United States Sector Rotation Report*
Economics & Financial Markets

Philip L. Miller – 646-415-9141
Chief Strategist
pmiller@sisresearch.com
www.sisresearch.com

United States Equity Markets

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Parts I,II, III, & IV The Recovery Portfolio: Refocusing from Relative Strength to Sector Rotation – With Portfolio Returns

I.   Introduction

On Friday July 10th Tom Lauricella on the front page of the WSJ wrote that:

> "Asset allocation, a bedrock of investing for decades, appeared t fail miserably in 2008. The conviction shared by most investors –that they should spread their money across myriad asset classes to minimize losses—was shaken as nearly all markets tumbled in unison….At Ibbotson Associates, a Chicago firm specializing in asset-allocation strategies for big investors such as pensions and mutual funds, chief economist Michele Gambera also has gone back to the drawing board. It's been a topic on his mind for the past two years but 2008 heightened his scrutiny. There have been reasons to question diversification, no doubt about that," he says. "It's been humbling."

It is this hole that we at SISR attempted to close. We observed what happened to NASDAQ based portfolio's in the crash of 1999 to 2001. We understood the risk of diversified portfolios, with all markets and assets going down. From that point we developed an APT type approach that would alert us prior to the decline in earning where the trouble signs were and in good times where the growth is. In this respect our entire focus at SISR is on the macro picture, but not in a traditional manner but with a complete focus on sectors and sector performance.

Our work at SISR has been directed exclusively at this problem. SISR in fact was founded on the belief that there are limitations in MPT and its modification to deal with systemic risk the various modifications that come under the heading of Arbitrage Pricing Theory (APT). Miller coined the acronym CEFA (Cross section Economic Factor Analysis) as the APT modification to deal directly with the issue of systemic risk in transition period and isolation out the growth areas in normal times. The first published attempt at this exercise was the working paper report entitled: "Failure of the Analyst in

the Collapse of Intel 2001." That report laid out the early theoretical foundation for what has become identified the CEFA approach of using a relative strength approach to tracking sector growth within the economy.

Instead of using the high level Macro indicators like inflation, expected inflation, employment new orders, etc. we use these same variable not at the macro level but at the sector level to determine that rate of expansion of approximately 60 subsectors. The analysis uses the North American Industry Classification System Code System (NAISC) in contrast much more popular Global Industry Classification Standard (GICS) as created by Standard and Poor's. The NAISC codes are much closer to the actual data and it is our goal at SISR to work with investors and to show the added value of the NAICS codes in contrast to the GICS which is much more universally used.

II.   Theoretical Foundation

From the work of Harry Markowitz in the late 1950's to the introduction of Arbitrage Pricing Theory (APT) in the late 1970's, these approaches were major catalysts for the expansion of: 1) Hedge Funds in the 1980 and 1990's, and 2) to an entire industry of investors, working on ways to create portfolios that are as risk free from both market risk and systemic risk. MPT or more specifically the Capital Asset Pricing Model (CAPM) and its extension and modifications like APT, are approaches to reduce risk for well diversified portfolios. CAPM strove to reduce risk by reducing the risk of a particular portfolio based on its Beta and its covariance to other assets. While this approach was intended to capture both market risk or portfolio risk and systemic risk, it performs better on portfolio risk and much worse the more sever the systemic risk becomes, because at the extremes all asset correlations approach one (1).

 APT, interestingly was developed as a way to measure systemic risk by using multifactor models which went beyond the covariance of a given asset and or it's Beta. MS Barra is one of the more success participants in what had become an attempt to interpret the risk of a portfolio and developed a highly successful compliance business around the evaluation of managed portfolio risk. The main difference between APT and CAPM is that APT does a better job than CAPM on systemic risk. The problem with APT is that it is more limited and needs a highly efficient and liquid market to work. Even then APT really has not been very successful.

A. <u>The Discounted Cash Flow Approach:</u>

Security analysts from virtually all the major Wall Street firms including the coveted CFA Institute Members often begin with various bottoms up valuation metrics with the most common and developed approaches being the discounted cash flow (DCF) valuation model. While at SISR we began with this approach because it so clearly highlights the limitation in the work of so many analysts. The DCF approach we have argued assumes that one has knowledge of the "expected" cash flow to the firm beyond t_1 in period t_2 to t_n. The standard DCF model calculates the value of a firm based on the expected cash flow to the firm in period t_1 over the Weighted Average cost of Capital.

$$\text{Value of Firm} = \sum_{t=1}^{t=\infty} \frac{\text{CF TO FIRM}}{(1+\text{WACC})^t}$$

Where:

CF to the Firm $_t$ = expected Cash flow to Firm in period t

WACC = Weighted Average Cost of Capital

For our purposes the critical component here is the requirement to correctly forecast "expected cash flows for the firm on a forward-looking basis." The standard ways is to discern information from news releases from the firm as to their projections, derive a model based on past performance, project the discount rate and the risk free rate of return, look at competitive factors such as changes in market share, the relative performance of different divisions within the firm and the relative profit margins and expected growth rates within those divisions.

These kinds of calculations in fact are the standard fair for most analysts. For this approach to be able to deal with systemic risk there needs to be a clear distinction between valuation and forecasting. DCF can value an existing asset, a house, a diamond ring, a stock, but ultimately it has to make assumptions about the future based on the past. The crisis and inability of traditional analysts to anticipate a major event in large part is a consequence of their use of CAPM models, which today is the cornerstone of so much of current all evaluation work.

B. The Critique of CAPM Models:

CAPM models are dependent upon past price movements staying constant. Most CAPM models attempt to project revenue streams based on the expectation that past events serve as a guide for future returns. The difference between the risk free and the risk premium are calculated based on past expectations. Highly successful securities analysts, however, generally work from these CAPM models.

They begin with the assumption that every asset has a value that can be determined. The problem is that anyone can go to a stock page or the Internet and see what the market price of a company is. Is this a fair price or not depends on their assumption about the future potential revenue stream for that company. The price that someone is willing to pay is the value of the asset or in more formal terms its enterprise value (EV) which is its market capitalization plus debt less cash and cash equivalents. The market capitalization of course is dependent on the expected revenue stream, which in turn depends on the assumptions of past value projected forward. However, within this model how can we explain unanticipated events that fall outside of the expected range of anticipated events? Whether one employs a DCF, or DDM model, to project future revenues and income of a company they are primarily assuming continuity with past events.

This assumption is endemic to even the more complex approaches of Markowitz and Sharpe's CAPM models where they take the covariance matrix of past returns as a guide to future risk. Fama and French were correct to extend their critique of CAPM models: when they contend: "many of the CAPM average-return anomalies are related" and one cannot explain return anomalies based on CAPM models (Fama French p. 55 1996), concentrating also on the cross section limitations of the CAPM model.

