Spotlight on Performance: What's Working in Retail?

A review of the Markit Retail Model and Industry Key Drivers

Consumer spending drives over two-thirds of the US economy and beneath this vital segment of the market lies the retail sector. As such, the pulse of the US consumer drives economic sentiment and in turn market sentiment around the globe. With such an important piece of economic activity, in this report we take a detailed look at the Markit Retail Model which brings Markit's quantitative insight to stock selection in this unique and diverse universe. Model scores are geared around attributes including same store sales, store growth and operating strength, among others. Focusing on recent 2-year results, we highlight positive growth and momentum effects captured by factors such as *Store Growth Efficiency* and *Same Store Sales & Earnings Expectations*.

INTRODUCTION

The Retail Model is designed to generate excess return by employing general signals alongside key industry specific measures. Composition is geared around the following seven modules and their component factors:

- *Management Quality* assesses the ability and expertise in managing expenditures and asset quality. Factors include:
  - Abnormal Capital Investment
  - Change in Net Operating Assets
  - Store Location Attractiveness
  - TTM Capital Expenditures (Capex) to Sales
- *Operating Strength* targets the operating and working capital efficiency. Factors include:
  - Change in Sales vs Accounts Receivables
  - Change in TTM Operating Income vs Change in Long Term Debt
  - Chg in SGA Expenses vs Change in Sales
  - Unexpected Change in Inventory
- *Price Momentum* measures long-term price momentum and short-term price reversal. Factors include:
  - 12M Price Momentum
  - 1M Price Reversal
- *Short Sentiment* gauges the level of short interest and the change in short interest in order to quantify the market's perception of the firm. Factors include:
  - Abnormal Short Interest Shares
  - Short Interest Position
  - Short Interest Ratio
- *Same Store Sales (SSS) & Earnings Expectations* analyzes sell-side analysts' and the market's expectations for earnings as well as recent EPS, sales, and same store sales surprises. Factors include:
  - 3-Month Revision in FY1 Estimates
  - 3-Month Revision in FY2 Estimates

- *EPS Surprise*
  - High Estimate Same Store Sales Surprise
  - Mean Estimate Same Store Sales Surprise
  - Total Sales Surprise
- *Store Growth Efficiency* captures the strength and efficiency store growth. Factors include:
  - 1-Yr Change in Operating Profit Margin
  - 1-Yr Change in Quarterly Inventory as % of Sales
  - Actual Same Store Sales Growth
  - Sales Growth to Store Growth

- *Valuation & Liquidity* focuses on liquidity and cash flow generation as well as the valuation of the cash flows. Factors include:
  - 5-year Relative TTM Forward Free Cash Flow (FCF) to Price
  - Cash to Price
  - Forward Free Cash Flow to Price
  - TTM Operating Cash Flow to Price

The remainder of this report provides summary details for the Retail Model. Our focus is on performance over the Retail Universe during the last 2 years (May 2010 – April 2012) as well as recent year-to-date (YTD) developments. We first review the composite model as well as its main modules. Next we provide more precise detail at the individual factor level.

DATA, METHODOLOGY & RESULTS

Performance and attribution results are based on the Markit Retail universe which has averaged around 270 US names since 2005. Industry representation includes restaurants, apparel and luxury goods providers, food and staples retailers, and internet and catalogue vendors, among others. To test factor efficacy, we first calculate the information coefficient (IC) as the correlation between the model ranks (percentile) and subsequent returns. Equal-weight decile returns are also computed. The long/short spread is calculated based on an investment strategy that goes long the highest ranked stocks (Q1) and shorts those with the lowest ranks (Q5). The spread is simply the difference between these two quintile returns (Q1 – Q5).

<u>Retail Model</u>

Figure 1 outlines Retail Model performance (IC) for the prior 2-year period alongside YTD numbers. Likewise, quintile return spreads are displayed in Figure 2. Results in both instances are based on 1-month holding period averages.

