# Retail (model) therapy

August 2017

### Research Signals

The retail industry has grappled with many innovations, including the impact of internet shopping on malls and brick and mortar stores and the encroachment of Amazon on established retailers. The latest smart home technology that may change shopping behavior yet again is voice ordering, as home personal assistant devices become more prevalent. We revisit the Research Signals Retail model to evaluate recent performance, as fast-changing developments impact the industry.

- The model has continued its proven track record, with top ranked names outperforming bottom ranked names by an average of 0.89% per month over the past three years and a positive spread in 65% of months
- Retail stocks particularly struggled relative to the market since December 2016; however, the model posted a monthly spread of 2.04% over this period, with Short Sentiment the top performing sub-composite (3.23%)
- Recent trends in the retail industry point to higher financial distress and debt burden, along with more negative sentiment from analysts, short sellers, options traders and credit markets, based on our research library factor exposures

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IHS Markit

## Retail model performance

Given the fast changing landscape of the retail industry, we review recent performance of the Research Signals Retail model. The model is designed to generate excess returns by employing general signals alongside key industry specific measures. Its composition is geared around the following seven modules and the corresponding sub-factors are included in the Appendix:

- Management Quality assesses the ability and expertise in managing expenditures and asset quality
- Operating Strength targets the operating and working capital efficiency
- Price Momentum measures long-term price momentum and short-term 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
- 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
- Store Growth Efficiency captures the strength and efficiency store growth
- Valuation & Liquidity focuses on liquidity and cash flow generation as well as the valuation of the cash flows

Model performance and industry attribution are reported as of August 15th 2017 and are based on the IHS Markit Retail universe which has averaged around 250 US retail names over the past five years. Industry representation includes restaurants, apparel and luxury goods providers, food and staples retailers and internet and catalogue vendors, among others.

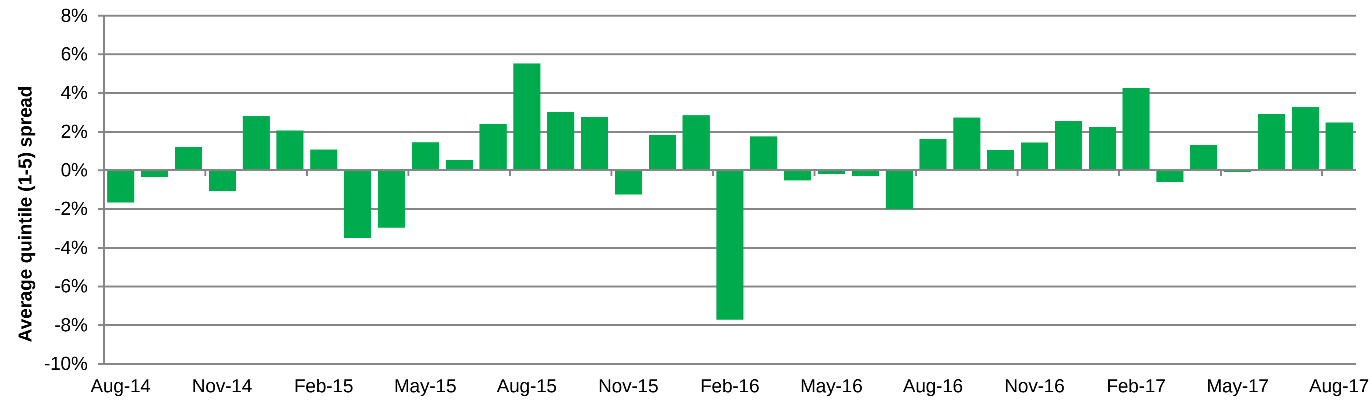
We begin by reporting recent performance results based on equal-weight quintile returns. The long/short spread is calculated based on an investment strategy that goes long the highest ranked stocks (Q1) and shorts those with the lowest ranks (Q5). The spread is simply the difference between these two quintile returns (Q1 – Q5). We compare model results (Figure 1) to the return for the full industry (Figure 2) as proxied by the SPDR S&P Retail ETF (XRT) along with the overall market proxied by the SPDR S&P 500 ETF (SPY).

