Tiffany Slaughter
Zhiqiang Zeng
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0 Executive Summary

The objective for this investment portfolio is to achieve a long-term growth comparable to the S&P 500 index but at lower risk and to provide sufficient fixed income to fund the scholarship program at the Crummer Graduate School. During the first few years of the portfolio, the primary goal is to grow the portfolio’s market value as rapidly as possible while maintaining a broad diversification. Securities in the U.S. equities market are limited to S&P 500 companies. The portfolio is a ‘buy-n-hold’ portfolio with no short sells. The portfolio is sufficiently diversified to minimize or eliminate unsystematic risk. The portfolio holdings are balanced to lie on the capital market line and the efficient frontier.

The portfolio consists of growth equities with international diversification, fixed income, and minimum cash. The portfolio does not invest in real estate, commodities, futures, options, or currencies. Growth equities were selected for their high return potential. International diversification is achieved through investment in international growth funds in the European and Asian markets. Due to the historically high volatility of many technology stocks, these stocks are included exclusively through NASDAQ 100-index fund from the original portfolio.

This team’s investment philosophy is to maintain diversification within selected industries that have strong growth potential, and to raise the number of individual securities in the portfolio to at least twenty. To minimize transaction fee effects for each security, each one’s corresponding weight was constrained to be not less than one percent. To accomplish these goals, the group analyzed various industries, as classified in S&P Industry Surveys, to ascertain the optimal areas for investment. Industries without promising growth potential were eliminated. Within the industries that were selected, securities added to the portfolio were chosen based on their capitalization (S&P 500 companies), strength of their PEG ratio relative to their industries, company profiles, other performance ratios, recent news, and analyst forecasts.

Assets from the existing portfolio were reviewed for their past and anticipated future performance. Most were retained in order to increase diversification, but three more promising companies were replaced for poorly performing securities in their respective industries. One mutual fund was also replaced. Through these, this team has created a diversified portfolio that, at least based on historical data during the past two years, had a return superior than that of the S&P 500 with only half of the market risk as measured by their standard deviations. The historical Beta is 0.71. Other performance ratios show that our portfolio had a lower risk than the S&P 500.
1 Introduction

SunTrust Banks of Central Florida Foundation has made a pledge to give $1,000,000 to Rollins College, $500,000 of which is designated for the Crummer SunTrust Investment Portfolio to be directed by Crummer students. The portfolio became operational in the January-April 1999 period, the time of the first $100,000 contribution. The first investment of the portfolio was made in May 1999 and has resulted in a 21.10% annualized rate of return as of February 2000. Returns from the portfolio are to be used to fund student scholarships for the Crummer Graduate School. Funds for scholarships are to be made available annually on the basis of six percent of the three-year moving average of the portfolio's market value, excluding the first two years of the fund's inception.

2 Client Profile

The client (Crummer Graduate School) desires to invest in a diversified portfolio. The client is not subjected to federal or state taxes but does pay transaction fees.

2.1 Investment Objectives

The investment objective is to achieve a long-term growth comparable to the S&P 500 index with reduced risk and to provide sufficient fixed income to fund the scholarship program. During the first few years of the portfolio, the primary objective is to grow the portfolio's market value as rapidly as possible while maintaining a diversified portfolio. Securities in the U.S. equities market are limited to S&P 500 companies. The portfolio is a 'buy-n-hold' portfolio with no short sells.

2.2 Risk Preferences

The portfolio is diversified to minimize or eliminate unsystematic risk. The portfolio holdings are balanced to lie on the capital market line and the efficient frontier.

2.3 Portfolio Composition – Asset Class Allocation

The portfolio consists of growth equities with international diversification, fixed income (ten percent allocation to provide cash payout for scholarships), and minimum cash. The portfolio does not invest in real estate, commodities, futures, options, or currencies. Growth equities were selected for their high return potential. International diversification is achieved through investment in international growth funds in the European and Asian markets. Due to the historically high volatility of many technology stocks, these stocks are included exclusively through NASDAQ 100-index fund from the original portfolio.
3 Investment Philosophy

This team's investment philosophy is to maintain diversification within selected industries that have strong growth potential and to raise the number of individual securities in the portfolio to at least twenty. To minimize transaction fee effects, each security weight in the portfolio is constrained to be not less than one percent.

4 Asset Allocation

Various industries, as classified in S&P Industry Surveys, December 1999, were analyzed to identify promising areas for investment. Industries without strong growth potentials were eliminated. Within the industries that were selected, securities to be added to the portfolio were chosen based primarily on their capitalization (S&P 500 companies) and strengths of their PEG ratio relative to industries. Other factors considered were company profiles, other performance ratios, recent news, and analyst reports.

Assets from the existing portfolio were reviewed for their past and anticipated future performance. Most were retained in order to increase diversification, but three more promising companies were replaced for poorly performing securities in their respective industries. One mutual fund was also replaced.

4.1 Industry (U.S.)

Industries selected for the diversified portfolio were based on future growth potentials (ref: S&P). During the past year, their returns ranged from 382% for airline to 9,125% for healthcare-drugs (ref: Morningstar). The gaming industry showed a return of −3% but was included because it is expected to grow strongly over the next few years.