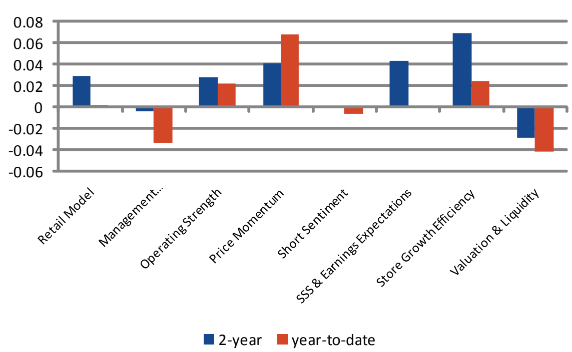

Figure 1: Retail Model average 1-m ICs, May 2010 – Apr 2012

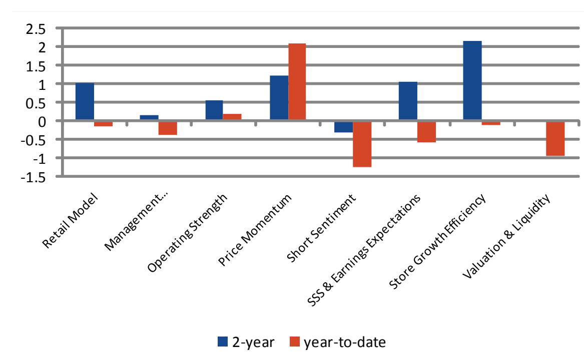

Figure 2: Retail Model average 1-m return spreads, May 2010 – Apr 2012

The positive 2-year Retail Model IC (0.029) is supported by mostly positive module results. In fact, only two modules report negative ICs including *Management Quality* and *Valuation & Liquidity*. The top positive contributor is *Store Growth Efficiency* (0.069) followed by *SSS & Earnings Expectations* (0.043) and *Price Momentum* (0.041). Growth and momentum have been clear drivers of retail performance over this period. On a YTD basis, overall model results are more neutral with similar directional module results; however, in this case *Price Momentum* decisively outperformed.

While the IC statistic captures cross-sectional results, return spreads indicate behavior at the tails of the distribution. Overall we observe spread performance in-line with IC results. The positive 2-year average return spread (1.03%) is again indicative of a growth and momentum bias in retail sector investor preferences over this period. *Store Growth Efficiency* once more took top honors with an average monthly return spread of 2.16%. For the year, *Price Momentum* remains robust to tail results with an average return spread of 2.09%.

Next we take a closer look at results for each module detailing individual factor performance.

Management Quality

We begin with a review of *Management Quality* factors. Figures 3 and 4 provide 2-year and YTD IC and return spread results, respectively. We noted above that *Management Quality* was not a favored attribute in the Retail Universe over the analysis period. However, *Store Location Attractiveness*, which assesses the attractiveness of store location based on population and household income, was an exception posting a 2-year average IC of 0.028 and return spread of 0.94%, indicating a more qualitative investment approach over financial quality. Yet these performance numbers turned sharply negative for the year. Also, high capital expenditures were rewarded as exemplified by negative returns to *TTM Capex to Sales* which is consistent with an investment approach rewarding future growth potential.

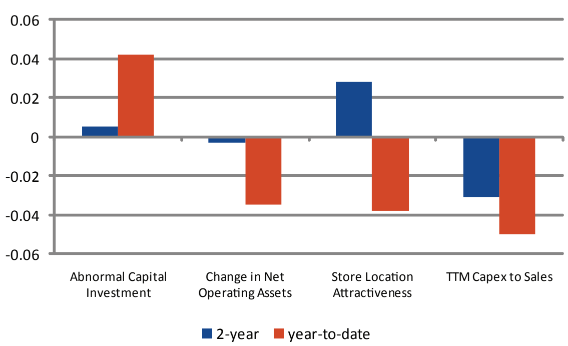

Figure 3: Management Quality average 1-m ICs, May 2010 – Apr 2012

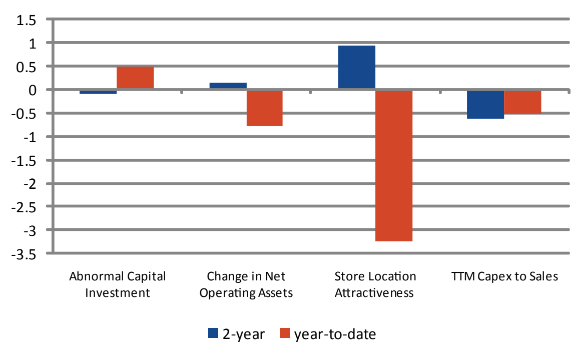

Figure 4: Management Quality average 1-m return spreads, May 2010 – Apr 2012

Operating Strength

The positive 2-year performance statistics for *Operating Strength* were driven by *Change in SGA Expenses vs Change in Sales* (IC: 0.035; return spread: 0.48%) and *Unexpected Change in Inventory* (IC: 0.023; return spread: 0.55%) as depicted by IC (Figure 5) and return spread (Figure 6) results. SGA represents selling, general and administration expenses excluding research and development. *Unexpected Change in Inventory Level* measures growth rates in excess of cost of goods sold capturing unnecessary inventory investment which can be an indicator of weaker than expected sales or excessive risk taking by management. The implication is that investors favored companies that controlled advertising expenses and inventories.