Over the past three years, the retail industry kept pace with the market relatively well up until early December 2016, with a weekly correlation of 0.41 based on the growth of a dollar performance. After that point, retailers lagged markedly and the correlation dropped precipitously to -0.80. SPY finsihed the period with a return of 26.8%, while XRT trailed by over 30 percentage points with a return of -5.2%.

However, the Retail model held up well during this period, recording an average monthly quintile spread of 0.89%. Furthermore, returns were positive in the majority of months with a hit rate of 65%. Both top and bottom ranked stocks contributed to the overall outperformance (see Table 1 below), with an average Q1 excess return of 0.60%, while Q5 names lagged the market by -0.29% on average. Results are even more interesting when focusing on the months since December 2016. During this particularly trying time, the model posted a robust 2.04% average monthly spread and 78% hit rate, with equal contributions from top and bottom ranked names (not reported here).

Figure 1

**Retail model quintile spread performance**

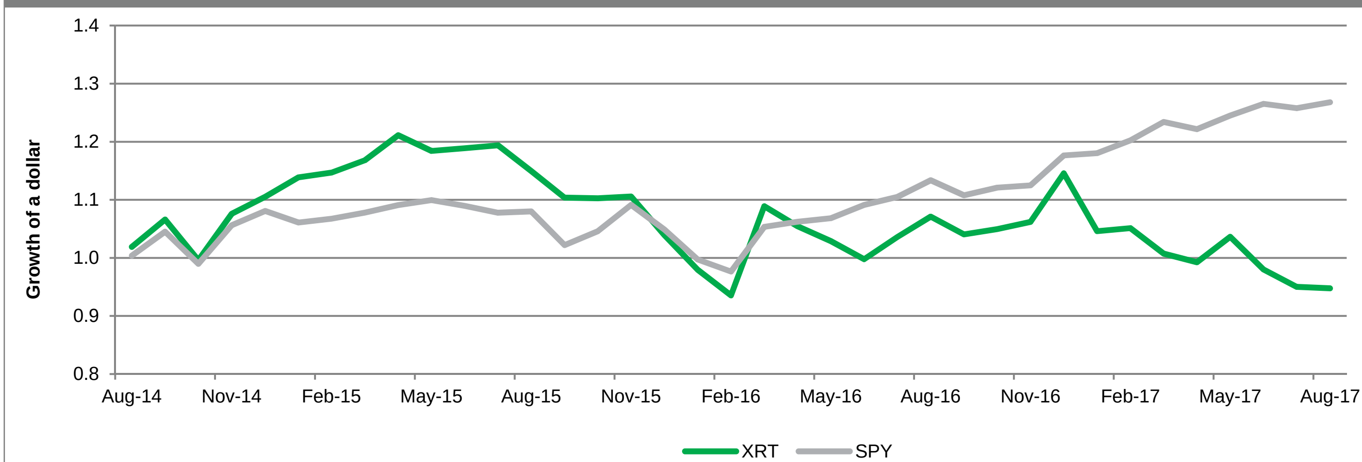



Source: IHS Markit



Figure 2

**ETF NAV return**




Source: IHS Markit



Next, we take a closer look at results at the sub-composite level over the same reporting period (Table 1). The top performing sub-composite was Short Sentiment which posted a significant 1.72% average monthly spread, with an 81% hit rate and equal contributions from both top and bottom ranked names. Moreover, spreads since December 2016 reached an impressive level of 3.23% (Figure 3). Same Store Sales & Earnings Expectations (0.63%), Price Momentum (0.34%) and Store Growth Efficiency (0.335) were also strong performers over the long term, in addition to the shorter term (2.00%, 1.73% and 1.39%, respectively). Lastly, the only sub-composite to underperform over the full period was Management Quality with a mild -0.14% average monthly spread.