4.1.1 Advertising

The investment outlook for the Advertising and Marketing industry is positive due to anticipation of strong demand for advertising services over the next several years. The Olympics, national elections, and Internet advertising will be important sources of business for the industry in the near future. Annual domestic and international advertising revenues are expected to grow 8% and 7%, respectively. Historically generous dividends are also an attractive feature of these types of stocks. In this industry, interest rate trends have little impact on operations, as the businesses are not generally capital intensive. The long-term outlook for the ad industry is promising because of the existence of new markets, new advertisers, and new product introductions.
4.1.2 Airline
Even with the $10 surcharge due to rising oil prices, airline stocks are expected to deliver average returns despite depressed valuations. Most of the weakness has been on the international side. Airline profits, which grew 1.7% in 1998, dropped about 11% in 1999. A 1.4% gain is expected for 2000 with potentials for stronger growth.

4.1.3 Beverages: alcoholic
Year to date through February 4, the S&P Beverages (Alcoholic) Index fell 6.0%, versus a 2.7% decline in the S&P 1500 Index. The S&P Beverages (Alcoholic) Index significantly under-performed the broader market in 1999, only gaining 5.2% versus the 19.5% rise in the S&P 1500. Despite this, the near-term investment outlook for the overall industry is positive, reflecting an improved pricing environment for beer and favorable demographic and consumption trends. In the coming year the U.S. brewing industry is expected to show a 1% to 2% growth in volume, despite modest price increases, led by continued strong growth in the premium and light beers sectors. U.S. distilled spirits shipments will likely remain unchanged from 1999 shipments, as higher disposable incomes offset a continued trend towards moderation. Wine products, however, may again buck this trend, as the volume U.S. wine shipments is currently benefiting from publicity concerning the health benefits of moderate consumption. Also, lower grape prices will yield lower wine prices at the generic end of the market, thereby increasing the industry’s volume in 2000.

4.1.4 Broadcasting TV
Since operating prospects for television and radio broadcasting are positive, and station ownership has been liberalized, this industry is expected to outperform the market in 2000. Although FCC price restrictions for subscriber charges expired in April 1999, the cable industry is expected to remain relatively conservative in its pricing policies, with rate hikes to average only 4%-5%. Cable subscriptions, which are relatively immune to economic conditions, are also expected to grow at 2% per year. Digital technology, which expands channel capacity, is having positive effects on cash flow and stock performance. The industry is expecting to be fully digitized by 2002, with consumer demand for digital services growing faster than the industry’s ability to provide them. Television advertising revenues in 2000 are expected to rise 13.5%, following an 8% gain in 1999. This is due to the heavily advertised Summer Olympics, Internet web-sites, and national elections.

4.1.5 Communication Equipment
The recent decline in the Communications Equipment Index is largely a function of an earnings shortfall from market share leader Lucent Technologies, which represents over 36% of the Index. Overall, however, healthy growth is expected for the communication industry. Much of the growth in communications equipment has resulted from the exponential growth of the Internet. As the number users increases and the average time online per user also increases, there is a strain on the capacity of networks. In response, communications carriers are constructing new networks, based on Internet protocols, that
combine the strengths of both voice and data communications equipment. These networks are increasingly being formed around fiber-optic cable and equipment. As a result, the market for optical products has soared in 1999, with further growth on tap for 2000. The current overall wireless penetration rate of 25% shows definite room for growth.

4.1.6 Electrical Equipment
1999’s S&P Electrical Equipment Industry under-performed the S&P 1500 due to investor concerns about rising interest rates. The near-term investment outlook remains neutral. Participants aggressively reducing costs to improve productivity have augmented earnings growth within the industry. It is thought that these leaner companies will be better suited to weather future economic downturns. The consumer electronics segment could prove a potential problem due to the absence of major new products. Without new products, companies have been relying on replacement demand in developed markets and presence in fast-growing developing countries, such as the Asia-Pacific region, to boost sales growth. To spark the demand, companies are supplying frequent minor changes to products in order to quicken the obsolescence of existing products. Competition is increasing for consumer products. R&D efforts are expected to increase fueling growth.

4.1.7 Financial: Diversified
The Financial Diversified Index is made up of a broad group of consumer and commercial oriented financial service companies that provide home equity loans, credit cards, insurance, and securities and investment products. The Financial Diversified Index in 1999 under-performed the S&P 1500 by 1.3%. This under-performance has been attributed to fears about rising interest rates. Despite this, the 12-month outlook is generally positive. Though rates are rising, they are still low compared to historical standards. Furthermore, the economy is expected to remain strong, the unemployment rate is expected to continue to decrease, and the GDP is expected to grow 3.7%. This combination provides an environment in which this industry should be able to produce good profit growth.

4.1.8 Gaming
The near-term investment outlook for the gaming industry is neutral. However, it is expected that a slowdown in the amount of new capacity throughout the industry will lead to opportunities for profit growth. It is also likely that there will be some consolidation within the industry. Though gambling is legal in 20 states, Las Vegas and Atlantic City remain to be the biggest U.S. casino markets, each with annual casino winnings of more than $3 billion. With limited growth opportunities in new markets, both Atlantic City and Las Vegas continue to receive considerable attention as potential locations for new casino/hotels or expansions for existing facilities. It is expected that casinos on Native American land in California will also become a significant industry factor in the years ahead.
4.1.9 Healthcare: Diversified
Revenues for this group fell 5.4% in 1999, which was one of the best performances in the lagging health care sector. Stronger earnings in 1999 helped these stocks. This group is made up well-balanced drugs, OTC medications, and medical devices. The overall group is expected to perform in line with the general market in the months ahead. Though the elderly segment of the population remains on prescriptions, recent political movements to help Medicare beneficiaries could prove detrimental to makers of prescription drugs and could result in steep price discounts. The branded drug industry is also facing patent expirations over the next 5 years on drugs that generated over $40 billion in sales in 1999. Despite this, the diversified medical products sector is still one of the strongest and highest-margin industries in the United States.