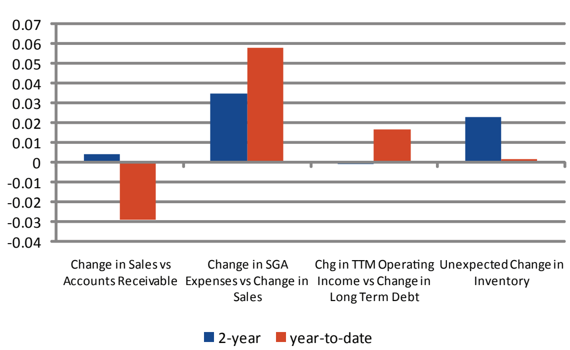

Figure 5: Operating Strength average 1-m ICs, May 2010 – Apr 2012

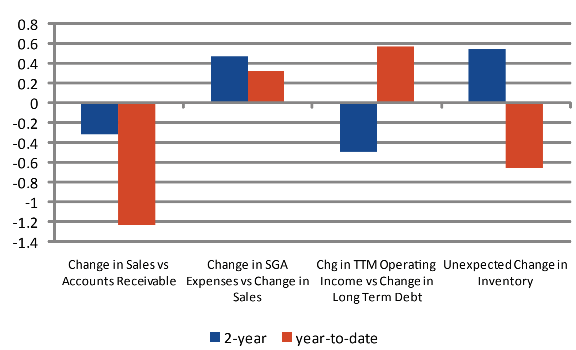

Figure 6: Operating Strength average 1-m return spreads, May 2010 – Apr 2012

Interestingly, positive returns to the inventory control measure have unwound since the start of 2012; however, we confirm that April once again witnessed positive IC and return spread performance (monthly results not shown here). Curiously, we also remark that *Change in Sales vs Accounts Receivable* turned significantly negative this year which is a trend that actually began in late 2011.

Price Momentum

The *Price Momentum* module is unique in extending strong 2-year performance into still higher current year results, which is reflective of strong broad market momentum effects. Indeed, when we delve further into factor results we note consistent IC (Figure 7) and return spread (Figure 8) outperformance.

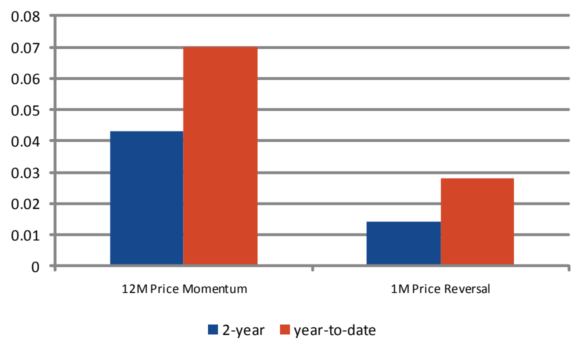

Figure 7: Price Momentum average 1-m ICs, May 2010 – Apr 2012

Figure 8: Price Momentum average 1-m return spreads, May 2010 – Apr 2012

Perhaps surprisingly, though, we do not observe the same consistency on a YTD basis. However, taking clues from our regularly-published Key Drivers Reports, we can draw some conclusions regarding developments in 1-month versus 12-month price momentum performance. Short-term price reversal factors reflected renewed investor optimism at the start of the year while medium-term price momentum factors underperformed. This relationship reversed in April. The Retail Universe mirrored broad market performance resulting in significant ICs in the outperforming months and pushing the YTD averages higher. On the other hand, return spreads experienced relatively similar periods of out/underperformance this year which cancelled each other out resulting in a neutral YTD value.

Short Sentiment

The *Short Sentiment* module displayed neutral to negative IC and return spread performance over both the recent 2-year and YTD time periods. Yet we observe that factor IC performance (Figure 9) was positive for *Abnormal Short Interest Shares* (2-year: 0.010; YTD: 0.017) and *Short Interest Ratio* (2-year: 0.009; YTD: 0.012) over both time periods, although at mostly neutral levels. We rank the short interest measures according to traditional interpretations as a negative signal for high levels of shorts. Overall, the factor IC and return spread (Figure 10) results were weak indicating a lack of favor by investors over the analysis periods suggesting concerns of deteriorating company prospects.

