

# SHARPER ♦ GRANITE



*Optimal Portfolio Management*

**SPRING**  
**2004**

**P**ersistent unemployment and increasing oil prices in the face of an improving economy helped bonds and hurt stocks this quarter.

The stock market raced ahead in January, building upon a positive 2003, and continuing a tendency of strong Januarys.

Then, disappointing job reports and rising oil prices caused some major institutional selling through February and March. The importance of these factors for our economy are highlighted this quarter in the Economy Review.

The strong January we experienced fits a trend of certain known "calendar anomalies". The causes of this January effect were discussed somewhat in last quarter's Economy Review, and this quarter, research related to other calendar effects is shared in the context of our disciplined portfolio rebalancing processes.

## IN THIS ISSUE

- **Financial Markets Summary**
- **Portfolio Rebalancing and Calendar Effects on the Stock Market**
- **First Quarter 2004 Economy Review**

## Financial Markets Summary

In the 1st quarter of 2004 (ending April 2nd), the S&P 500 Index gained 3.1%, while the Lehman Aggregate Bond Index increased 0.3%.

The average of all Sharper ♦ Granite client portfolios increased 4.4% (net of all costs) and maintained a risk level 14% less than the S&P 500 Index.<sup>1</sup> At this risk level, one would expect to gain 2.8% as fair return in an efficient market. Thus, this marks nine quarters in the last ten that the average of all Sharper ♦ Granite portfolios outperformed the S&P 500 Index on a risk-adjusted basis.

Sharper ♦ Granite performance was especially strong this quarter relative to the overall stock and bond markets. Please refer to the personal letter from your portfolio manager for a report on your performance this quarter. ●



## Portfolio Rebalancing and Calendar Effects on the Stock Market

Over the last two quarters we discussed how Sharper ♦ Granite portfolios are uniquely constructed for each client. Once a client's desired portfolio is established, over time portfolios must be adjusted, or rebalanced, as the portfolio drifts away from its targeted, desired allocation.



This may occur because money has been contributed or withdrawn, or because some assets have grown more than others on a relative basis. Also, some assets, like bonds and dividend producing stocks, contribute to the portfolio by spinning off cash rather than through capital appreciation. For example, the nominal value of bond funds tends to stay relatively constant while cash interest is produced. Growth stocks, conversely, tend to contribute few cash dividends, but rather experience share price growth over time.

Another possible cause of portfolio imbalance is a change in the *target*, a client's desired portfolio state. This changes if a client has a pending life event such as retirement, a wedding, a home purchase, or college. The target portfolio can also drift over time as the economic cycle progresses. Rebalancing with optimal frequency and timing adds approximately 0.6% annually to returns in an average market year according to Sharper ♦ Granite research.

*Frequency:* Making trading adjustments too frequently can add "trading friction" costs, while adjusting too infrequently can increase portfolio risk or hinder performance. Sharper ♦ Granite uses RiskPoint software to help determine the optimal frequency for rebalance adjustments in each client's portfolio.

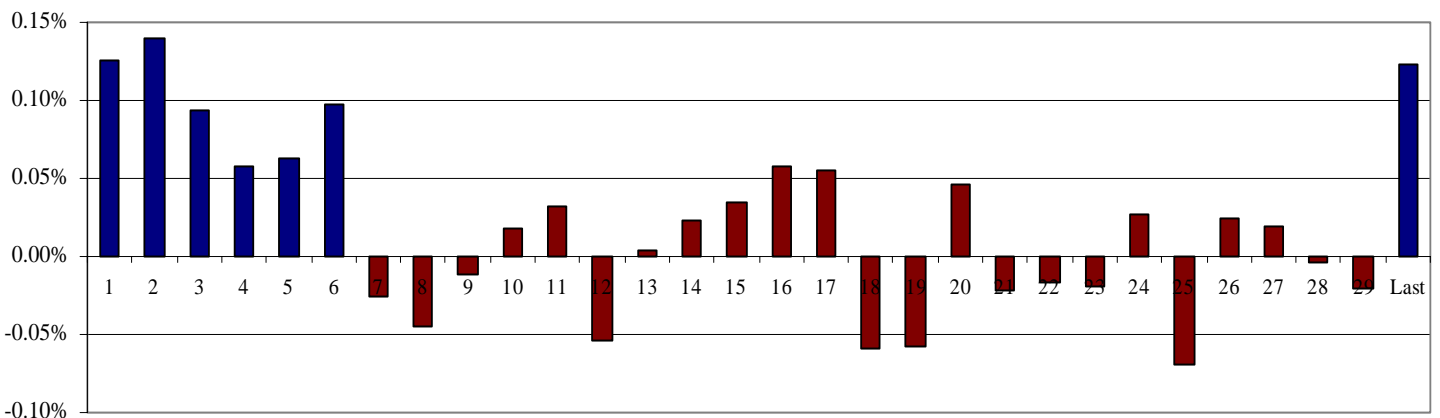
*Timing:* Once the need for an adjustment is signaled within a portfolio, many factors, such as current market strength and volatility, contribute to the timing of the trade. Another factor that helps guide trading is the historical effects of the calendar. While this is a subtle factor within our overall portfolio rebalancing strategy, the research is fascinating, so we share some of it here.