4.1.10 Healthcare: Drug
Drug stocks have decreased in recent weeks, mostly reflecting concerns over proposed changes in the Medicare program restricting drug pricing. Studies have shown that drug pricing has significantly outpaced the overall rate of inflation over the past few years. Furthermore, investors are also concerned over patent expirations on a large number of major drugs. New cost-containment strategies have been implemented which require customers to pay for an increasing proportion of their drug costs. This has increased the incentive to choose generics and less expensive formulary-listed products. Historically, however, this industry has been able to maintain its strength and rejuvenate itself by introducing premium-priced new therapies, which obsolete older drugs and open new markets. Drug makers should also benefit from a more industry-friendly environment, with the FDA promising to streamline and make more efficient the overall new drug approval processes.

4.1.11 Household: Furnishing
High amounts of housing activity in recent years and low interest rates have provided a demand for household furnishings and appliances. The 2000 shipment volume is expected to exceed 1999’s record amount. However, shares may be pressured by fears of higher interest rates that could slow housing activity, the most important driving force behind furniture sales. Homeowners tend to spend more of their disposable income on new furniture one year after purchasing a house than any other time. Helping the industry are low unemployment, a strong stock market, and high consumer confidence. Also, the population group this industry targets is the 35-to-64 year-olds, the fastest growing segment in the U.S. and those at the peak of their spending years.

4.1.12 Household: Products
The household products industry is expected to outperform the market in 2000. In 1999, the industry was slowed due to difficulties in Latin America. However, the second half of the year was helped by strong results in Asia Pacific. Results are expected to improve due to strength in Asia Pacific and a turnaround in Latin America. International sales comparisons may also begin to improve due to the weakness of the dollar. Further,
Brazil, Chile and Argentina are beginning to become important to the industry. Though these economies struggled throughout most of 1999, the industry was able to post solid results due to cost cutting programs. Future growth will most likely come from continued expansion overseas, particularly in emerging countries, and industry consolidation. It is expected that the emergence of global brands should dominate the industry over the next decade.

4.1.13 Investment Banking
The investment banking industry has a positive outlook for 2000. Security trading volumes continue to increase along with capital market activity and consolidation across many different industries. Rising interest rates could affect profits, but the expectation is that interest rates will fall in the second half of the year, thus helping the industry. Competition is intensifying, driven by consolidation within banks and insurance companies. Furthermore, the growth of low cost on-line trading is likely to put pressure on the traditional retail brokerage commissions. Despite these trends, long-term prospects look favorable for the industry due to the monetary unification in Europe and problems with funding social security obligations in developed nations. Internationalization of financial markets continues to increase, as well as favorable demographics, which will yield higher savings rates. The industry continues to build up asset management operations and compensation plans. These actions reduce the cyclical nature of the industry.

4.1.14 Restaurants
The near-term investment outlook for the restaurant and food service industry is neutral. The industry is feeling pressure from three trends: rising wage rates, strong same-store sales gains, and food price inflation. Competition within the industry is slowing as fewer new units are under construction than in past years. Nonetheless, there is still a growing demand for eating out. Since more people are working, they have less time to cook at home. There is an emphasis on offering lower-priced menu items. There will be pressure from higher labor costs as the unemployment rate remains low and the pool of qualified employees remains limited. The industry will most likely need to lower development costs of new restaurants and slow expansion in the U.S. Reducing the amount of investment in new units should boost companies’ return on investment and better position them to enter new markets, namely, abroad.

4.1.15 Retail: Building & Supplies
The near-term outlook for the Retail (Building Supplies) industry, which caters to the do-it-yourself market, is mostly positive. During 1999, the industry outperformed the broader market with a stellar 53.7% rise, outperforming the 18.8% increase of the S&P 1500. Interest rates are expected to remain at levels in which consumers feel comfortable about spending their disposable income on remodeling projects. This industry is not solely dependent upon sales of new homes. Factors that affect the industry include interest rate levels, housing turnover, consumer debt levels, consumer concerns about job
security, and even weather. Though new housing is important, housing turnover is three
times larger. Homes built before 1980 account for more than 86% of the U.S. housing
stock. As a result, many are old enough to need repairs. Furthermore, baby boomers are
spending more time at home with their families, which suggests that they are more likely
to spend a larger portion of their disposable income on their homes than in prior years.

