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**Cash Flow Trends and Their Fundamental Drivers: A Continuing Look**  
**Summary Review (Qtr 2, 2009)**  
**FREE CASH MARGIN INDEX:**

**2.43, 4.12**

**4.76**

**5.14**

**Recession Lows (Mar. 2001, Dec. 2008)**

**Current (June 2009)**

**Expansion High (June, 2004)**

In this research report we provide our flash measure of free cash margin for all non-financial companies measured through June, 2009. Detailed industry data for the quarter will be published soon. We found that for the twelve months ended June, 2009, free cash margin improved to 4.76%, up from the recession low of 4.12% reached in December 2008 and up from the 4.60% registered for the twelve months ended March 2009. Thus, the improvements noted in the March quarter continued into June, suggesting the much-discussed turnaround in the U. S. economy remained on track.

In the June 2009 reporting period, free cash margin improved even though profitability, as measured by operating cushion, declined slightly. Driving the improvement in free cash margin were noteworthy reductions in both capital spending and the cash cycle. Income taxes paid as a percentage of revenue also declined. While the continued improvement in free cash margin is a positive development and consistent with the improvements noted in share prices since early March, the long-term viability of the Recovery will require a return to improving profitability. More specifically, confirmation of the end of the recession on a cash flow basis will require an improving cash margin driven more by improving profitability, as evidenced by improving operating cushion, and less through reductions in capital spending and the cash cycle.

Data for this research were provided by Cash Flow Analytics, LLC., [www.cashflowanalytics.com](http://www.cashflowanalytics.com).  
Charles Mulford is a principal in Cash Flow Analytics, LLC. September, 2009

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**Georgia Tech Financial Analysis Lab**

The Georgia Tech Financial Analysis Lab conducts research on issues of financial reporting and analysis. Unbiased information is vital to effective investment decision-making. Accordingly, we think that independent research organizations, such as our own, have an important role to play in providing information to market participants.

Because our Lab is housed within a university, all of our research reports have an educational quality, as they are designed to impart knowledge and understanding to those who read them. Our focus is on issues that we believe will be of interest to a large segment of stock market participants. Depending on the issue, we may focus our attention on individual companies, groups of companies, or on large segments of the market at large.

A recurring theme in our work is the identification of reporting practices that give investors a misleading signal, whether positive or negative, of corporate earning power. We define earning power as the ability to generate a sustainable stream of earnings that is backed by cash flow. Accordingly, our research may look into reporting practices that affect either earnings or cash flow, or both. At times, our research may look at stock prices generally, though from a fundamental and not technical point of view.

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**Cash Flow Trends and Their Fundamental Drivers:  
A Continuing Look**

**Summary Review (Qtr 2, 2009)**

***Improvements in Cash Flow Generation:  
a “V” or a “W”?***

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**FREE CASH MARGIN INDEX\*:**

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The **\*Free Cash Margin Index** is free cash flow measured as a percentage of revenue for the trailing twelve month period.

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**Introduction**

This is a summary research report that is part of a continuing series that examines cash flow trends and the underlying drivers that are causing changes in those trends. In the current study we conduct a summary review of the cash flow performance of all non-financial companies for a series of rolling twelve-month periods from the first quarter of 2000 through the second quarter of 2009. All companies with a current market cap of \$50 million or more are included, resulting in a total sample of 3,518 companies.

In this report we do not look at the performance of individual industries as has been our custom with earlier reports. Our objective here is to provide a timely measure of free cash margin for our sample through the second quarter of 2009. Individual industry data will be posted on our website later.

Measured as free cash flow divided by revenue, free cash margin is a cash flow profit margin. It indicates what percent of revenue is left for shareholders in the form of free and discretionary cash flow. If the company sells its products or services for a dollar, free cash margin tells us how many cents the shareholders can take home without reducing the company’s ability to generate more. Thus, as we look at cash flow trends and their underlying drivers, our particular interest is on how those factors impact free cash margin.

### ***Our Continuing Focus on Cash Flow***

Corporate financial success is dependent not only on a company's ability to generate revenues and earnings, but also cash flow, especially free cash flow. It is free cash flow and growth in free cash flow, that discretionary stream of cash that a company can put to use for acquisitions, debt retirement, dividends and stock buybacks that works with growing earnings to drive firm value higher. Because it is "free," free cash flow comes with no strings attached. It is truly discretionary. Spending it does not impact the company's ability to generate more.