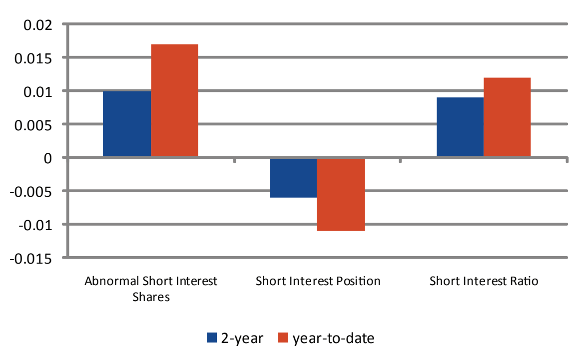

Figure 9: Short Sentiment average 1-m ICs, May 2010 – Apr 2012

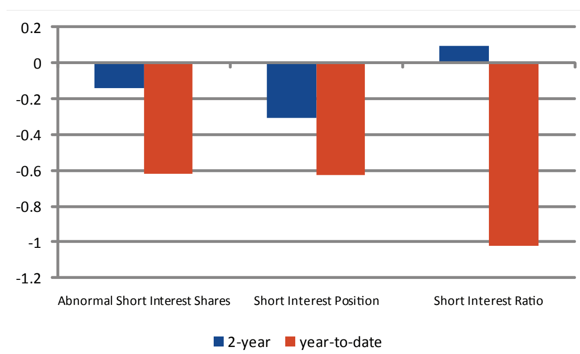

Figure 10: Short Sentiment average 1-m return spreads, May 2010 – Apr 2012

SSS & Earnings Expectations

As noted above, the Retail Model reflected strong momentum effects over the prior 2-year period which translated into positive *SSS & Earnings Expectations* IC results. Indeed, no factors posted negative ICs (see Figure 11 on Page 5) or return spreads

(Figure 12) over this horizon. However, for the year *High Estimate* and *Mean Estimate Same Store Sales Surprise* significantly underperformed the remaining revision and surprise factors.

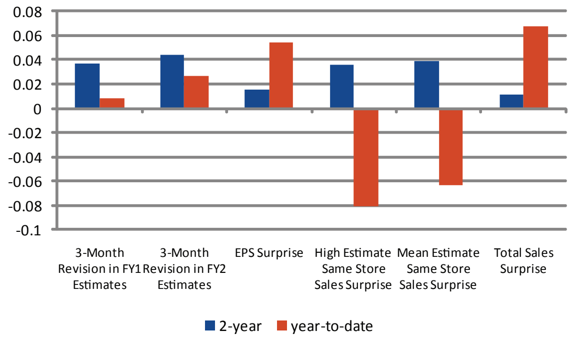

Figure 11: SSS & Earnings Expectations average 1-m ICs, May 2010 – Apr 2012

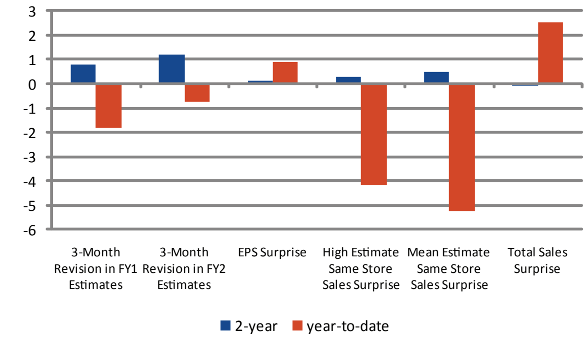

Figure 12: SSS & Earnings Expectations average 1-m return spreads, May 2010 – Apr 2012

Store Growth Efficiency

As the top 2-year performing module in the Retail Model, not surprisingly *Store Growth Efficiency* also displayed strong factor IC (Figure 13) and return spread (Figure 14) results. In fact, each factor posted positive performance with *Actual Same Store Sales Growth* (IC: 0.107; return spread: 2.71%) the most significant followed by *1-Yr Change in Quarterly Inventory as % of Sales* (IC: 0.052; return spread 1.49%). For the year, ICs are again positive for each factor consistent with the composite results. Further, the slightly negative *Store Growth Efficiency* return spread is indicative of more neutral factor performance with a negative result for *1-Yr Change in Operating Profit Margin*.