4.1.16 Retail: Specialty
Most of these stocks are currently down from their 1999 highs. The near-term investment
outlook is neutral. Over the long-term, however, many companies that have a strong
market niche, such as Tiffany’s and William Sonoma, should continue to outperform
others. The combination of low inflation and low unemployment allows for an optimistic
outlook for continued gains in personal income. With an increasing number of people
working at home and adding equipment such as faxes and modems to their home office,
office supply stores, namely the large superstores, have been able to grow to about 2,000
units in the U.S. Other types of superstores with products such as sporting goods,
electronics, computers, books, and pet supplies are springing up around the country.
These outlets offer lower pricing and larger selections than traditional retailers, thus
making small stores unable to be competitive. The winners in the future will be the
companies with the combination of a strong brand name and a web site for shopping.
However, the expenditures for e-commerce sites will hurt profitability in the short-term.

4.1.17 Telecommunications: Long-Distance
The telecommunications industry continues to be strong. When Baby Bells enter the
long-distance market in 2000, they will be going against competition-hardened long-
distance players. It is expected that this group of long-distance carriers will beat the
market in 2000. The major players have been de-emphasizing long-distance in favor for
more attractive growth in international, local, wireless and Internet/data services markets.
Overall long-distance calling volume growth has slowed in recent years since pricing
trends have stabilized. Top players have lowered their rates as the FCC lowered access
charges to local carriers. Therefore, the revenue shortfall should not filter down to the
earnings of these companies. Top carriers are also accelerating efforts into the quickly
growing wireless market and are encouraging incremental use of their own networks.
4.2 Securities from Existing Portfolio: Retained

<table>
<thead>
<tr>
<th>Security</th>
<th>Industry/ Category</th>
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<tbody>
<tr>
<td>DAL</td>
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<td>Electrical Equipment</td>
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<td>Financial: Diversified</td>
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<td>JNJ</td>
<td>Healthcare: Diversified</td>
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<td>Healthcare: Drug</td>
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<td>ODP</td>
<td>Retail: Specialty</td>
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<td>T</td>
<td>Telecommunications: Long Distance</td>
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<td>FEURX</td>
<td>Invesco European</td>
</tr>
<tr>
<td>QQQ</td>
<td>NASDAQ 100</td>
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</tbody>
</table>

Table 1 Securities from Existing Portfolio: Retained

**DAL** - Delta Air Lines, Inc. provides air transportation for passengers, freight and mail over a network of routes throughout the United States and abroad. The Company provides air service to over 140 cities in the United States and 46 cities in foreign countries. Delta's operations are concentrated in Asia, Europe, Latin America and North America. Delta's United States route system consists of four hub airports located in Atlanta, Cincinnati, Dallas-Fort Worth and Salt Lake City. These hubs also provide connecting passengers with access to Delta's international gateway at New York's Kennedy Airport and its Pacific gateway in Portland, Oregon. Delta has partial interest in various domestic carriers including Atlantic Southeast Airlines Holdings (ASA), Inc., Comair Holdings, Inc. and SkyWest, Inc. For the six months ended 12/99, revenues rose 5% to $7.59 billion and net income applicable to Common rose 36% to $698 million. Revenues reflect an increase in revenue passenger miles and passenger mile yield. Net income also reflects a $901 million gain on the sale of the Singapore Airlines.

**BUD** - Anheuser-Busch Companies, Inc., is a brewer of beer that also participates in the production and acquisition of brewing raw materials, the manufacture and recycling of aluminum beverage containers and the operation of theme parks. The Company's principal product, beer, is produced and distributed by its subsidiary, Anheuser-Busch Incorporated (ABI). The Company's packaging operations are conducted through several subsidiaries including Metal Container Corporation, Anheuser-Busch Recycling Corporation, and Precision Printing and Packaging, Inc. The Company is active in the family entertainment field through Busch Entertainment Corporation, which owns, directly and through subsidiaries, nine theme parks. Other operations include the Company's real estate development, marketing communications and transportation service businesses. For the nine months ended 9/30/99, net sales increased 4% to $8.99 billion and net income increased 14% to $1.21 billion. Results reflect increased domestic
beer sales volumes, increased revenue per barrel, and increased equity earnings from the
company's Modelo investment.

GE - General Electric Company is one of the largest and most diversified industrial
corporations in the world. The Company's products include lamps and other lighting
products, major home appliances, industrial automation products and components,
motors, electrical distribution and control equipment, locomotives, power generation and
delivery products, nuclear reactors, nuclear power support services, aircraft jet engines,
plastics, and a wide variety of high-technology products. The National Broadcasting
Company, Inc., a wholly owned affiliate, furnishes network television services, operates
television stations, and provides cable programming and distribution services. Through
General Electric Capital Services, Inc., the Company offers financial services including
real estate financing, asset management and leasing, mortgage services, consumer
savings and insurance services, specialty insurance and reinsurance. Total revenues for
the nine months ended 9/30/99, rose 10% to $78.78 billion and net income rose 15% to
$7.63 billion. Revenues reflect increased volumes of goods and services sold. Earnings
also reflect an improved operating margin.

C - Citigroup, Inc. provides financial products and services to individuals, businesses,
governments and financial institutions. Subsidiaries include Citibank, Commercial
Credit, Primerica Financial Services, Salomon Smith Barney and Travelers Life &
Annuity. Global Consumer delivers banking and lending services in over 50 countries.
Global Corporate and Investment Bank provides financial planning and retail brokerage
services, banking and other financial services, and commercial insurance products in the
United States and nearly 100 foreign countries. The Asset Management group offers
mutual funds, closed-end funds, managed accounts and unit investment trusts. Citigroup's
Investment Activities segment primarily consists of the Company's venture capital
activities, the realized investment gains and losses related to certain corporate and
insurance related investments, and the results of investments in countries that refinanced
debt. For the nine months ended 9/30/99, total revenues rose 7% to $61.05 billion and net
income before accounting change applicable to Common rose 46% to $7.26 billion.
Results reflect increased revenues from principal transactions and reduced interest
expenses.