A company with revenue growth will eventually lose the favor of investors if it never finds a way to generate earnings. In a similar way, a company with profits that is unable to generate cash will also experience waning investor enthusiasm. It may take a while. Investors are patient with profitable, growing companies. Ultimately, however, a company must show an ability to generate free cash flow.

Companies that consume cash must continually seek new sources of capital – whether debt or equity. At some point, those sources of capital will dry up or become prohibitively expensive if the firm does not show at least some progress toward getting closer to positive cash generation. Worse, if cash flow does not back a company's earnings, ultimately those earnings themselves may become suspect, necessitating write-downs of the resulting non-cash assets. Net losses will likely accompany those write-downs.

### ***Cash Flows During Recessions***

During periods of economic contraction, revenues and profitability decline. A company's ability to generate cash flow declines as well. A decline in a firm's ability to generate cash is of particular concern given the importance of cash flow to a firm's economic well being.

When free cash margin is positive, a firm is covering all ongoing claims and is able to pay dividends, reduce debt or simply add to its cash coffers. When free cash margin turns negative, ongoing claims are not being met. Cash and short-term investments can be used to meet the shortfall. However, on-hand cash and short-term investments are not an unlimited source of funds. Firms can borrow money to meet their needs, but even if this were an option, increasing debt levels add new, unwanted risks. Equity issues provide another avenue, but capital markets are painfully dilutive when share prices are depressed by recession. Thus, free cash margin serves as an important measure of long-term financial health and one that is particularly relevant during a recession.

We think that by periodically examining their cash generating ability, we will gain insight into the overall financial health of important segments of U.S. firms such as the S&P 500, or of different industry groups. With data dating back to 2000, we will see how the cash-generating

performance of these firms presently compares with their performance during the 2001 recession.

### **Cash Flow Definitions**

Free cash flow is the cash flow equivalent of the income statement “bottom line.” Like net income, free cash flow is available for shareholders after all prior claims have been satisfied. However, also like net income, which, to facilitate analysis, can be divided into certain sub-measures of performance, like gross profit and operating profit, free cash flow can be similarly divided. Thus, while our primary focus is on free cash flow and free cash margin, or free cash flow as a percentage of revenue, we analyze here the fundamental drivers underlying two distinct, but also closely related, measures of cash flow:

- 1) Operating cash flow and operating cash margin - cash flow from operations after interest charges and income taxes. Operating cash margin is operating cash flow divided by revenue.
  
- 2) Free cash flow and free cash margin - cash flow available for common shareholders that can be used for such discretionary purposes as stock buybacks and dividends without affecting the firm's ability to grow and generate more. This measure is calculated as operating cash flow less preferred dividends and net capital expenditures. Free cash margin is free cash flow divided by revenue.

### **Data and Methodology**

Our data is provided by Cash Flow Analytics, LLC.<sup>1</sup> As noted, each data amount is for a rolling twelve-month period ending with the quarter end in question. For example, cash flow amounts for March 31, 2009 represent amounts for the twelve months (four quarters) ending June 30, 2009.

### **Results**

In the exhibits below we present a graph of free cash margin and four of its underlying drivers: operating cushion, capital expenditures to revenue, and cash cycle, and income taxes paid to revenue for our complete sample of companies. A total of 3,518 companies are included.

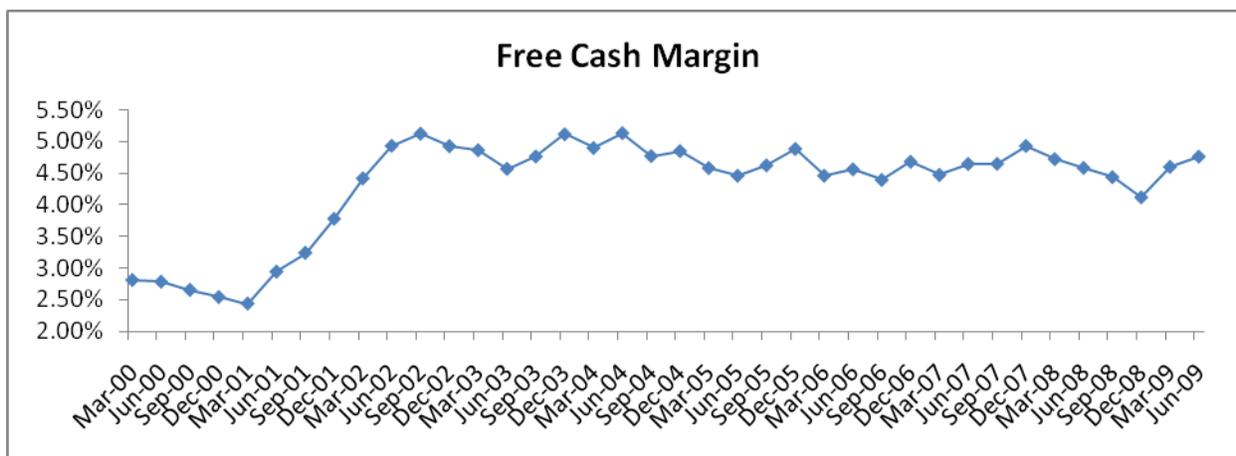
In reviewing the exhibits, quickly it becomes clear that the improvements noted for free cash margin during the period ended March 2009 continued into June. For the twelve months ended June, 2009, free cash margin improved to 4.76%, up from 4.60% noted for the twelve months ended March 2009 and up from the recession low of 4.12% reached in December 2008. A graph of free cash margin is presented below. Note the striking “V” formation that is developing between December 2007 and June 2009. After reaching a near-term peak of 4.93% in December