Table 1

**Retail model monthly performance, Aug 2014 – Aug 2017**

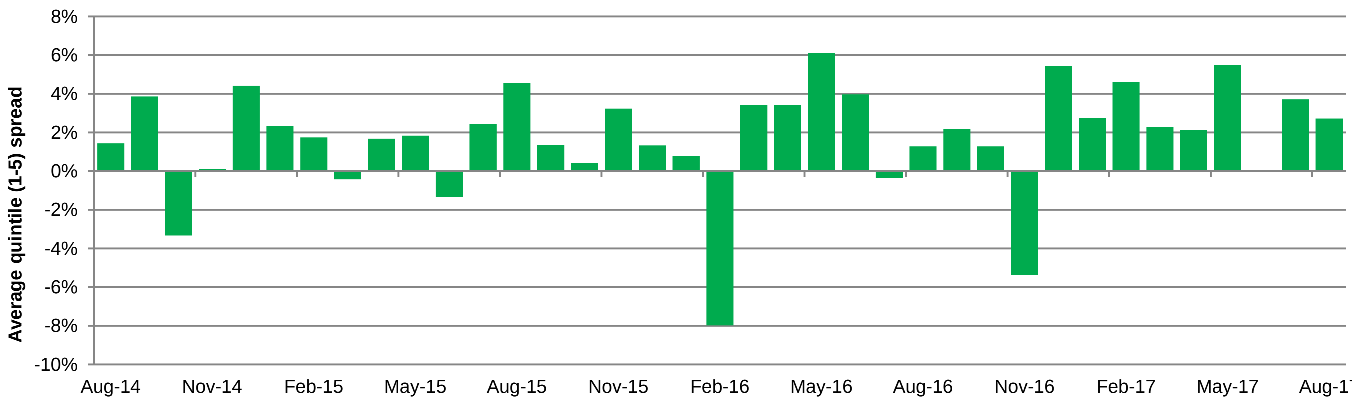
| | Average Q1-Q5 spread | Hit rate | Average Q1 excess return | Average Q5 excess return |
|---|---|---|---|---|
| Retail model | 0.89% | 65% | 0.60% | -0.29% |
| Management Quality | -0.14% | 49% | -0.06% | 0.08% |
| Operating Strength | 0.17% | 46% | 0.38% | 0.21% |
| Price Momentum | 0.34% | 57% | 0.03% | -0.30% |
| Short Sentiment | 1.72% | 81% | 0.87% | -0.85% |
| Same Store Sales & Earnings Expectations | 0.63% | 54% | 0.02% | -0.61% |
| Store Growth Efficiency | 0.33% | 54% | 0.27% | -0.06% |
| Valuation and Liquidity | 0.27% | 54% | -0.23% | -0.50% |

Source: IHS Markit



Figure 3

**Short Sentiment quintile spread performance**




Source: IHS Markit



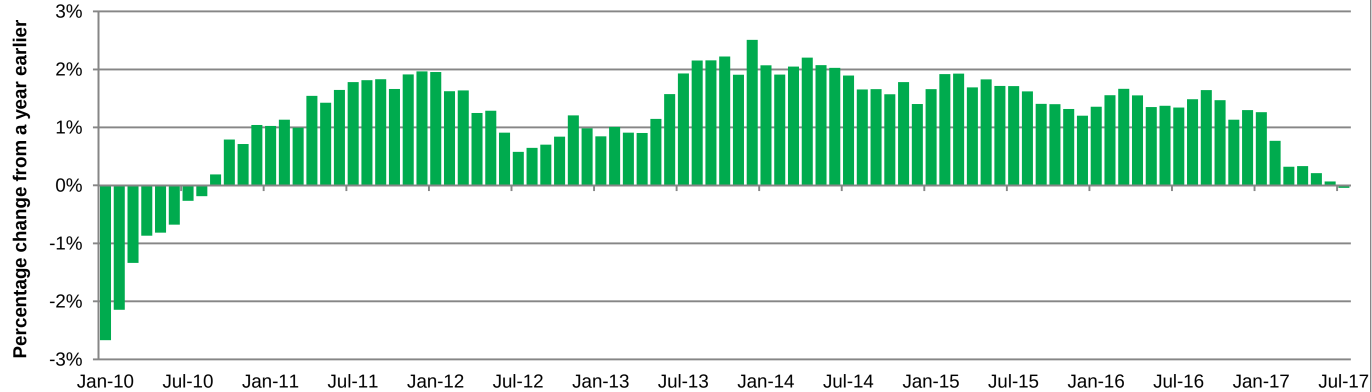
## Market overview and industry attribution

Retail model performance was particularly strong given the tenuous environment surrounding the industry. In this section, we provide more color on the market and industry attributes. First, at the macro level, we note that, based on the Bureau of Labor Statistics' August jobs report, yearly retail employment job growth continued its downtrend in 2017 and was negative for the first time since August 2010 (Figure 4).