JNJ - Johnson & Johnson manufactures and sells a variety of health care products
worldwide. The Consumer segment produces personal care and hygiene products for oral
and baby care, first aid use, non-prescription drug usage, sanitary protection, and skin and
hair care. Some of the Company's major brands are Band-Aid bandages, Carefree
feminine hygiene products, J & J baby care products, Mylanta, Neutrogena, and Tylenol.
The Pharmaceutical segment produces prescription drugs for allergy, antibacterial, anti-
fungal, anti-anemia, contraceptive, dermatological, gastrointestinal and pain management
uses. The Professional segment manufactures products such as surgical and medical
equipment and devices for use in the professional healthcare field. For the nine months
ended 10/3/99, revenues increased 17% to $20.24 billion and net income increased 14%
to $3.38 billion. Revenues reflect acquisitions, new product launches and price increases.
Earnings were partially offset by increased interest expenses, decreased interest income, and unfavorable foreign currency rates.

**PFE - Pfizer Inc.** is a global health care company operating in two business segments. The Pharmaceutical segment includes prescription pharmaceuticals for treating cardiovascular diseases, infectious diseases, central nervous system disorders, diabetes, erectile dysfunction, allergies, arthritis and other disorders, as well as non-prescription medications. The Animal Health segment comprises antiparasitic, anti-infective and anti-inflammatory medicines, and vaccines for livestock, poultry and companion animals. Pfizer's major pharmaceutical products include Norvasc, Procardia XL, Zithromax, Diflucan, Zoloft, Viagra, and Zyrtec. Pfizer's better-known over the counter brands in the United States are Visine, Bengay, Cortizone, RID, Unisom, Bain de Soleil, Plax and Barbasol. Pfizer's Animal Health products include Dectomax, Rimadyl, Anipryl, Terramycin LA-200, Banminth, Nemer, Valbazen, Paratect, Coxistac, Aviax and Mecadox. For the nine months ended 10/3/99, total revenues rose 21% to $11.7 billion and net income from continuing operations rose 37% to $2.25 billion. Results reflect increased alliance revenue and increased net interest income.

**ODP - Office Depot, Inc.** operates a national chain of office products retail stores. Through its Stores Division, the Company operates over 700 retail office supply stores in about 40 states, the District of Columbia and five Canadian provinces. The stores carry a wide selection of merchandise including office supplies, business machines and computers, computer software, office furniture and other related products, and each store also contains a multi-purpose print and copy center offering printing, copying and a wide assortment of other services. The Company's Business Services Group offers delivery and contract services through catalogs, contract and public web sites, and a dedicated sales force. The International Division operates retail office supply stores and provides catalog and delivery services to customers in Australia, Austria, Belgium, Colombia, France, Germany, Hungary, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, The Netherlands, Poland, Thailand and the United Kingdom. For the 39 weeks ended 9/25/99 revenues rose 13% to $7.54 billion and net income rose 6% to $173.6 million. Revenues reflect the opening of new stores and higher comparable store sales. Earnings were partially offset by store closure costs.

**T - AT&T Corp.** provides voice, data and video telecommunications services to large and small businesses, consumers and government entities. AT&T and its subsidiaries furnish regional, domestic, international, and local communication services. The Company also provides billing, directory, and calling card services, and provides online and Internet accesses services. AT&T's communication and information services businesses provide regular and custom long distance communications services, data transmission services, 500 services, 800 and 888 (toll-free) services, 900 services, private line services, software defined network services and digital network technology based services. Services provided by AT&T Wireless include cellular, voice and data, messaging and air-to-ground communications. AT&T Solutions, Inc. provides outsourcing, consulting, networking integration, and multimedia call center services. For the nine months ended 9/30/99, revenues rose 16% to $46.06 billion and net income from
continuing operations before extraordinary items rose 7% to $3.48 billion. Results reflect higher broadband revenue, partially offset by equity losses.

**FEURX** - Invesco European Fund seeks capital appreciation. The fund normally invests at least 80% of assets in equity securities of companies domiciled in the following European countries: England, France, Germany, Belgium, Italy, the Netherlands, Switzerland, Denmark, Sweden, Norway, Finland, and Spain. The advisor selects securities that are generally listed on the principal stock exchanges of these countries. There is no limitation on the percentage of assets that may be invested in any one country. Prior to July 1, 1993, the fund was named Financial European Fund. On June 18, 1999, Invesco European Small Company Fund merged into the fund.