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<sup>1</sup> Cash Flow Analytics, LLC, 1727 Malvern Place, Duluth, Georgia, 30097. [www.cashflowanalytics.com](http://www.cashflowanalytics.com). Charles Mulford is a principal in Cash Flow Analytics, LLC.

2007, free cash margin declined to 4.12% in December 2008 and has now improved for two reporting periods, to 4.76% for the twelve months ended June 2009.

### All Industries, March, 2000 – June, 2009

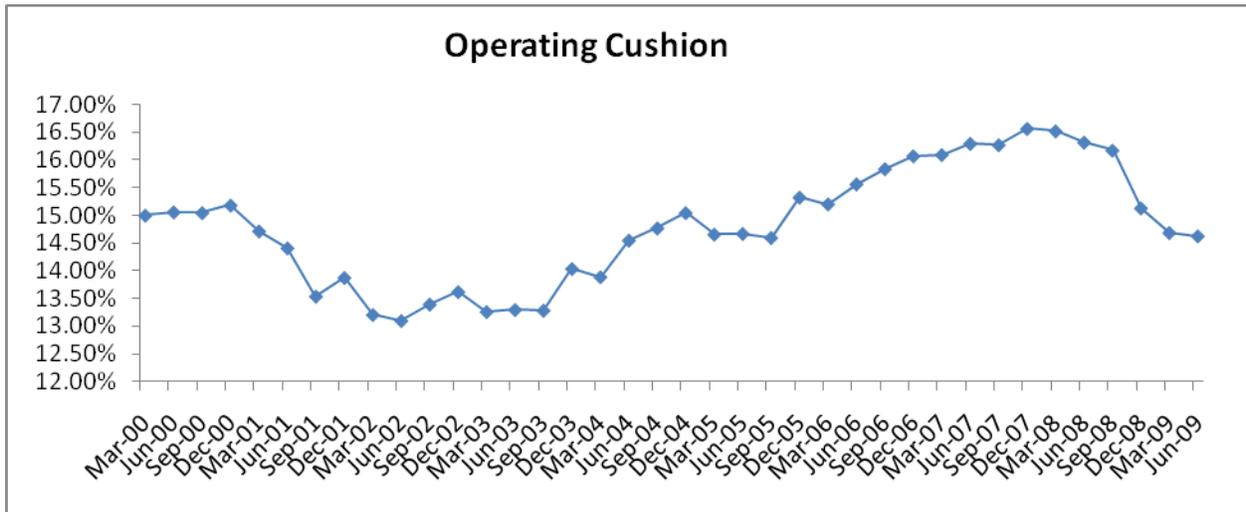


Underlying movements in free cash margin are the effects of factors that affect profitability and efficiency. On the profitability front, operating cushion measures operating profit, exclusive of the non-cash expenses, depreciation and amortization. Factors impacting operating cushion consist of gross margin (excluding depreciation and amortization), SG&A% (excluding depreciation and amortization) and R&D%. Also impacting profitability and a firm's ability to generate free cash flow, but excluded from operating cushion, is income taxes paid, which we measure as a percent of revenue. Capital expenditures do not impact profitability directly, but through depreciation. However, these expenditures are subtracted in computing free cash flow. Like operating expenses and taxes, we measure capital expenditures as a percent of revenue.

On the efficiency front, increases in receivables and inventory consume free cash flow. Increases in accounts payable provide free cash flow. The combination of receivables days plus inventory days less payables days is a firm's cash cycle. Reductions in the cash cycle provide free cash flow, while increases in the cash cycle consume free cash flow. Below we present graphs of operating cushion, income taxes paid to revenue, capital expenditures to revenue and cash cycle for our sample.