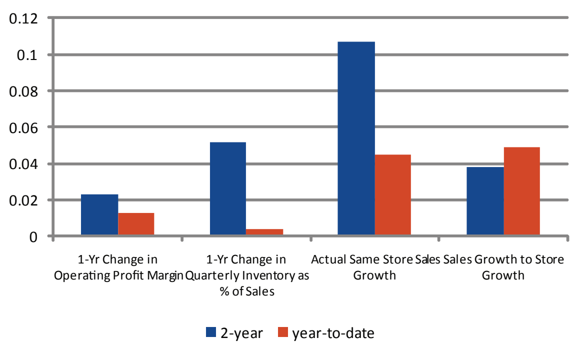

Figure 13: Store Growth Efficiency average 1-m ICs, May 2010 – Apr 2012

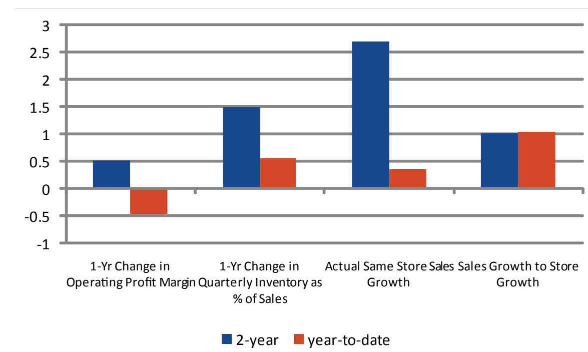

Figure 14: Store Growth Efficiency average 1-m return spreads, May 2010 – Apr 2012

Valuation & Liquidity

Valuation & Liquidity was a weaker module over the 2-year and YTD time periods. This is consistent with factor IC (Figure 15) and return spread (Figure 16) results. We point out some exceptions including positive *5-Year Relative Forward FCF to Price* ICs

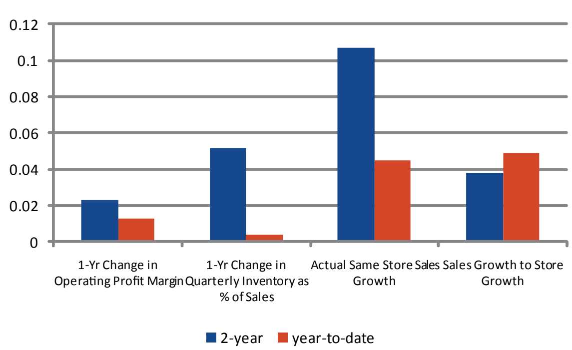

Figure 15: Valuation & Liquidity average 1-m ICs, May 2010 – Apr 2012

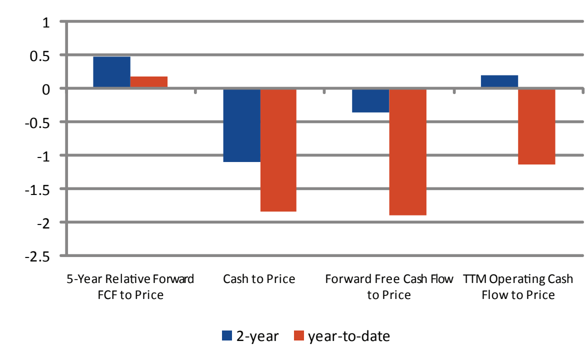

Figure 16: Valuation & Liquidity average 1-m return spreads, May 2010 – Apr 2012

(2-year: 0.031; YTD: 0.042) and return spreads (2-year: 0.47%; YTD: 0.18%) performance over both time horizons and a slightly positive, although neutral, 2-year return spread for *TTM Operating Cash Flow to Price* (0.20%).

CONCLUSION

In this report we take a detailed look at the Markit Retail Model and industry key drivers. This model brings unique quantitative insight to this important sector of the US economy and is designed for excess return generating power using general signals alongside key industry specific alpha factors. Its composition is geared around attributes including same store sales, store growth and operating strength, among others. Our review focuses on recent 2-year performance and further breaks out results for 2012 YTD through April.

We first review the composite model as well as its main modules. The Retail Model posted strong IC and return spread results over the prior 2 years. Outperformance was driven by modules including *Store Growth Efficiency, SSS & Earnings Expectations* and *Price Momentum*. YTD *Price Momentum* posted the most significant outperformance.

Next we provide more precise detail at the individual factor level. Beyond measures of store growth, outperformance was indicative of investor biases to companies that controlled advertising expenses (*Change in SGA Expenses vs Change in Sales*) and inventories *(Unexpected Change in Inventory* and *1-Yr Change in Quarterly Inventory as % of Sales)* with positive earnings revisions and eps and sales surprises. Broad market momentum effects also drove returns to *12M Price Momentum* and *1M Price Reversal.*

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Its client base includes the most significant institutional participants in the financial marketplace.

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