**QQQ** - NASDAQ 100 index fund.

### 4.3 Securities from Existing Portfolio: Removed

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Category</th>
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<tr>
<td>MCK</td>
<td>Distributors: Food &amp; Products</td>
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<tr>
<td>AXP</td>
<td>Financial: Diversified</td>
</tr>
<tr>
<td>GMH</td>
<td>Telecommunications: Equipment</td>
</tr>
</tbody>
</table>

**MNIGX** Montgomery International

**Table 2 Securities from Existing Portfolio: Removed**

**MCK** - McKesson HBC, Inc. is a health care supply management company. MCK also provides software solutions, technological innovations, and comprehensive services to the health care industry and processes and markets pure drinking water. For the nine months ended 12/99, revenues increased 26% to $27.43 billion. Net income from continuing operations applicable to Common totaled $272.8 million, up from $122.7 million. Results reflect growth in the U.S. direct delivery and a $263.2 million gain on investments. While the revenues of this company have been up recently, their business strategy is not focused on healthcare and therefore does not fit into the criteria for our industry-weighted diversification. Therefore, we chose to keep the two more focused healthcare companies to represent this industry in our portfolio.

**AXP** - American Express Company, founded in 1850, provides travel-related, financial advisor, and international banking services throughout the world. American Express Travel Related Services Company Inc. provides a variety of products and services, including global network services, the American Express Card, the Optima Card, stored value products, corporate and consumer travel products and services, tax preparation and business planning services, magazine publishing, merchant transaction processing, and back office products and services. American Express Financial Corporation provides a variety of financial products and services to help individuals, businesses and institutions establish and achieve their financial goals, insurance and annuities, a variety of investment products, mutual funds and limited partnerships, investment advisory...
services, and trust and employee plan administration services. We chose to remove this security from our portfolio and exchange this for a company more focused in investment banking, an area in which we felt the portfolio was short.

**GMH** - Hughes Electronics Corp. is a leading global provider of digital direct broadcast satellite entertainment services, satellite communications services and satellite-based private business networks. Hughes, a wholly owned subsidiary of General Motors Corporation, is also a leading global manufacturer of satellite systems. The Company's businesses includes DIRECTV, which is the world's leading digital direct broadcast satellite service based on number of subscribers; PanAmSat, which owns and operates the largest commercial satellite fleet in the world; Spaceway, which is a planned satellite-based broadband communications platform; Hughes Network Systems, which is a leading provider of satellite and wireless communications ground equipment and services; and Hughes Space and Communications, which is a leading satellite manufacturer. This stock was removed due to poor performance and replaced by Motorola.

**MNIGX** - Montgomery International Growth Fund - Class R seeks capital appreciation. The fund normally invests at least 65% of assets in equities issued by companies domiciled in at least three foreign countries, with market capitalization greater than $1 billion. It may invest the balance in debt or in smaller companies. To select securities, management examines a company's per-share sales and earnings growth, return on capital, balance sheets, financial and accounting policies, overall financial strength, and new technologies and services. This fund was removed from our portfolio due to its poor performance but primarily to increase diversification of our international allocation.

### 4.4 Securities Added to Existing Portfolio

<table>
<thead>
<tr>
<th>Code</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMPW</td>
<td>Advertising</td>
</tr>
<tr>
<td>CCU</td>
<td>Broadcasting TV</td>
</tr>
<tr>
<td>MOT</td>
<td>Communication Equipment</td>
</tr>
<tr>
<td>HET</td>
<td>Gaming</td>
</tr>
<tr>
<td>WHR</td>
<td>Household: Furnishing</td>
</tr>
<tr>
<td>PG</td>
<td>Household: Products</td>
</tr>
<tr>
<td>LEH</td>
<td>Investment Banking</td>
</tr>
<tr>
<td>MCD</td>
<td>Restaurants</td>
</tr>
<tr>
<td>LOW</td>
<td>Retail: Building &amp; Supplies</td>
</tr>
</tbody>
</table>

**ACINX** - Acorn International (Asia)

*Table 3 Securities Added to Existing Portfolio*

**TMPW** - TMP Worldwide Inc. is a marketing services, communications, executive search, and technology company that provides comprehensive, individually tailored advertising services including development of creative content, media planning, market
research, and production and placement of corporate advertising. The Company's clients include nearly 400 of the Fortune 500 companies. TMP has also developed interactive career hubs, which can be accessed by individuals seeking employment via the Internet. The Online Career Center (OCC) was developed to help job seekers and corporate recruiters through the use of efficient and easy to use software. MedSearch is a web site for the healthcare industry, attracting healthcare professionals and health care providers alike. Be The Boss users can search for online franchise opportunities and apply directly to these franchisers using a customized questionnaire. For the nine months ended 9/30/99, net revenues increased 12% to $539.5 million. Net loss totaled $7.8 million vs. an income of $22.4 million. Revenues benefited from acquisitions, new clients, and increased Internet commissions. Loss reflects $46.2 million in merger-related charges and $2.8 million in restructuring expenses.

CCU - Clear Channel Communications is a diversified media company that owns or programs radio and television stations, and is an outdoor advertising company. Clear Channel's two radio stations are located in Denmark and broadcast Adult Contemporary and Oldies formats to the Copenhagen market and one cable audio channel that reaches most of Denmark. The Company also operates several radio networks serving Oklahoma, Texas, Iowa, Kentucky, Virginia, Alabama, Tennessee, Florida and Pennsylvania. Clear Channel's television stations are affiliated with various major television networks. The Company owns approximately 89,008 domestic display faces and 213,566 international display faces in over 32 domestic and 14 international markets. Domestic display faces include billboards of various sizes and small display faces on the interior and exterior of public transportation vehicles. International display faces include transit displays and billboards. For the nine months ended 9/30/99, gross revenues rose 96% to $2.01 billion. Net income totaled $95.3 million, up from $45 million. Results reflect the acquisition of additional radio stations and $136.9 million in gains on the sale of certain stations.