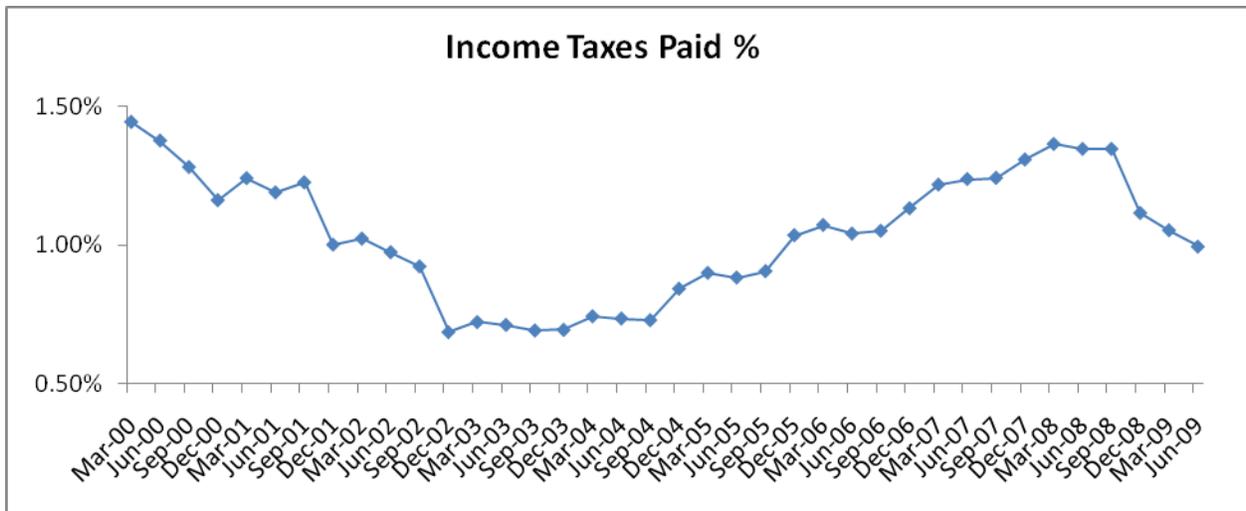
Note that operating cushion declined to 14.63% during the twelve months ended June 2009 from 14.69% in March 2009 and 15.13% in December 2008. Thus, the improvement in free cash margin is not one of improving profitability. The impact on free cash margin of such declining profitability was muted and offset, however, by declining income taxes paid, declining capital expenditures and a declining cash cycle. Whether the increase in free cash margin noted in the March 2009 and June 2009 reporting periods continues, (a "V" formation), or is instead followed by a decline, (a "W" formation), is very much dependent on whether companies can once again begin improving profitability.

**All Industries, March, 2000 – June, 2009**



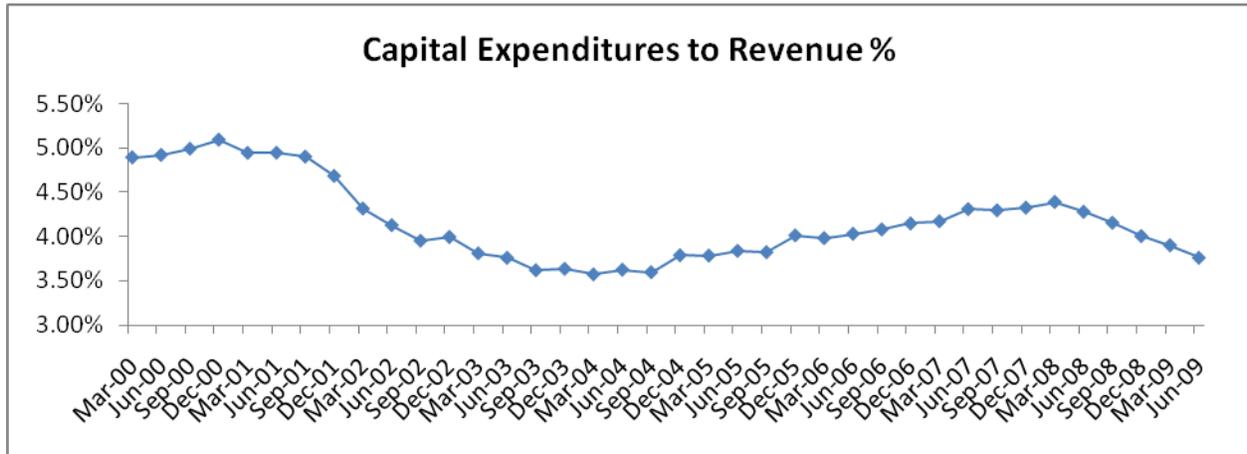
Income taxes paid, measured as a percent of revenue, declined to .99% in the June 2009 reporting period, from 1.05% in March 2009 and 1.12% in December 2008. In the absence of changing tax rates, as operating profits decline, measured as a percent of revenue, so do income taxes paid. A graph is presented below.