Campbell, Lo, and Mackinlay, conclude their discussion of CAPM models by stating that:
We have shown that there is some statistical evidence against the CAPM in the past 30 years of US stock-market data. Despite this evidence, the CAPM remains a widely used tool in finance. There is controversy about how the evidence against the model should be interpreted. Some authors argue that the CAPM should be replaced by multifactor models with several sources of risk. (C. L. M. *The Econometrics of Financial Markets* p. 217)… We summarized empirical evidence indicating that the

CAPM beta does not completely explain the cross section of expected asset returns." (C.L.M. p 219). Multi-factor models were an attempt to explain cross section anomalies limitation of the CAPM models.

C. <u>Arbitrage Pricing Theory (APT):</u> <u>The Multi-Factor APT Approach</u>

In many ways the work spearheaded by Roll and Ross; MSBarra; Fama & French, Chen, Blin and Bender are all attempts to fill this gap. These approaches have different objectives. First, Roll and Ross conceptualized this cross section problem with their development of arbitrage pricing theory (APT), which became applied by two groups the Blin and Bender, and MSBarra. Blin and Bender recognized the arbitrage and pairs trading possibilities and called their company and approach arbitrage pricing theory (APT). MSBarra, alternatively, saw the risk and compliance possibilities and developed risk compliance models. Second, beginning with Fama and French, from the academic perspective there was an attempt to understand these cross section anomalies more directly (Fama & French 1992, Chen, Roll, Ross 1991).

The standard APT factor model postulates that a linear relationship exists between the realized returns of the assets and the K factors common to those assets, or

$$\mathbf{R_{it}} = \mathbf{E}\ (\mathbf{R_i}) + \Sigma\ \mathbf{b}_{ik}\ F_{kt} + \epsilon_{it}$$
$$k = 1$$

Where:

R_{it} denotes the rate of return for asset i;
$E(R_i)$ denotes the expected return for asset I;
B_{ik} denotes the sensitivity (or exposure) of asset i to factor k;
F_{kt} denotes the return of factor k with $E(F_k) = 0$; and
ϵ Denotes the residual (or specific) return of asset I, i.e. the share of the return that is not explained by the factors, with $E(\epsilon_i) = 0$.

The factors k in this regression or difference equation model determine the return to asset, index, sector, or security i. This model then predicts stock prices based on the ability to forecast future unanticipated rates of inflation, production, some have preferred various consumption metrics (Roll, Ross, & Chen). Roll and Ross originally developed this critique, which is often identified as an arbitrage pricing theory (APT) factor model approach. It is identified with arbitrage theory in that they are attempting to understand cross section anomalies in market or portfolio returns thus creating what may be considered arbitrage possibilities. They argue that CAPM models measure risk on a single number the "asset's beta." They contend that: "an asset's riskiness, its average long-term return, is directly related to its sensitivities to unanticipated changes in four economic variables – (1) inflation, (2) industrial production, (3) risk premiums, and (4) the slope of the term structure of interest rates (Roll & Ross 1984 p.14).

Blin and Bender were one of the early groups to pick up fully on the arbitrage potential and concentrated on risk neutral portfolios attempting to balance away some of the risk to create an artificially higher portfolio with the characteristics of a risk free portfolio, but with a series of risky assets. They also developed various pairs trading models keying in on this arbitrage of anomalies as developed by Roll

and Ross. The MSBarra group took this enterprise one step further and saw the compliance possibilities with respect to risk evaluations, and has developed a highly successful business around these measures. Fama and French, from a purely academic perspective pushed the question of anomalies into their now classic article that developed a 3 factor model attempting to explain various cross section anomalies. These factors are: "(1) the excess return on a broad market portfolio; (2) the difference in the return on a portfolio of small stocks and the return on a portfolio of large cap stocks; and (3) the difference between the return on a portfolio of high-book-to market vs. the return of low-book-to-market stocks." (Fama & French 1996 p. 55). Each of these multi-factor models has a major limitation. None of these approaches are capable of making forward-looking projections.

D. The Critique of these Multi-Factor Models:

The three groups all working from a slightly different perspective have all emerged from a similar core, a core that itself may contain limitations. Campbell et al, correctly address this critique. They argue that factor models:

> Provide an attractive alternative to the single-factor CAPM, but users of such models should be aware of two serious dangers that arise when factors are chosen to fit existing data without regard to economic theory. First, the models may over fit the data because of data-snooping bias; in this case they will not be able to predict asset returns in the future. Second, the models may capture empirical regularities that are due to market inefficiencies or investor irrationality; in this case they may continue to fit the data but they will imply Sharpe ratios for factor portfolios that are too high to be consistent with a reasonable underlying model of market equilibrium (CLM p. 251).

Campbell et al go on to argue that what is needed is: "what forces determine the risk less interest rate (or more generally the rate of return on a zero-beta asset) and the rewards that investors demand for bearing risk?" (C.L.M. *ibid* p. 291). They go on to argue that:

> In the CAPM the riskless interest rate or zero-beta return and the reward for bearing market risk are exogenous parameters; the model gives no account of where they come from. In the APT the single price of market risk is replaced by a vector of factor risk prices, but again the risk prices are determined outside the model (CLM ibid 291).

As a means toward creating this type of forecasting model Campbell et al go on to develop a consumption based model arguing that consumption and preferences leads the stock returns. They even go on to an example where commercial paper index growth leads the sectors index growth. They go on to contend that there is: "strong evidence that the real commercial paper rate is forecastable, and weaker evidence that the real stock return is forecastable" (CLM *ibid* p. 313). Is this not what Kumar really did with Semiconductor shipments and the new order data, and can we go beyond the single variable forecasting model and go into a multi-dimensional forecasting framework?

By taking the factor model approach and using data available to specific sub sectors of the economy one can use the sub sector data as the independent variables and build forecasting models by sub sector. While Roll and Ross used inflation and industrial production, suppose we looked at ppi for semiconductors, shipments and new orders for semiconductors, labor force and hours worked by

semiconductor worker when attempting to understand the semiconductor sector. This study will use the factor model approach attempting to extent Chen, Roll and Ross to asset forecasting. This will be attempted by using information that is often neglected by the Wall Street securities analyst, while challenging also the central assumption of the efficient market hypothesis. It will strive to establish that information distortions exist, and the primary explanation may well be found in the biases of approaches used by the Wall Street Analysis's.

E. <u>FINANCIAL FORECASTING</u>

The starting point for many forecasting models is the models and tools utilized by the conference board in forecasting the GDP of the economy. One of the problems encountered with these measures is that the objective of the conference board and those of the finance community are rather different. The conference board in their projections in fact even uses as one of their primary measures the S & P 500 stock index, under the presumption that the index itself is a leading indicator. How then can one use the leading economic index as a measure of stock prices? This takes us to the very heart of the issue between financial forecasting and economic forecasting. The objective of course is financial forecasting and attempting to project the market and the economy, two very different activities. Economists have been using Governmental economic data since their inception. They have even been at the forefront in the development of the data collection process.