If there is a buy or sell that needs to be made, what time of the month should it be made? What day of the week? What time of the day? Does it matter?

### Intramonth Effects <sup>2</sup>

One of the most striking findings comes when comparing the first half of the month to the second half. The percentage change in the Dow Jones Industrial Average stock prices during the first half of the month is eight times larger than the gains in the second half. The difference in total return is further magnified by the fact that two-thirds of the Dow stocks pay dividends in the first half of the month.

#### Day of Month Average Returns on the Dow, 1885 - 1997



In fact, returns that occur from the last day of the month through the first six calendar days of the month are greater than the returns for the entire month. That is, the average net return for the other three weeks of the month is actually *negative*. Strong gains at the beginning of a month occur due to the timing of contributions from individuals' cash flow (e.g. paychecks, bond interest payments, etc.).

The chart above shows this effect on a daily basis since 1885. Similar effects are noted over all time periods we observed.<sup>3</sup>

## Intraweek Effects <sup>4</sup>

Okay, perhaps intramonth cycles make some sense, but are there actually effects related to particular days of the week? The chart below show that statistically significant differences do exist. Just like the weekly mood cycle that most of us share at work, the market loathes Mondays and celebrates Fridays.

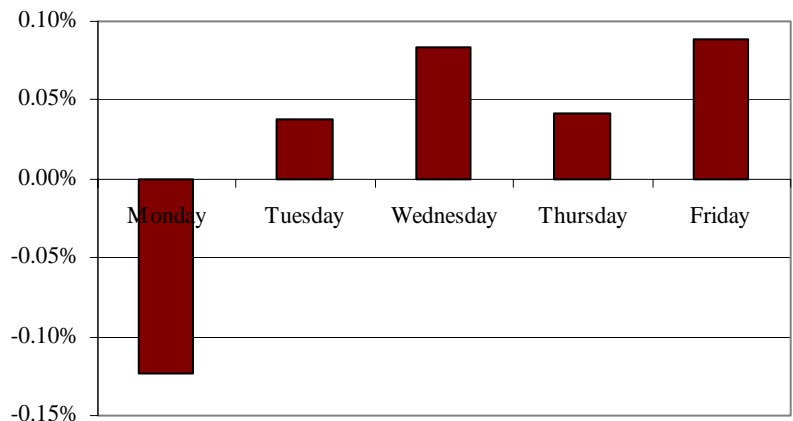
*Rainy Mondays:* Monday is by far the worst day of the week, and has been throughout all time periods examined. Monday in fact is so bad that if Monday returns were like the average of all other days of the week, then the Dow Industrial Average would be nearly twice as high as it is today.

*TGIF:* Friday yields return about four times the average of the other days of the week. Even when stock markets were open on Saturdays, which was the case before 1946 and before 1953 in all except the summer months, Friday returns were best.<sup>5</sup>

Just as with intrayear and intramonth effects, intraweek effects are seen not only in the U.S. but also in the rest of the world. It is interesting to note that Tuesday is also a poor day, but especially in Asia and Australia, which is likely due to the poor Monday just experienced in Western countries the previous night.

While there are rational explanations for intramonth effects, there are no known economically rational explanations for this noted day-of-the-week pattern. If anything, one could argue that since Monday returns factor three days of capital appreciation instead of one, the return should be larger than the other days. After all, capital is committed for three times the length of time and thus is committed with more risk and so merits higher return.

### Average Returns on the Dow, 1885 - 1997



## Intraday Effects <sup>6</sup>

Finally, there is also a diurnal pattern of stock returns. Evidence shows a sinking spell in the morning, especially on Mondays. Then the market firms toward midday, declines slightly in mid-afternoon before rising strongly in the last half hour of trading.<sup>7</sup>

While these factors are subtle, they are factored into our disciplined rebalancing processes. For further information on how Sharper ♦ Granite rebalances client portfolios please contact your portfolio manager. ●

## First Quarter 2004 Economy Review

The equity markets have generally declined since mid-January. Two economic factors chiefly contributed to the short-term weakness, worse than expected employment numbers and an increase in oil prices.