MOT - Motorola, Inc. provides integrated communications solutions and embedded electronic solutions, including software-enhanced wireless telephone, two-way radio, messaging and satellite communications products and systems, networking and Internet-access products, embedded semiconductor solutions and embedded electronic systems. Semiconductor products include integrated circuit devices, digital signal processors and access memories. Land mobile products include analog and digital two-way voice and data products and systems. Motorola also manufactures and sells automotive and industrial electronics, energy storage products and systems, printed circuit boards, ceramic and quartz electronic components, and electronic fluorescent ballast. On January 5, 2000, Motorola completed the acquisition of General Instrument Corporation, a leading worldwide provider of integrated and interactive broadband access solutions. For the nine months ended 10/99, net sales rose 7% to $22.43 billion. Net income totaled $468 million vs. a loss of $1.12 billion. Revenues reflect increased sales from Personal Communications Segment. Earnings also reflect the absence of $1.98 billion in restructuring and other one-time charges.

HET - Harrah's Entertainment, Inc. is engaged in the casino entertainment business, operating casino hotels in the traditional United States gaming markets of Reno, Lake
As of December 31, 1998, the Company operated a total of approximately 1.1 million square feet of casino space, 11,685 hotel rooms or suites, approximately 206,292 square feet of convention space, 90 restaurants, 29 snack bars, 12 showrooms and five cabarets. It also operated riverboat casinos in Joliet, Illinois, dockside casinos in Mississippi, Louisiana, and Missouri, and casinos on three Indian reservations. The Company also operates Showboat casinos in Las Vegas and Atlantic City, as well as a riverboat casino in Indiana, and the Star City Casino in Sydney, Australia. For the nine months ended 9/30/99, revenues rose 54% to $2.28 billion and net income before extraordinary item rose 51% to $160.3 million. Revenues reflect the acquisition of Rio and Showboat. Earnings were partially offset by higher interest expense due to acquisition-related debt increases.

WHR - Whirlpool Corporation is a manufacturer and marketer of major home appliances, cooking appliances, and other small home appliances. The Company's laundry appliances include automatic and semi-automatic washers, automatic dryers, coin-operated laundry machines and stacked washer-dryer units. Refrigeration and room air conditioning equipment include refrigerator-freezers, upright and chest freezers, room air conditioners, dehumidifiers, compact refrigerators, and ice-makers. Cooking appliances include ranges, ovens and surface cooking units, microwave ovens, countertop cooking units, and range hoods. Small household appliances include stand mixers, hand mixers, food processors, blenders and toasters. Other home appliances, products and services include dishwashers, residential trash compactors, hot water dispensers, oil radiators, water heaters, kitchen sinks, product kits, repair services, and warranty contracts. For the nine months ended 9/99, revenues rose 3% to $7.82 billion. Net income from continuing operations increased 3% to $234 million. Revenues reflect higher North American unit volumes and improved product and brand mixes. Net income reflects lower personnel expenses as a percentage of sales.

PG - The Procter & Gamble Company (Procter & Gamble) manufactures and markets a broad range of consumer products in many countries throughout the world. The Company's products fall into five business segments: Laundry and Cleaning, Paper, Beauty Care, Food and Beverage, and Health Care. Laundry and Cleaning products include dish care, fabric conditioners, hard surface cleaners and laundry. Paper products include diapers, feminine protection, tissue and towel, and wipes. Beauty Care products include cosmetics, deodorants, fragrances, hair care, personal cleansing, and skin care. Food and Beverage products include coffee, juice, peanut butter, shortening and oil, snacks, and commercial services. Health Care products include gastrointestinal, oral care, pharmaceuticals and respiratory care. For the six months ended 12/99, revenues rose 5% to $20.51 billion. Net income fell 2% to $2.22 billion. Revenues reflect growth in unit volume and product upgrades. Earnings were offset by increases in marketing and research expenses.

LEH - Lehman Brothers is a leading global investment bank that serves institutional, corporate, governmental, and high-net-worth individual clients and customers. The Company is engaged primarily in providing financial services. Other businesses in which the Company is engaged represent less than 10% of consolidated assets, revenues or pre-
tax income. The Company's business includes capital raising for clients through securities underwriting and direct placements, corporate finance and strategic advisory services, merchant banking, securities sales and trading, research and the trading of foreign exchange, derivative products and certain commodities. The Company acts as a market maker in all major equity and fixed income products in both the domestic and international markets. For the nine months ended 8/99, total revenues fell 11% to $14.29 billion, while net income applicable to Common rose 27% to $745 million. Results reflect lower interest and dividends revenues. Earnings benefited from increased customer flow activities in most of the fixed income and equity products.

**MCD** - McDonald's Corporation develops, operates, franchises and services a worldwide system of restaurants that prepare, assemble, package and sell value-priced foods. The Company operates the restaurants through franchise arrangements by franchisees that are independent third parties, or by affiliates under joint-venture agreements between the Company and local business people. Franchisees purchase equipment, signs, seating and décor, reinvest in the business, and pay rent and service fees or royalties. For the nine months ended 9/30/99, total revenues rose 7% to $9.89 billion and net income rose 22% to $1.46 billion. Revenues reflect restaurant expansion and positive comparable sales trends. Earnings also reflect the absence of a $160 million special charge related to the home office productivity initiative.