Most economists, however, rarely use the data to the full extent of its current availability. Economists are concerned with national economic trends and to lesser extent differential growth patterns of sectors such as manufacturing, financials, technology, and commodity prices. However, they rarely utilize the information at the level of the sub-sector.

Analysts alternatively concentrate on data from firms like accounting data, news releases, competitor's behavior, and the like. Their use of economic data from government reports is similar to that of the economist, to determine trends in the overall economy. Neither the economist nor the analyst appears to drills down into this data to develop forecasts at the level of the sub-sector.

In order for the government to collect the GDP data at the macro level, they must first collect this data at a micro level. This is why the census department, a division of The Department of Commerce, collects so much of the economic data. The Census department has created over 40 single spaced pages of sub categories of business activity. They have coded each of these business activities into a 6 digit NAICS code. Each company can be assigned a single or multiple 6-digit codes.

This data in turn is reported by significant sub sector, such as: iron and steel, semiconductors, computers, aluminum, heating and ventilation, department stores, etc, etc. This data is collected for new orders, sales, inventories, at the manufacturing level; sales, and inventories at the retail and wholesale level, PPI, CPI by sub-sector; hours worked by sub-sector and number of workers by employed by sub-sector; as well as capacity utilization by sub-sector. The data comes out monthly, and is 3to 5 weeks old, but earnings are often are reported 8 weeks after the first monthly report of the sub-sector, giving the analyst enough time to anticipate problems within a given sub-sector way before earning warning begin.

III. Applying the Model –The Relative Strength Approach

The CEFA approach begins by carefully analyzing each of the daily reports as they are provided from the various sources. We report on these in our morning notes. In those morning notes we start to look for sector trends irrespective of whether it comes from the manufacturing, wholesale, retail, finance, housing, or energy sectors. Once we have noticed a particular trend we attempt to confirm it in various ways. An excellent example of this approach involves looking at the Durable goods report from the Commerce Department. This data can be viewed in various ways:

1. In Figure I we report the raw data for rate of change by sector on a three month moving average to eliminate some of the noise in this sector. We do this for one month change, three month change, 6 month change, and y/y change, enabling us to see the second derivative for this sector.
2. In Figure II we rank order Table 1 by sector to see which sectors are growing relatively the fastest and which are growing the slowest with the same time frame breakdown to see changes in these sectors relative growth rates.
3. In Figure III we do a relative strength analysis based on a 3 month percentage change but also showing the standard deviation in this data. This is the most visibly pleasing and provides some real clarity, but is not as informative as Figures I and II because it is a static table whereas Figures I and II show more dynamic movement.

For the past several years we have garnered many of our thoughts on sector trends in the manufacturing sector from the monthly Commerce Department Report on Manufactures Shipments, Inventories and New Orders. We have found this report absolutely invaluable and when overlapped with the PPI report tracking the same industry groupings, we have over the years reported on numerous of these trends with what we believe to have been a high degree of confidence.

The Commerce Department report contains 56 industry groupings by the North American Industry Classification System (NAICS) Codes. Each sub industry has a 6 digit code with the report being a grouping of various codes. We have selected 25 of these groupings that we have found over the years to have a high degree of utility. The advantage of this grouping as opposed to the GICS is that the CIGS are not pure groupings and they do not speak directly to the data, whereas the NAICS Codes are the codes that are used by the Commerce Department a division of the U.S. Census to survey the companies in question. Over the years we have found that the purity of this data is amazingly good in that the Commerce Department Surveys these companies and there does not appear any reason for bias when the Government asked these companies for their monthly shipments, new orders, inventories and unfilled orders, since their reporting is grouped with many other companies and in principle their information appears invisible. However, we have devised a methodology that we have identifies as CEFA (Cross-Sectional Economic Factor Analysis) that we have used in various reports to econometrically track via factor analysis the relationship between large companies in the given sector to the shipments and new orders, in an attempt to determine how well this data speaks to those companies.

Our objective in this report is quite a bit more modest. We are simply attempting to introduce 25 important Industries in 6 Sector groupings. We look at the relative strength of each of these 25 industries, and provide our projected weighing (overweight, underweight, neutral) for each industry in Table 4 based on the relative performance of their shipments for the past month, three months, six

months, and one year. These four data points allow us to surmise the rates of growth of the industries and the second derivative of the rate of growth of these industries, over the past year.

Figure I: June Sector Growth Rates Based on M/M, 3M, 6M & Y/Y Percent Change

Sector - Industry	M/M % Δ	3 Month % Δ	6 Month % Δ	Y/Y % Δ	Average
Basic Materials	0.52	3.94	3.66	2.47	2.65
Wood	-0.02	4.11	3.67	3.49	2.81
Nonmetallic Mineral Products	0.13	2.77	-2.07	-6.31	-1.37
Iron & Steel	1.79	8.35	14.36	12.82	9.33
Aluminum	0.16	0.52	-1.34	-0.11	-0.19
Farm and Food	0.68	1.93	4.02	16.07	5.67
Farm Machinery	2.12	3.64	4.54	17.96	7.07
Pesticides , Fertilizers	-0.48	2.39	5.30	28.05	8.82
Grains and Seeds	1.25	1.43	6.55	15.60	6.21
Meat & Poultry	1.44	4.01	5.14	7.18	4.44
Dairy Products	-0.93	-1.82	-1.45	11.54	1.84
Petrolum	1.73	10.65	18.61	30.44	15.36
Mining, Oil and Gas Equipment	-0.86	5.03	10.06	15.75	7.50
Petroleum Refineries	4.32	16.26	27.16	45.13	23.22
Computers & Communication	0.72	-4.07	-3.69	-2.64	-2.42
Computers	-3.85	-14.79	-15.74	-9.67	-11.01
Storage	0.47	10.28	18.32	22.49	12.89
Peripheral Equipment	2.00	-0.82	-1.58	1.45	0.26
Semiconductor	3.49	-17.69	-16.14	-20.35	-12.67
Communication	-0.35	0.19	1.87	1.78	0.87
Industrial Machinery	0.77	-4.64	-5.35	-9.60	-4.71
Audio Video Equipment	2.36	-6.07	-12.86	-16.67	-8.31
Electromedical, Measur & Control	0.87	0.95	1.94	9.43	3.30
Defense	0.49	9.11	18.21	18.52	11.58
Traditional	0.90	14.85	25.09	27.60	17.11
Communication	0.08	3.37	11.33	9.43	6.05
Construction	-1.11	-2.52	-1.63	5.95	0.17
Construction Machinery	-0.47	0.27	-1.51	18.58	4.22
Paints, Coating & Adhesives	0.24	-4.65	-7.29	-3.30	-3.75
HVAC	-5.61	-3.65	3.49	1.55	-1.06
Turbines	1.41	-2.03	-1.22	6.98	1.29

Source: Department of Commerce, SISR

We have divided the 25 industries into 6 Sectors:

1. Basic Materials which encompasses wood products, nonmetallic mineral products, iron & steel and Aluminum.
2. Farm and Food encompasses farm machinery, pesticides and fertilizers, grains and seeds, meat & poultry, and dairy products.