**All Industries, March, 2000 – June, 2009**



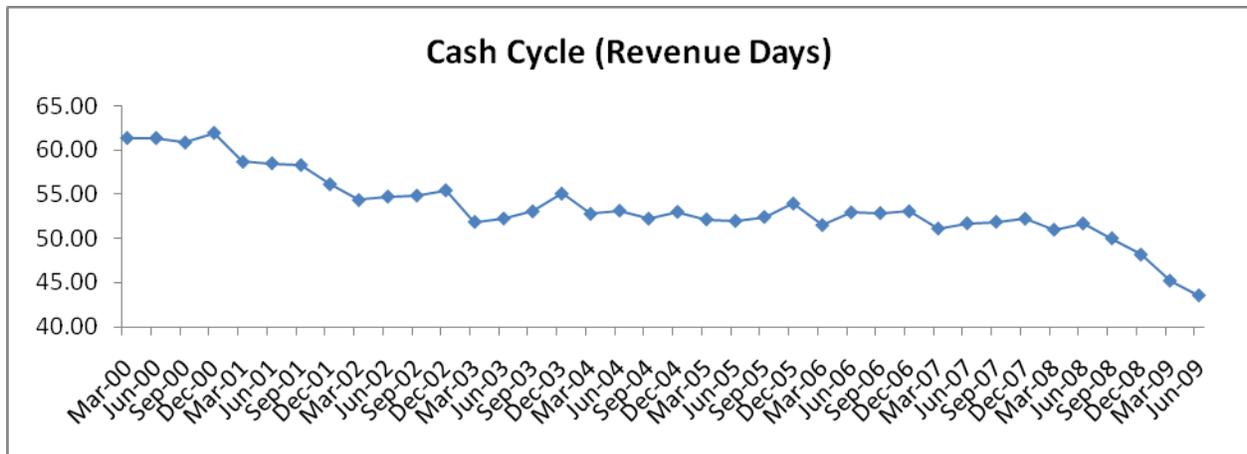
Capital expenditures measured as a percent of revenue declined to 3.76% in the twelve months ended June 2009 from 3.90% for the twelve months ended March 2009 and 4.00% for the twelve months ended December 2008. Declining capital expenditures add directly to current free cash flow but may negatively impact free cash flow in subsequent periods as delayed capital spending projects are resurrected.

**All Industries, March, 2000 – June, 2009**



The cash cycle declined markedly to 43.52 days in the twelve months ended June 2009 from 45.18 days for the twelve months ended March 2009 and 48.15 days for the twelve months ended December 2008. We saw a slight uptick in receivables days and a reduction in inventory days. Consistent with the increase in receivables days, payables days also increased. A declining cash cycle adds to corporate efficiency and cash flow as companies tie up less cash in operating working capital. The cash cycle reported by our sample firms in the June 2009 reporting period is the lowest cash cycle we have seen across our nine years of data. Firms have responded aggressively to the slowing economy by cutting operating working capital. In the process, free cash flow has improved.

**All Industries, March, 2000 – June, 2009**



## **A Final Observation**

From a cash flow perspective, U.S. corporate performance bottomed in the twelve months ended December 2008. At that point, free cash margin declined to 4.12%, down from an expansion peak of 5.14% reached during the twelve months ended June 2004. Since the December 2008 reporting period, cash generation has improved, with increases in free cash margin noted for the twelve months ended March 2009 and again for the twelve months ended June 2009. A graph of free cash margin now appears to be a classic “V” formation. Under the surface, however, all is not well. Corporate managers have done a remarkable job of offsetting declines in profitability, as measured by operating cushion, with reductions in capital spending and the cash cycle. Such steps are not sustainable. If operating profitability does not turn up, the expectation is that free cash margin will likely decline again, making the “V” formation more of a “W”. It is an interesting and open question that can only be answered as economic developments unfold. Will companies improve profitability and with it free cash margin or will increased capital spending and inventory replacement push free cash margin lower? We will review the data as it becomes available.