From the stock market perspective, we also examine trends in 52-Week High average monthly Retail universe ranks (Figure 5) with respect to the overall US Total Cap universe (98% of cumulative market cap, or approximately 3000 names). We find that investors have grown more wary in the price they are willing to pay for retail stocks, as a higher degree of stocks are priced further away from their highs, with the latest July figure (65) sitting at the second highest average rank in five years.

Figure 4

**Retail employment**

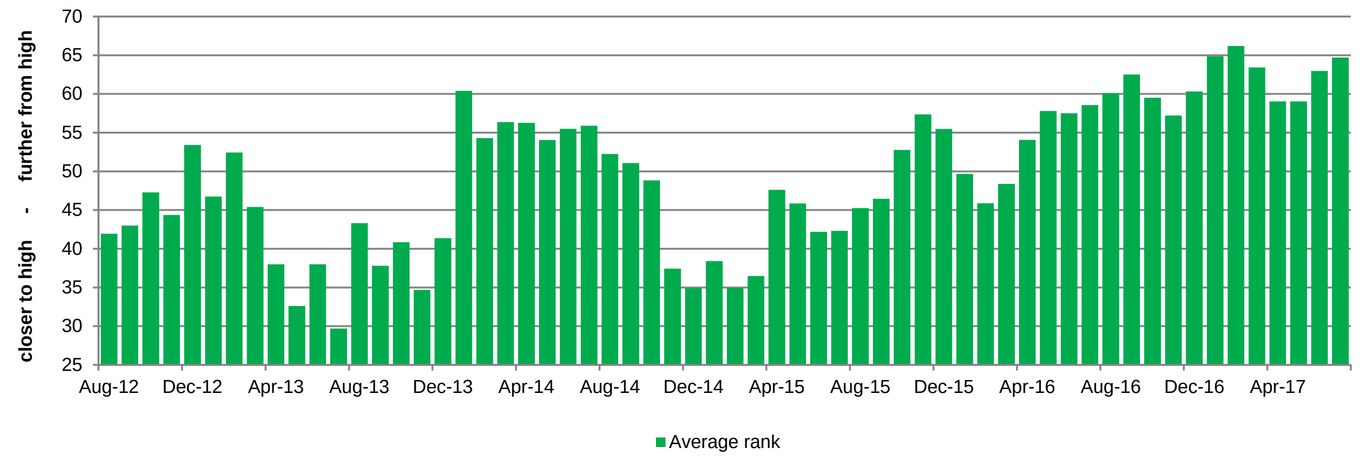



Source: IHS Markit



Figure 5

**52-Week High average ranks**



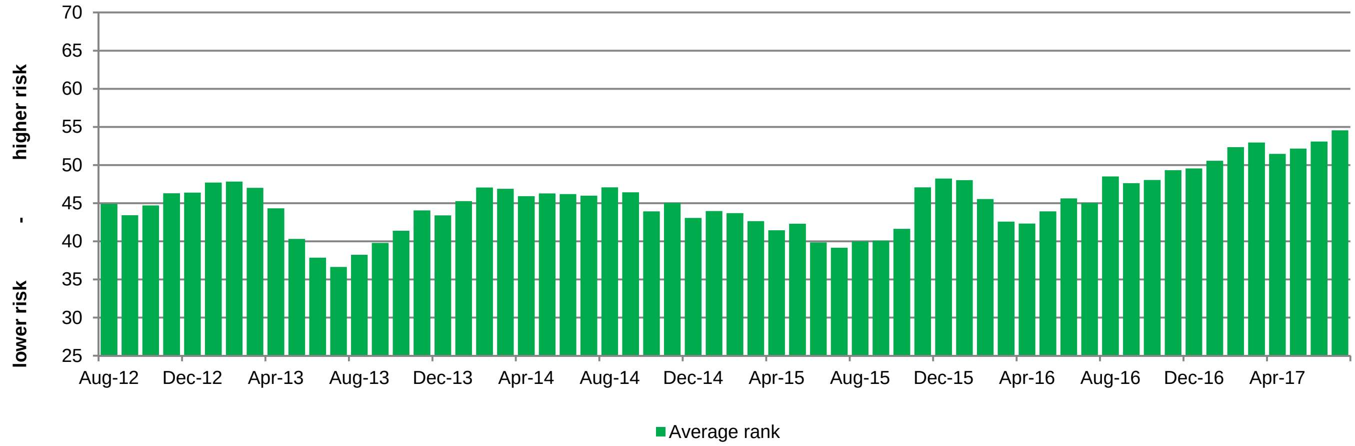

Source: IHS Markit



Turning to fundamentals, we look at Distress Measure (Figure 6), a gauge of default risk, and Interest Coverage (Figure 7), a measure of debt burden, to evaluate trends in retailers' financial health. Distress Measure average ranks have been on a steady upward trend over the past 15 months, with the July average (55) reaching a five-year high, indicating higher financial stress. While Interest Coverage averages have hovered in a fairly narrow range over the past five years, the last three months have seen a notable increase in rank outside of this band, a sign of higher debt burden. Credit markets seem to have responded, as Credit Risk average ranks (Figure 8) have increased this year (note that Credit Risk coverage is limited relative to the equity-sourced factors).