3. Petroleum encompasses mining, oil, and gas equipment, and petroleum refineries.
4. Computers and Communication equipment encompasses computers, storage, peripheral computer equipment, semiconductors, communication equipment, industrial machinery (a bit of a misnomer since the biggest category is semiconductor equipment), audio and video equipment, and electro-medical, measuring and Control equipment.
5. Defense is made up of a grouping of four categories. For communication defense we have grouped defense communication equipment and defense search and navigation equipment. For Traditional defense we have grouped defense air and space and the residual of all other defense which includes ships and boats, and missiles which for obvious reasons are not broken out.
6. Construction encompasses construction machinery, paints, coatings and adhesives, HVAC, and turbines (which are used in construction trucks as well as for backup energy).

Figure I which was from June of 2008 shows clearly how weak so many of the basic sectors already were at that time. Except for food, and Petroleum most of the economy was in negative territory. We must remember in this chart also that by June 2008 the first stimulus program had already issued many of the checks so we can see a bit of a pop in the retail space.
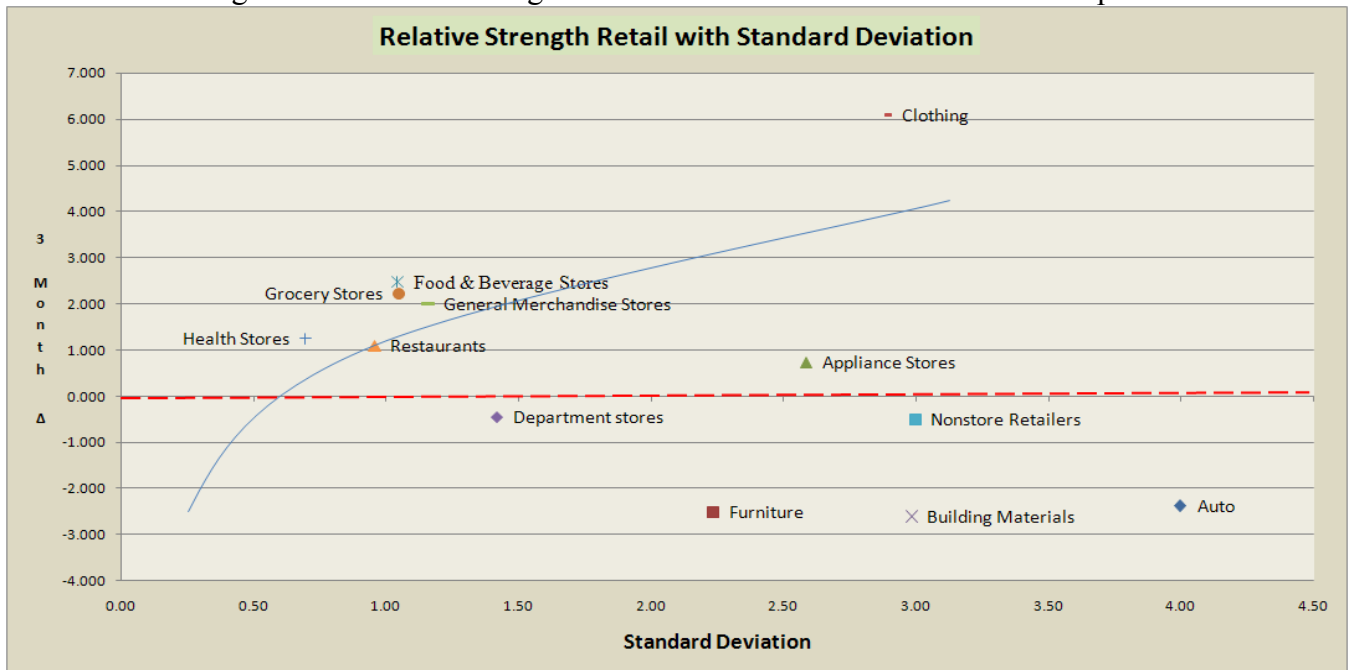
Figure II: June 2008 Sector Ranking Based on the Rate of Growth

Sector - Industry	M/M % Δ	3 Month % Δ	6 Month % Δ	Y/Y % Δ
Basic Materials	13.8	8.5	12.8	15.8
Wood	18	6	11	15
Nonmetallic Mineral Products	16	10	20	21
Iron & Steel	6	4	4	9
Aluminum	15	14	16	18
Farm and Food	12.8	11.2	10.2	7.8
Farm Machinery	4	8	10	6
Pesticides , Fertilizers	21	11	8	2
Grains and Seeds	9	12	7	8
Meat & Poultry	7	7	9	13
Dairy Products	23	18	17	10
Petrolum	11.5	3	3.5	4
Mining, Oil and Gas Equipment	22	5	6	7
Petroleum Refineries	1	1	1	1
Computers & Communication	11.1	17.8	17.8	17.9
Computers	24	24	24	23
Storage	13	3	3	4
Peripheral Equipment	5	17	19	18
Semiconductor	2	25	25	25
Communication	19	16	14	16
Industrial Machinery	12	21	21	22
Audio Video Equipment	3	23	23	24
Electromedical, Measur & Control	11	13	13	11
Defense	13.5	5.5	3.5	7.5
Traditional	10	2	2	3
Communication	17	9	5	12
Construction	16.75	19	16.8	14.0
Construction Machinery	20	15	18	5
Paints, Coating & Adhesives	14	22	22	20
HVAC	25	20	12	17
Turbines	8	19	15	14

Source: Department of Commerce, SISR

Figure II provides the same data but in this instance we see the rank order of the various sectors. From this table we find that fertilizer and pesticides went from a y/y rank of 2 to a m/m rank of 21 with a continuous pattern of decline. It was based on this information that we at SISR recommended a short on Mosaic when the stock was selling at $150. Mosaic subsequent to this report went from a high as $160 to below $30 within the next few months. Many of the major brokerage houses still had strong buys on this stock and $200 price targets.

Figure III: Relative Strength Sector View March 2009 from Retail Report

Source: Department of Commerce, SISR

Figure III looks at the different data in a slightly different manner. This table is also produced for the durable goods and wholesale sectors. This figure however unlike figure I and II is a static table looking only at one period in time and as a consequence is not dynamic. This table is easier on the eyes and clearer, but in other ways is more limited. From this table we began to recommend the clothing retailers Aeropostale (ARO) and Ralph Lauran (RL) and we also added the restaurants of Darden (DRI) and Cheese Cake Factory (CAKE). In January and February clothing and restaurants were outperforming much of the economy. This figure is from March 2009.