### The Irony of Employment in the Economy

Employment reports are important because they are perhaps the most politically sensitive of all economic indicators. Employment drives votes, and while the Federal Reserve Board is officially independent of political influences, monthly employment numbers factor significantly in its determination of interest rates.

This is intriguing since most economists agree that the employment rate is actually a very poor indicator of *future* economic direction. Note that employment indicators are not in our Leading Economic Indicator Summary reported below. It is the political impact that gives the employment reports such weight in the interest-rate-setting process.

How can the economy be improving without the hiring of new workers? The reality is that businesses are getting more out of their existing workers. Do you feel like you are working harder than ever at your job? This measure is called *productivity*, and productivity is at its highest levels in years. In fact, it is at a level that is unsustainable for the long-term.<sup>8</sup> Thus, employment must improve at some time in the near future as companies finally give in and hire more workers (and stretch existing workers less) to meet demand.

### Oil - our Most Important Commodity

Much more significant to future economic direction in the short-term is the price of oil. Oil is a key input to so many business and consumer end products. It's price movement can greatly affect consumers' ability to travel and purchase leisure-time products. It also impacts the profitability of corporations that produce plastic containers, fly airplanes, drive trains, build trucks, or manage hotels. Oil prices, while volatile, have such a strong influence on the overall economy that they must be watched closely. Economists estimate that every \$2/barrel increase costs the U.S. Gross Domestic Product (GDP) 0.1%.<sup>9</sup>

Due to attempted OPEC restrictions oil prices reached \$38/barrel mid-March 29, the highest since 1991. However, the current high oil prices will make it even more difficult than usual for OPEC members to collude on oil production restrictions without cheating. We expect oil prices to cool in the second quarter.

The key *leading* economic indicators we track follow below. These factors continue to flash positively.

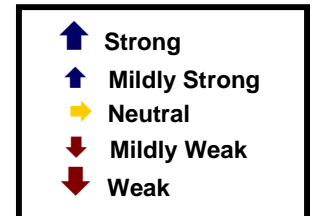


### Leading Economic Indicator Summary

↑ **Market Cycle:** The S&P 500 Index gained 26% in 2003. Corrections are to be expected in a stock market bull run. Looking to the 2nd quarter, April and June tend to be strong months. The benefit of recent tax cuts may boost consumers' tax refund checks and further spark spending and investment.

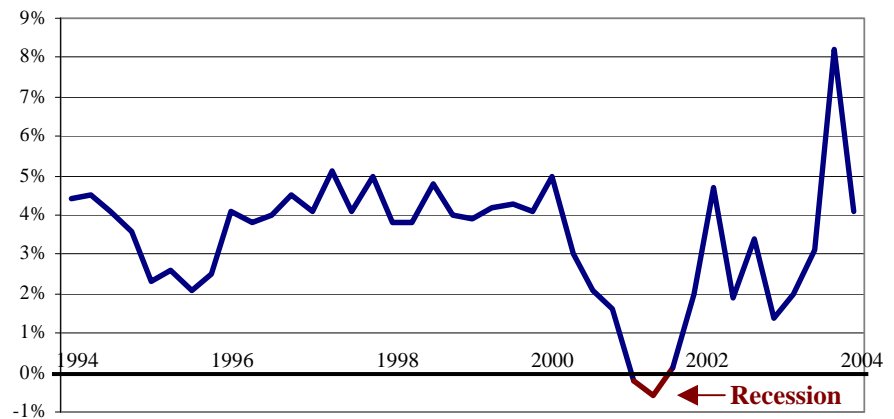
↑ **Political Cycle:** We are in the 4th year of President George W. Bush's term. Traditionally, the 3rd year in the presidential cycle is the strongest, but the 4th year is second best. Since World War II, the 4th year of the presidential cycle has seen the S&P 500 Index post an average gain of 8.6%. Eleven of the 14 post-WW II 4th years have been positive.

Overall, the 2nd quarter (where we are now) has been the best quarter in a president's 4th year, averaging 3.2%.<sup>10</sup>



↑ **GDP Growth:** Gross Domestic Product (GDP) is the official economic measure of the U.S. economy. It is a measure of all goods and services produced in the United States. In the 1st quarter of 2004 the economy grew a healthy 4.1%.<sup>11</sup> It was the tenth consecutive quarter of expansion, or positive economic growth, since the official recession of 2001.