Figure 6

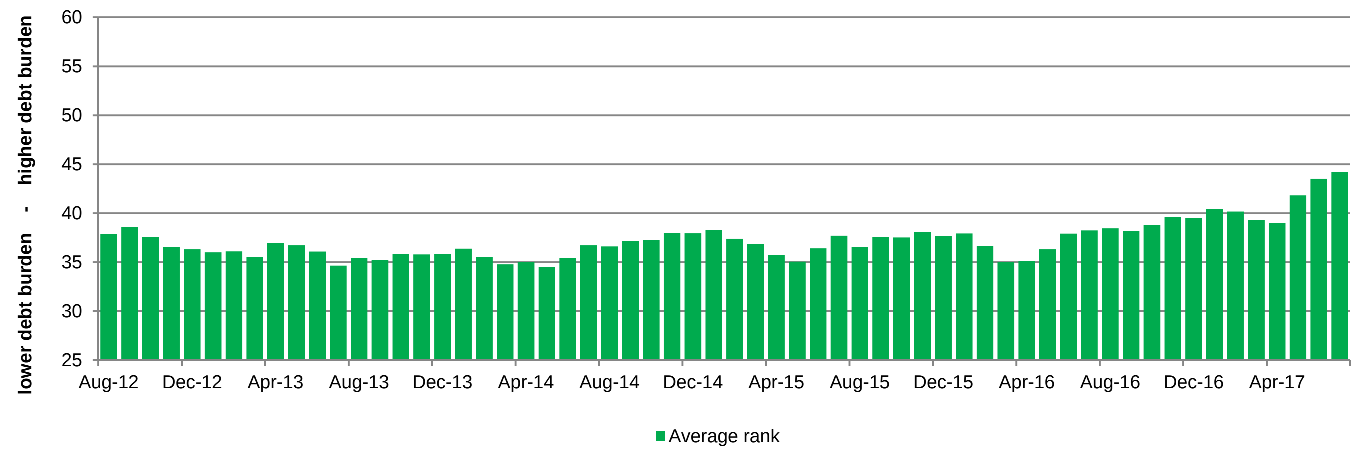
**Distress Measure average ranks**




Source: IHS Markit © 2017 IHS Markit

Figure 7

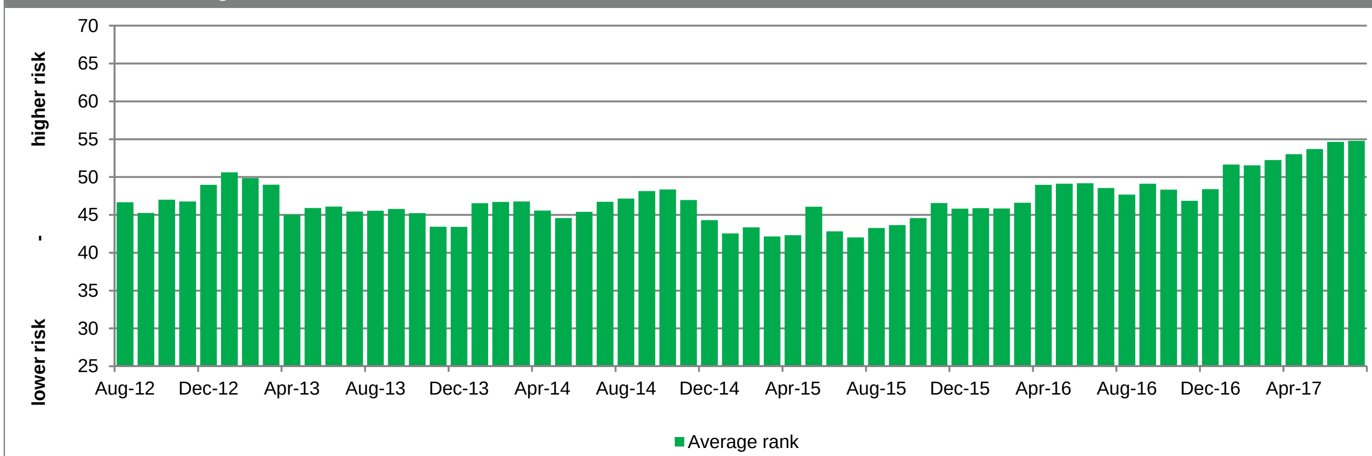
**Interest Coverage average ranks**




Source: IHS Markit © 2017 IHS Markit

Figure 8

**Credit Riak average ranks**

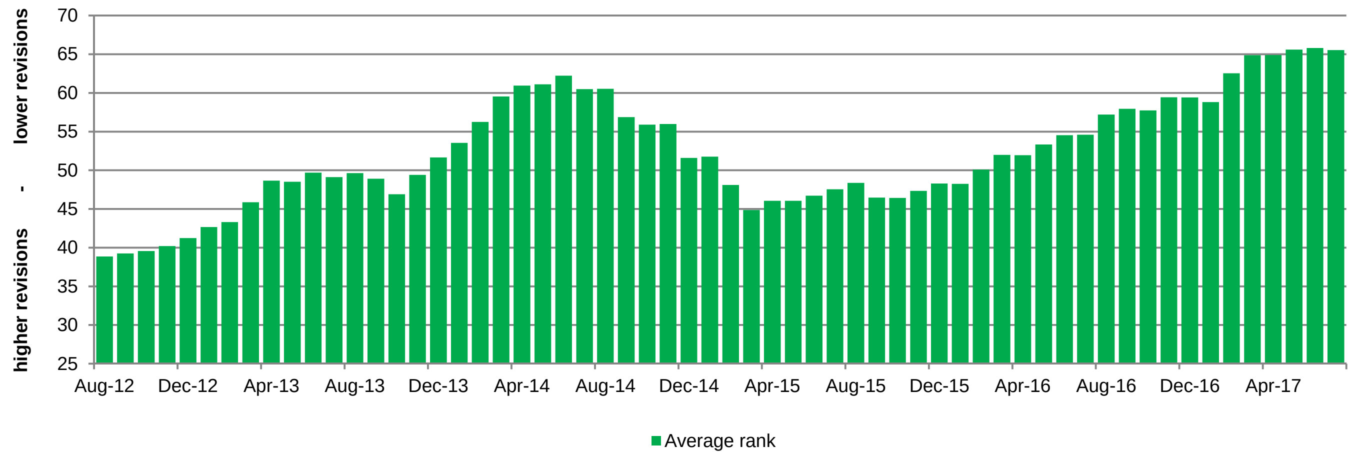



Source: IHS Markit © 2017 IHS Markit

Analysts have also turned more negative on earnings outlook, with Time Weighted Earnings Revision Dispersion average ranks (Figure 9) steadily moving from the top half of the distribution to the bottom half of the distribution over the course of the past two years and now residing at 66. Moreover, as estimate revisions have weakened, retailers have struggled to a greater extent to beat expectations based on Standardized Unexpected Earnings average ranks (Figure 10).