Asset allocation model attempt to balance the portfolio in such a way that irrespective of which asset class outperforms the portfolio will benefit and serve as a counter for those sectors that underperform. The goal is to overweight some sectors in the hope that those overweight sectors will outperform the market and in the same manner reduce risk to the portfolio.

Sector rotation alternatively seeks to find those sectors that are likely to outperform and keep rotating into those sectors at the expense of those sectors that are likely to underperform the markets. The key difference is that during weak markets the asset allocation approach would overweight consumer non-cyclicals, health care and utilities during these periods. Sector rotation would encourage a portfolio that has a long/short negative ratio.

IV. Reframing the Analysis from Relative Strength to Sector Rotation

The key question today is where are we in the economic and financial cycle and where should we begin to look to overweight our portfolios. It is relatively clear that we are still in the recession, but as with all recoveries the current markets appears to have hit their low and are moving upward. The economy similarly is at or near its low point and the recession is likely near the end.

Figure IV: Traditional Sector Cycle Theory as Reported by Fidelity Investments

Source: Fidelity Investments, Products Division

If our assumption is correct that all recessions must end, and that the economy is in the late recession phase, then according to conventional wisdom Financials and Consumer Cyclicals both durables and nondurables are the traditional location for the next wave which is off the bottom and into the early recovery phase. In the table above during the early recovery phase Transportation as well as Technology stocks would appear to be the place for the early recovery investments.

This recession however, has not been the traditional recession and the traditional recovery may not be the norm in this recovery either. There are two factors that have thrown the traditional recovery pattern into chaos and that is the extent of damage to the financial sector, and secondly the impact of gasoline on the consumer and transportation. We will argue that this recovery will be lead by basic materials and primarily construction materials given the conditions on the ground of this recession. This recession has been the most severe and housing has experienced the most severe downturn in modern history. The consumer is struggling with high unemployment, nearly 10%, and still relatively high gasoline prices, which will affect the technology space, which ultimately needs a strong consumer to participate. Transports similarly are still reeling from high gasoline prices.

A. The Case Against the Financials

On June 17th 2009 the Department of Treasury rolled out its working proposal entitled the *Financial Regulatory Reform a new Foundation: Rebuilding Financial Supervision and Regulation (FRRP)*. The proposed contains five major suggested areas for reform:

1. Promote Robust Supervision and Regulation of Financial Firms
2. Establish Comprehensive Regulation of Financial Markets
3. P:ortect Consumers and Investors and Financial Abuse
4. Provide the Government with the Tools it Needs to Manage Financial Crises
5. Raise International Regulatory Standards and Improve International Cooperation.

There are two central themes that run through the entire reform package:

1. Control of Leverage is critical to stabilization of the international economy and
2. Much less central there needs to be more oversight protection for the consumer, but the converse is also true that the consumer sold products must be of higher quality for the financial community to survive successfully.

1. Promote Robust Supervision and Regulation of Financial Firms

This provision would promote a Financial Services oversight council with one of its main functions that will "conduct a fundamental reassessment of existing regulatory capital requirements for banks and bank holding companies." It would also improve accounting standards to "determine how financial firms should be required to employ more forward-looking loan loss provisioning practices that incorporate a broader range of available credit information.

2. Establish Comprehensive Regulation of Financial Markets

The key concept here is that the attempt to "increase the transparency and standardization of securitization markets and be given clear authority to require robust reporting by issuers of asset backed securities (ABS)." The would regulate all OTC derivatives markets, including CDS markets, should be subject to comprehensive regulation that addresses relevant public policy objectives; (1) preventing activities in those markets from posing risk to the financial system; (2) promoting the efficiency and transparency of those markets; (3) preventing market manipulation, fraud, and other market abuses; and (4) ensuring that OTC derivatives are not marketed inappropriately to unsophisticated parties.

3. Protect Consumers and Investors From Financial Abuse

This provision would create a single primary federal consumer protection supervisor to protect consumers of credit, savings, payment and other consumer financial products and services, and to regulate providers of such services to create: transparency, simplicity, fairness, and access.

4. <u>Provide the Government with the Tools it need to Mange Financial Crises</u>

This is likely to be the most important provision of this regulation in that it will provide the tools to the Treasury and the Federal Reserve to act in a crisis, where during this past crisis much of what they did was quasi beyond the normal limits of their authority (Cajoling BAC to complete the merger with MER).

5. <u>Raise International Regulatory Standards and Improve International Cooperation</u>

Given the level of interconnection between the international capital markets any efforts in this direction is essential. I would not be surprised to see an international central bank with limited powers within the next twenty years.

The Treasury approach to the crisis in short can be seen as making sure that a Lehman impact on the larger economy never happens again. The Treasury proposal in essence is an attempt to prevent companies like Lehman from failing. Given the amount of leverage that these structured products produced they were capable of bringing down not only particular companies, but the entire economy. This occurrence needs to be eliminated, they believe.

Banks, bank holding companies, and other similar financial institutions will in the future be more scrutinized and have their leverage reduced. This will force the portfolio manager to move up on the efficient frontier line to take on greater risk to make their desired returns or the returns that their management would like. This is the reason why there are proposals to cap compensation, to reduce the risk that the manager feels compelled to take on.

 In essence than rather than reducing risk portfolio managers will be taking on more risk, unless their compensation does not matter, and in that regard they will not care and produce lower returns for their firms. If this is correct then companies like Morgan Stanley and Goldman will have more volatile earning if they allow their managers to take on the greater risk or if not they will have chronically lower earning.

Even the hedge funds are likely to become affected in this regard as they become registered and regulated. The big impact on the financial institutions is that the large banks and brokerage business will likely show lower returns, and higher volatility in their stock price, which in turn will create greater risk for those institutions own survival, the central issue that is at the heart of these regulations, the preservation of these institutions.

B. **<u>The Case Against Consumer Discretionary, Technology, and Transportation</u>**

On June 17, 2009 President Obama laid out a program for major financial reforms. President Obama blamed the crisis on "a culture of irresponsibility." The backbone of the plan would give additional powers to the Federal Reserve for oversight of the financial system and create a new consumer protection agency. The set of reforms are being sold as a solution to future Financial Crisis similar to the crisis of 2007 to 2009. Our objective in this introductory piece is to begin to establish a major concern with the logic and attention that is going to be directed at the financial sector, without a similar focus to the codependent cause of this recession the high price of energy.

For the past two years we have argued while at SISR that the financial crisis was co dependently caused by the housing crisis and the high price of gasoline that put undue pressure on the household. We had argued that the economy had become unbalanced and the consumers difficulties in managing their personal budget or disposable income, was at least in part caused by the high price of gasoline. This in turn put additional pressure on the household ability to pay their mortgages bills.