**LOW** - Lowe's Companies, Inc. is the second largest retailer of home improvement products in the United States. At January 29, 1999, Lowe's operated 484 stores in 27 states, principally in the eastern half of the United States. Lowe's serves both retail and commercial business customers, providing a wide selection of high quality, nationally advertised brand name merchandise. A typical Lowe's home improvement warehouse stocks more than 40,000 items ranging from lumber and tools to appliances and home decorations, as well as additional items available through its special order system. Lowe's also offers specific services such as installation, delivery, loading, assembly, free how-to clinics, wood and glass cutting, free kitchen design and a project desk to assist Lowe's customers in planning their home improvement tasks. For the nine months ended 10/29/99, net sales increased 19% to $12.12 billion and net income increased 30% to $523.9 million. Results benefited from an increase in comparable store sales, new store openings, and favorable changes in the product mix.

**ACINX** - Acorn International Fund seeks long-term growth of capital. The fund normally invests at least 75% of assets in equity and debt securities issued by small- and mid-cap, non-U.S. companies. It invests in a minimum of three countries with developed or emerging markets. Management generally selects companies that it judges to have superior growth potential, financial strength and stability, strong management, and fundamental value. The fund may invest up to 20% of assets in debt securities rated below investment-grade.
5 Portfolio Snapshot

The portfolio weight for each security and mutual fund was derived from the efficient frontier using MS Excel and is shown in Figure 1. Figure 2 shows the historical weekly return of the portfolio vs. S&P 500.

<table>
<thead>
<tr>
<th>Weight</th>
<th>Symbol</th>
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<tbody>
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<td>4.84%</td>
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<td>1.00%</td>
<td>DAL</td>
<td>Airline</td>
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<td>12.72%</td>
<td>BUD</td>
<td>Beverages: Alcoholic</td>
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<tr>
<td>1.00%</td>
<td>CCU</td>
<td>Broadcasting TV</td>
</tr>
<tr>
<td>1.00%</td>
<td>MOT</td>
<td>Communication Equipment</td>
</tr>
<tr>
<td>1.00%</td>
<td>GE</td>
<td>Electrical Equipment</td>
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<tr>
<td>1.00%</td>
<td>C</td>
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<td>1.00%</td>
<td>HET</td>
<td>Gaming</td>
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<tr>
<td>1.00%</td>
<td>JNJ</td>
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<tr>
<td>1.00%</td>
<td>ODP</td>
<td>Retail: Specialty</td>
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<td>Telecommunications: Long-Distance</td>
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<td>44.17%</td>
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<td>Acorn International (Asia)</td>
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<td>1.00%</td>
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<td>Invesco European</td>
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<tr>
<td>22.27%</td>
<td>QQQ</td>
<td>NASDAQ 100</td>
</tr>
</tbody>
</table>

Table 4 Portfolio Snapshot
5.1 Portfolio Composition by Industry

Figure 3 - Portfolio Composition by Industry

5.2 Portfolio Composition by Region

Figure 4 - Composition by Region
5.3 Portfolio Risk and Return

Based on the above weight allocated to each individual asset, together with the weekly price data during the past two years, the portfolio had an annual return of 34.85% and a standard deviation of 120.24%. The Beta of the portfolio was 0.71.

5.4 Portfolio Performance Ratios

If benchmarking on S&P 500, use a risk free rate of 6.52% (annual yield rate of three-month Treasury bill), the performance of the portfolio can be evaluated using the following criteria:

1. Sharp’s measure: divides average portfolio excess return over the period by the standard deviation of returns over that period. It measures the reward to total volatility trade-off.

\[ \frac{\bar{r}_p - \bar{r}_f}{\sigma_p} \]

Using the above listed formula, we can calculate the Sharp measures of both the portfolios and the market to be: \( S_p = 0.24 \), \( S_M = 0.06 \). These numbers tell us that the portfolio outperformed the market index. Note here that the return and risk rates of both the portfolio and the market have been adjusted to the yearly basis to be in consistent with the risk free rate, which is denominated as an annual rate.

2. Treynor’s measure: evaluate excess return per unit of risk, but it uses systematic risk rather than total risk.

\[ \frac{\bar{r}_p - \bar{r}_f}{\beta_p} \]

Based on the Beta figure given above, which is 0.71, the calculated Treynor measure for the portfolio is 0.40, compared with 0.08 of the S&P 500, this also suggests that the suggested portfolio was performing better than the market.

3. Jensen’s measure: which is the average return on the portfolio over and above that predicted by the CAPM, given the portfolio’s beta and the average market return.

\[ \alpha_p = \bar{r}_p - \left[ \bar{r}_f + \beta_p (\bar{r}_M - \bar{r}_f) \right] \]

The Jensen’s measure of the portfolio is calculated to be 22.74, that is the alpha value of the portfolio. From this figure, we can easily conclude that the portfolio very attractive with a high positive alpha value.

Overall, under the measures listed above, we see that the portfolio had a higher return than the S&P 500 while maintaining a lower risk.