Figure 9

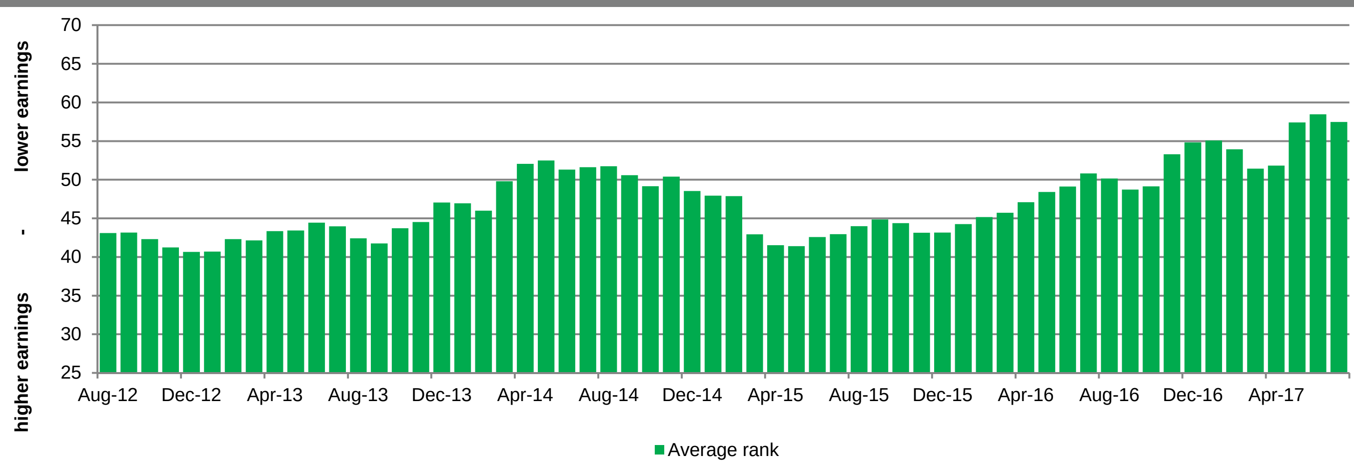
**Time Weighted Earnings Revision Dispersion average ranks**




Source: IHS Markit © 2017 IHS Markit

Figure 10

**Standardized Unexpected Earnings average ranks**

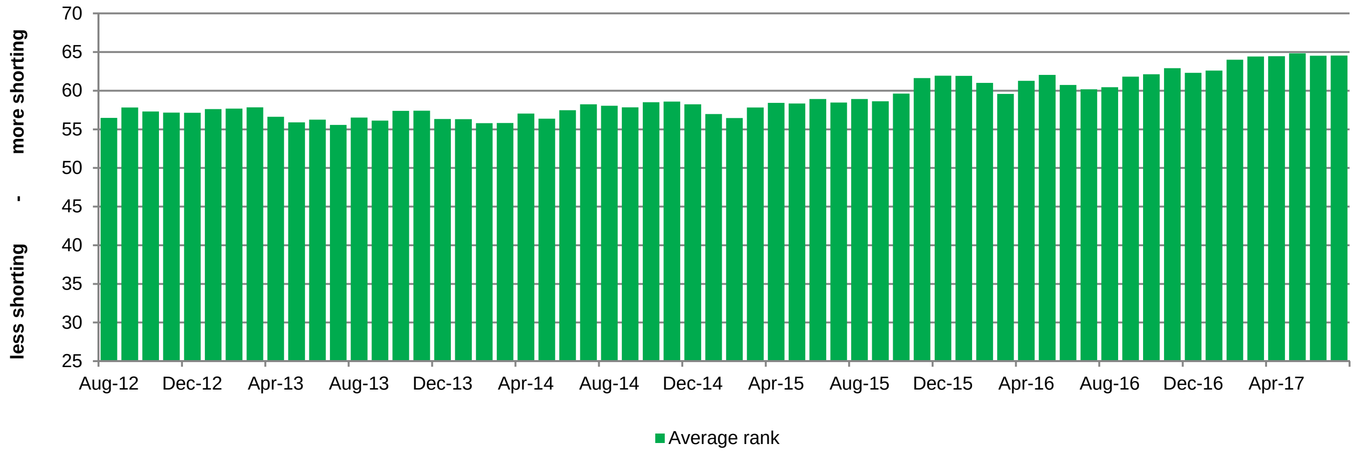



Source: IHS Markit © 2017 IHS Markit

Lastly, we take a look at how the securities lending and options markets have responded to recent trends in the retail industry. Short Interest average ranks (Figure 11) have been above average over the past five years. However, 2017 has seen somewhat of an uptick in magnitude, an indication of movement toward relatively more negative sentiment from short sellers. Options traders, on the other hand, have tended to price in lower volatility relative to the universe, with Implied Volatility average ranks (Figure 12) grouped in the lower volatility region of the factor distribution through the latter part of 2016. After that point, though, implied volatilites trended higher and average ranks now sit with the higher volatility half of the universe.