The concern that we have with the Obama Administration's focus on only one aspect of the co-dependency is that the second component has been largely ignored, and it may even turn out as Hamilton has argued to be a more critical cause of the recession of 2008, than the financial crisis. Professor Hamilton has argued that:

> "The implications that almost all of the downturn of 2008 could be attributed to the oil shock is a stronger conclusion than emerged from any of the other models surveyed in my Brookings paper, and it is a conclusion that I don't fully believe myself. Unquestionably, there were other very important shocks hitting the economy in 2007-08, most notably the problems in the housing sector. But housing had already been subtracting 0.94% from the average annual GDP growth rate over 2006:Q4-2007:Q3, when the economy did not appear to be in a recession. And housing subtracted only 0.89% over 2007:Q4-2008:Q3, when we now say that the economy was in recession. Something in addition to housing began to drag the economy down over the later period, and all the calculations in the paper support the conclusion that oil prices were an important factor in turning that slowdown into a recession." (James Hamilton, "Causes and Consequences of the Oil Shock of 2007-2008," Paper presented at the Brookings Institution's April 2009).

All through 2007 and 2008 we strenuously argued at SISR that the high price of crude would ultimately bring the economy into a recession. We argued that the energy crisis was at least a codependent cause to the financial crisis. When the consumer could no longer pay their mortgage bills due to the high price of gasoline, the financial crisis was exacerbated. The risk models had not anticipated the level of struggle by the homeowner, which would result from their inability to manage their household budget.

Many models had used the distinction designated by the EIA and endorsed by the Federal Reserve that the correct measure was average income, whereas we at SISR argued that medium income highlighted the plight of the household better. When gasoline was $4.17 we showed that over 8.2% of the medium households budget went to gasoline alone. Unfortunately, the nature of the regulations that are currently being proposed by the Administration and Congress are addressing only one part of this codependency.

In the past 30 months alone we have seen the price of crude go from $70 a barrel to $147, back down to $30, and now back up to $70. In the past 5 months we have seen crude increase from $30 to $70 and again we are seeing that segments of the economy are beginning to struggle, particularly the consumer. As the price of crude went from $30 to $70 the price of gasoline has followed in tandem. Over the past three weeks as the markets weakened the price of crude had fallen below $60 per barrel, but in the past week, as the markets have appreciated the price of crude has again strengthened, with gasoline following in tandem. Our concern is that crude and gasoline with rise sufficiently as the markets and economy gets stronger to prevent the consumer from having sufficient free discretionary expenditures to have the consumer discretionary sector lead the economy out of the recession.

In the coming weeks and months we will be following all the reforms that are proposed and passed by Congress and signed by the President. Throughout the process we will whenever and wherever possible continue to point out that whatever regulations this administration is able to pass, and no matter how effective and important those regulation may be, it likely will not accomplish its goal of the eliminating of the cause of future recession, like the recession of 2007 to 2009, 2002, 1990, 1980, and 1973 to 1975.

We believe that this is an extremely critical point for any market participant to come to understand, because the markets today as they were in 2006 and 2007 are currently highly influenced by the price of oil and no reform of the banking system will begin to solve that problems, until Congress or the President seriously takes on the question of crude oil. The current Energy Bill before congress is more of an environmental bill than a true energy bill that addresses the dependency of the United States on foreign oil.

The <u>Wall Street Journal</u> wrote: "The proposed regulatory revamp is setting out to do what history suggests can't be done easily – tame the financial system's tendency to drive itself off a cliff" (WSJ P. A8, July 17, 2009). In coming weeks we will attempt to prove that Congress may well be fighting to fix a potential future crisis with half a tool set. The Senate and House Banking committees are doing an excellent job; the problem is that the Senate Committee on Energy and Natural Resources and the House Energy and Commerce Committee may not be as cognizant of the importance of Energy in the crisis of 2007 to 2009. The financial sector is the lower hanging fruit it appears, and it is only when the higher hanging fruit is tackled, will the types of business cycles that have dominated the post war period begin to be addressed. More directly, if crude is free to creep up the way it has during this recession it is highly unlikely that the consumer nor transportation will be able to lead the economy out of this recession.

The case against Technology is a bit more mixed. During the 1990 Technology boom the technology sector lead the markets because of consumer purchases of new electronic equipment, but more importantly because businesses were making huge investments in technology. Today most of the successful technology companies, Apple, Research in Motion are consumer directed and not business driven. If the consumer is not going to lead we do not see how technology can lead. Technology can only lead if the business makes major technology investment, and there are some signs in this direction but we do not believe enough for this sector to lead out of the recession.

C. __The Case For the Construction and High Tech Consulting Sectors__

If the consumer, technology, transportation, and the financials are not the recovery areas where could it come from? In this recession it must come from Construction and Professional Technological Services because there is no other place for job growth except from that space. Construction is a space that has lost the most jobs, and is also the area where the most jobs can be created in the shortest order. Professional and Technological Services is the area where growth had been the fastest. No other sector can produce jobs as quickly as the construction and the Professional Technology sectors. It is this hypothesis that we will pursue in this report.

On **<u>April 6, 2008</u>** we wrote:

> On Friday April 4, 2008 the Department of Labor reported that the economy lost 80,000 jobs last month, after having lost 76,000 the month before. This is the third month in a row where the
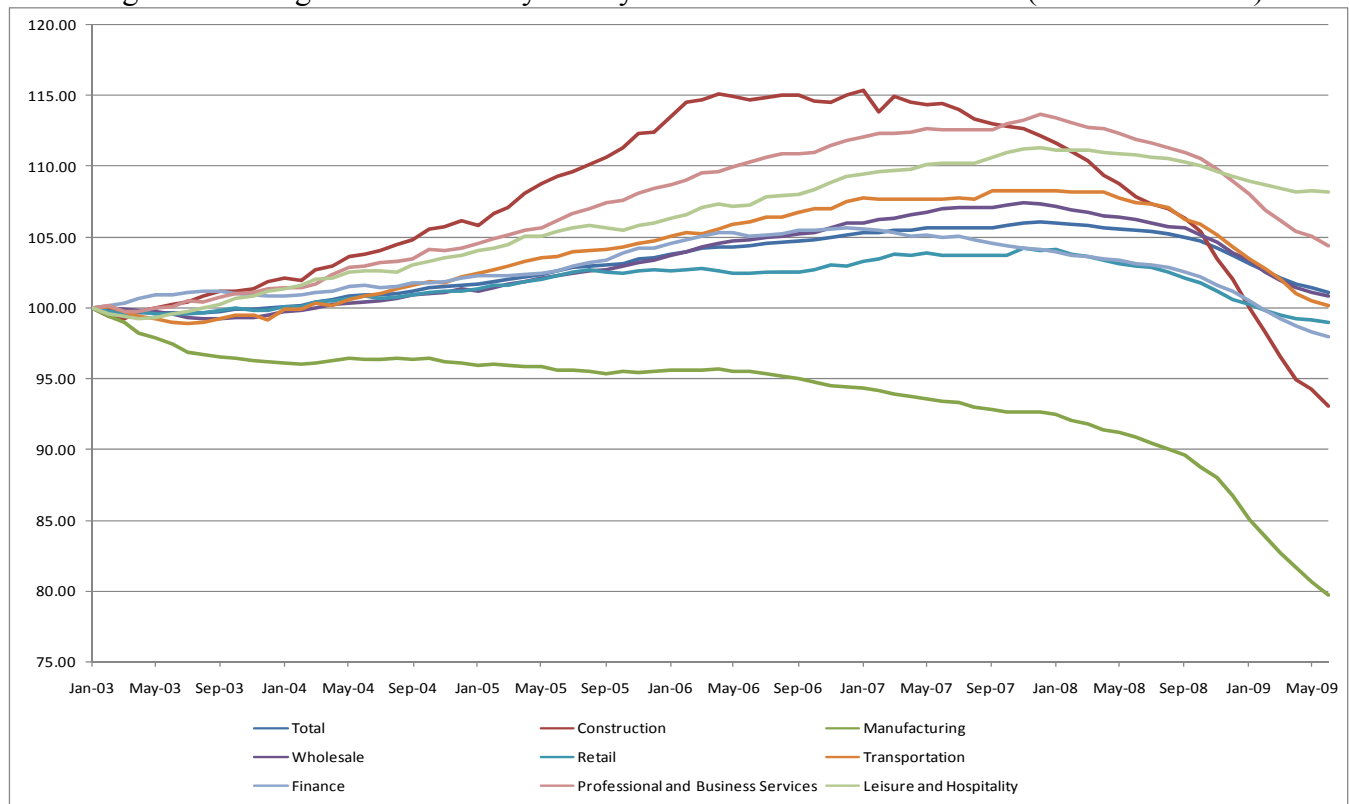
economy has lost jobs. Since World War II there have been 11 rece3ssions, and there has never been an instance where the economy has NOT been in a recession when the economy has lost jobs for three months in a row.

In that report we argued on April 6th that the economy was already in a recession, well before the NBER had declared the economy to be in a recession.

The value in this data which often is considered the most important single economic report of the month may be used in a slightly different manner. It can help us figure out where jobs can be created, and as a consequence where jobs need to be created to begin to regain back the more than 6 million jobs that had been lost. If one adds the 100K jobs per month that are required for the economy to grow we are looking at a required 8 million new jobs just to get back to where we were prior to this recession, given the population growth from both legal immigration of working age, about 500K per year, and new entrants into the labor force.

Figure V show the percentage change in the number of jobs lost by sector. We have included the Sectors of Construction, Manufacturing, Wholesale, Retail, Transformation, Professional Services, Leisure and Hospitality and Finance as well as the total loss of jobs. The table is indexed to base 100 from January 2003 indicating that a score of 100 would mean zero growth from 2003 to June 2009, and a score of 130 would indicate job growth of 30% in that sector. Similarly a score of 80 as we have with manufacturing would indicate a 20% loss of jobs from 2003.

Figure V: Change in Nonfarm Payrolls by Sector Jan 2003 to June 2009 (2003 = Base 100)

Source: Department of Labor, SISR

The figure shows that construction from 2003 to mid 2006 and professional and Technical Services until early 2008 had created the largest number of jobs. It also indicates that 20% of all construction jobs had been lost have been lost since then. We also can observe a decline in manufacturing jobs with a decline closer to 12% since 2007. Manufacturing job losses have been occurring throughout the decade of 2000 and as a consequence it is unlikely that this is where we can expect massive growth recovery. Business and professional services which includes legal and accounting services as well as computer and technical consulting lost approximately 7% as did all other areas except for leisure and hospitality which is down only about 3% from its high.

Of the sectors reported Professional and Business Services accounts for 13% of the economies jobs, followed by retail at 11%, Leisure and Hospitality at 10% manufacturing at 9%, finance and construction both at 6% wholesale at 4 and Transportation at 3%. This accounts for 61% of all jobs in the economy. The two excluded sectors: education and Health, and the Government makes up most of the remainder. We excluded Government because there is no way to invest in the government and Health and Education because those sectors have been adding jobs throughout the recession, and we do not see massive job gains in Health and Education.

From this table it is clear that in order to begin to recapture some of the jobs lost we must look to construction and professional services and consulting. Construction was the first area to roll over, Manufacturing has been losing jobs all decade, and the other areas which all rolled over at about the same time will begin to show some growth, but most likely only once there is some job creation. Professional and consulting services has been the stop gap for much of the lost jobs in manufacturing over the decade, with more individuals moving to the service sector where there have been the greatest growth in jobs.

There is no other area besides Construction that has the total upside potential for jumpstarting the economy. In addition the expected stimulus bill has a great deal of infrastructure in the bill that will be spent in the next 6 to 12 months. Housing appears to have stabilized, and as a consequence the construction area is the most likely and necessary area for recovery.

V. **Conclusion**

We began this report with a WSJ quote regarding the problems with asset allocation during periods of systemic risk. We tried to show both theoretically and empirically our work at SISR over the past half decade has been a direct attempt to address two critical issues:

1. During transition period: The method sets off alarms regarding weakening sectors during downturn and the early growth sectors during recovery periods.
2. During the mid cycle it sends out signals regarding which sectors appear to be outperforming the economy and which are lagging behind.

We provided several empirical examples of how this data successfully made early calls on particular sectors, stocks, and the economy in general and concluded by arguing that the recovery most likely would come from the construction and professional services high tech area, believing that job creation must come back from those areas most affected.

For this reason we at SISR have been arguing that construction must become a viable area for growth. We also like the high tech area of consulting simply because that had been the second fastest growth area prior to the recession and we expect that this area will continue to grow as manufacturing continues to lose jobs well into the next decade. Based on this logic we have included Accenture (ACN), and Infosys Technology (INFY) in our portfolio on the consulting side, and caterpillar (CAT), Granite Construction (GRA), Jacobs Engineering Group (JEC), Texas Industries (TXI), Vulcan Materials (VMC) on the construction side. We believe that much of the Stimulus which has not been spent will be proceeding much faster on the infrastructure side, and with the health records bill and the new regulations for the financial system these programs should help the technological consulting firms.

The entire SISR portfolio is provided below.