*Ten Years of GDP Growth*



↑ **Purchasing and Manufacturing:** The Institute of Supply Management (ISM) Index, the key manufacturing indicator, remained relatively strong in January and February. This marked the first time the index has remained above 60 (a relatively high level) for

four months in a row since 1983 - 1984. Other manufacturing indicators that we watch, such as factory utilization and manufacturing industry hiring and wages, are showing undisputable strength.<sup>12</sup>

The Chicago Purchasers Index declined throughout the quarter, but remained at levels indicating economic expansion.<sup>12</sup>

↑ **Inflation Control:** The most widely accepted measurement of inflation is the Consumer Price Index (CPI). The core CPI, which excludes volatile food and energy prices, rose a modest 0.2% in the first two months of the year. High energy costs drove the total CPI up 3.7% over the last three months, which is concerning. In fact, commodity goods, which include steel, energy, foodstuffs, and other input goods rose for the first time in 16 months. The Federal Reserve Board left interest rates unchanged this quarter in its March meeting.<sup>9</sup>

↑ **Consumer Spending:** The Consumer Confidence Index declined slightly over the quarter.<sup>13</sup> Job acquisition and salary increase expectations fell.<sup>14</sup>

↑ **Capital Spending:** Information technology spending by businesses is reported to reach \$742 billion in 2004.<sup>15</sup> This is \$74 billion more than the next largest year in history, the technology bubble peak year, 2000. This could provide a huge boost to Nasdaq technology leaders like Microsoft, Cisco, Dell, and Oracle. These "big four" represent 24% of the market capitalization on the entire Nasdaq exchange, the busiest stock market in the world.

↓ **Investor Sentiment:** Investor sentiment is an important contrarian indicator. Market conditions are actually more favorable when "expert" newsletters are more bearish. This is true for two reasons. First, studies show that "experts" seeking to time the market are consistently wrong more often than they are right. Second, short-term investors place their bets first, then tout their directional picks. For example, when investors are overly bullish, they have likely already employed their capital, leaving less money to be pushed into the market to generate demand.

Bullish readings that have been at extreme levels since September, 2003, finally began to turn more bearish during March, suggesting that investors' exuberance is beginning to wane.<sup>16</sup> This represents an improving condition. Long-term market rallies often climb a "wall of worry".

↓ **Insider Trading:** Insider trading measures continued in the 1st quarter at record bearish levels. The insider sell to buy ratio as tracked by Thompson Financial continues near ten-year highs.<sup>17</sup> ●

#### Questions?

Contact us at:

questions@sharpergranite.com

#### Notes and Acknowledgements:

1. Arithmetic average used for return measurement. Asset weighted average beta used for risk-adjustment to market risk level. Performance includes assets tracked for clients that lie outside Sharper ♦ Granite direct management, which amount to less than 10% of total assets. All client portfolios weighted equally in calculation.
2. Jeremy J. Siegel, Professor of Finance, Wharton School of Business at Penn University. Sharper ♦ Granite Research.
3. "Are Seasonal Anomalies Real? A Numeric Year Perspective," Cornell University, 1987. Sharper ♦ Granite Research, 2004.
4. Bruce Jacobs and Kenneth Levy, "Calendar Anomalies: Abnormal Returns at Calendar Turning Points," *Financial Analysis Journal*, 1988. Updated by Sharper ♦ Granite Research, January, 2004.
5. Gibbons and Hess data, 1991. Sharper ♦ Granite Research, 2004.
6. L. Harris, "A Transaction Data Study of Weekly and Intradaily Patterns in Stock Returns," *Journal of Financial Economics*, 1986. Sharper ♦ Granite Research, 2004.
7. Tim Bollerslev, Professor of Finance, Duke University, "Intra-Day and Inter Market Volatility," *Review of Economic Studies*, 1991.
8. Alan Greenspan, Federal Open Markets Committee (FOMC) Meeting, March, 2004. Sharper ♦ Granite Research, 2004.
9. Merrill Lynch, April, 2003.
10. TD Waterhouse database.
11. U.S. Commerce Dept.
12. Institute for Supply Management (ISM) – Chicago, March 17, 2004.
13. Conference Board, March 30, 2004.
14. U.S. Labor Department.
15. Economic Business Council, March 26, 2004.
16. "Investors' Intelligence", March 30, 2004.
17. Thomson Financial, March 29, 2004.