Figure VI: The SISR Model Portfolio Since Inception October 2009 to July 17, 2009

Companies, Initiation Date and Price and Percentage Change

#	Company	Initiation Date	Initiation Price	Initial Purchase	Initial Purchase Sold	# of Shares	Date of Sale	Sale Price	Price May 7, 2009	Percent Change	Current Value	Profit/Loss
1	The Mosaic Company (MOS)	Oct. 18, 2008	$33.66		$50,000.00	1485.44	April 8, 2009	$45.61		35.50%	$0.00	$17,751.04
2	Holly Corporation (HOC)	Oct. 23, 2008	$16.75		$50,000.00	2985.07	May 7, 2009	$25.25		50.75%	$0.00	$25,373.13
3	Abercrombie (ANF)	Nov. 3, 2008	$28.96	$50,000.00		1726.52			$25.12	-13.26%	$43,370.17	
4	Aeropostale (ARO)	Nov. 3, 2008	$24.18		$50,000.00	2067.82	May 5, 2009	$37.22		53.93%	$0.00	$26,964.43
5	Harris (HRS)	Jan. 25, 2009	$42.80		$50,000.00	1168.22	May 7, 2009	$28.58		-33.22%	$0.00	-$16,612.15
6	Caterpillar (CAT)	Jan. 28, 2009	$32.32	$50,000.00		1547.03			$34.07	5.41%	$52,707.30	$0.00
7	Accenture (ACN)	Feb. 4, 2009	$33.11	$50,000.00		1510.12			$34.24	3.41%	$51,706.43	
8	Polo Ralph Lauren (RL)	Feb. 18, 2009	$36.97		$50,000.00	1352.45	May 7, 2009	$52.00		40.65%	$0.00	$20,327.29
9	Darden Restaurants (DRI)	Mar. 16, 2009	$28.78	$50,000.00		0.00			$33.76	17.30%	$0.00	$0.00
10	Cheesecake Factory Inc. (CAKE)	Mar. 16, 2009	$9.48		$50,000.00	5274.26	April 30 ,2009	$17.37		83.23%	$0.00	$41,613.92
11	Applied Materials (AMAT)	Mar. 16, 2009	$10.43	$50,000.00		4793.86			$12.40	18.89%	$59,443.91	$0.00
12	L-3 Communication Holdings (LLL)	Mar. 16, 2009	$61.29		$50,000.00	815.79	May 7, 2009	$77.04		25.70%	$0.00	$12,848.75
13	Wells Fargo & Co. New (WFC)	Mar. 16, 2009	$13.70		$50,000.00	3649.64	May 7, 2009	$24.76		80.73%	$0.00	$40,364.96
14	Bank of America (BAC)	Mar. 16, 2009	$6.18		$50,000.00	8090.61	April 30 ,2009	$8.93		44.50%	$0.00	$22,249.19
15	Lowes Companies Inc. (LOW)	Mar. 19, 2009	$17.19	$50,000.00		2908.67			$20.40	18.67%	$59,336.82	$0.00
16	J.B. Hunt Transport (JBHT)	Mar. 31, 2009	$23.61	$50,000.00		2117.75			$37.37	58.28%	$79,140.19	$0.00
17	Infosys Technologies (INFY)	Apr. 17, 2009	$27.98	$50,000.00		1786.99			$38.01	35.85%	$67,923.52	
18	China Life Insurance (LFC)	Apr. 17, 2009	$54.72	$50,000.00		913.74			$60.17	9.96%	$54,979.90	
19	Granite Construction Inc. (GVA)	Apr. 17, 2009	$40.12	$50,000.00		1246.26			$34.59	-13.78%	$43,108.18	
20	Texas Industries Inc. (TXI)	Apr. 17, 2009	$31.81	$50,000.00		1571.83			$35.11	10.37%	$55,187.05	
21	China Medical Technology (CMED)	Apr. 20, 2009	$19.28	$50,000.00		2593.36			$19.13	-0.78%	$49,611.00	
22	Nokia (NOK)	Apr. 30, 2009	$14.14	$50,000.00		3536.07			$13.07	-7.57%	$46,216.41	
23	Hewlitt Packard (HPQ	Apr. 30, 2009	$35.98	$50,000.00		1389.66			$39.86	10.78%	$55,391.88	
24	Coach Inc. (COH)	May 5, 2009	$25.42	$50,000.00		1966.96			$26.48	4.17%	$52,084.97	
25	Nordstrom Inc. (JWN)	May 5, 2009	$23.90	$50,000.00		2092.05			$22.06	-7.70%	$46,150.63	
26	Jacob Engineering (JEC)	May 5, 2009	$41.57	$50,000.00		1202.79			$39.95	-3.90%	$48,051.48	
27	S&P Dep Receipts (SPY) - Short	May 7, 2009	$90.86		-$600,000.00	-6603.57	June 5, 2009	$94.02		3.48%	$0.00	-$20,867.27
28	Exxon Mobil Corp (XOM)	May 11, 2009	$70.80	$50,000.00		706.21			$68.30	-3.53%	$48,234.46	
29	Petroleo Brasilei (PBR)	May 11, 2009	$40.00	$50,000.00		1250.00			$39.91	-0.23%	$49,887.50	
30	Schlumberger Limited (SLB)	May 11, 2009	$56.53	$50,000.00		884.49			$55.80	-1.29%	$49,354.33	
31	Baker Hughes Inc. (BHI)	May 11, 2009	$39.20	$50,000.00		1275.51			$38.37	-2.12%	$48,941.33	
32	Occidental Petroleum Corp (OXY)	June 6, 2009	$68.56	$50,000.00	$50,000.00	729.29	June 12,2009	$68.97		0.60%	$0.00	$299.01
33	FPL Group Inc. (FPL)	June 6, 2009	$55.22	$40,000.00		724.38			$56.84	3.93%	$41,571.89	
34	Woodward Governor Co. (WGOV)	June 6, 2009	$23.12	$50,000.00		2162.63			$18.98	-17.91%	$41,046.71	
35	Vulcan Materials Company (VMC)	June 6, 2009	$46.09	$50,000.00		1084.83			$41.82	-9.26%	$45,367.76	
36	Holly Corporation	June 14, 2009	$20.72	$50,000.00		2413.13			$18.64	-10.04%	$44,980.69	
37	WellPoint (WLP)	June 22, 2009	$48.82	$50,000.00		1024.17			$49.88	2.17%	$51,085.62	
38	United Health (UNH)	June 22, 2009	$24.56	$50,000.00		2035.83			$24.82	1.06%	$50,529.32	
	Total Equity			$1,390,000.00							$1,335,409.45	
	Cash			-$390,000.00							-$390,000.00	
	Total Realized Gain/Loss											$170,312.32
	Total Value of Account										$1,115,721.77	
	Original Asset Value										$1,000,000.00	
	Total Return Since Inception Oct 2008						S&P	-0.02	SISR	11.57%	$115,721.77	
	Total Return 2009						S&P	4.11	SISR	13.38%		

Source: Reuters SISR

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I, Philip L. Miller (or any research analysts at SISR Inc.) certify/certifies that the views expressed in this report accurately reflect my personal views about the subject companies and securities. In addition no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

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2 – Overweight – The stock is expected to outperform the equal weighted expected total return of the sector coverage. Our investment horizon is 12 – 18 months except as specified by the reporting analyst.
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A price chart, with changes of ratings and price targets in prior periods, is included above, for all securities covered in this report.

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