Figure 11

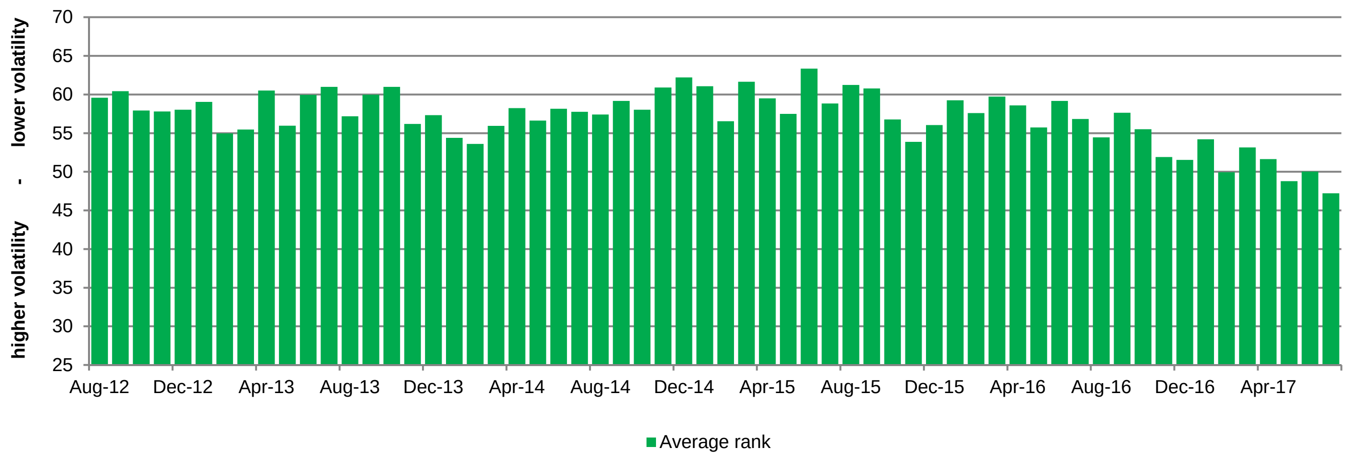
**Short Interest average ranks**




Source: IHS Markit © 2017 IHS Markit

Figure 12

**Implied Volatility average ranks**




Source: IHS Markit © 2017 IHS Markit

## Stock level detail

We round out the report with stock level detail for the Retail universe. We report the best and worst positioned names based on the Retail model composite scores along with the Short Sentiment sub-composite rankings (Table 2). Favorably ranked names which scored in the top quintile of both measures include Rocky Brands (RCKY), McDonalds (MCD) and Yum Brands (YUM). At the other extreme, bottom scores for the model and sub-composite are associated with Tuesday Morning (TUES), Freds (FRED) and Boot Barn (BOOT).

Table 2

**Retail model and Short Sentiment sub-composite top and bottom ranked names, Aug 15 2017**

| Top quintile | | Bottom quintile | |
|---|---|---|---|
| **Name** | **Ticker** | **Name** | **Ticker** |
| CHINA CORD BLOOD CORP | CO | BOOT BARN HLDGS INC | BOOT |
| CITI TRENDS INC | CTRN | CRACKER BARREL OLD CNTRY STORE | CBRL |
| COACH INC | COH | DINEEQUITY INC | DIN |
| DOLLAR TREE INC | DLTR | DULUTH HLDGS INC | DLTH |
| GRIFFIN INL RLTY INC | GRIF | FREDS INC | FRED |
| HOME DEPOT INC | HD | G-III APPAREL GROUP LTD | GIII |
| IAC INTERACTIVECORP | IAC | HABIT RESTAURANTS INC | HABT |
| MCDONALDS CORP | MCD | SIGNET JEWELERS LIMITED | SIG |
| NATIONAL RESH CORP | NRCI/A | SPORTSMANS WHSE HLDGS INC | SPWH |
| ROCKY BRANDS INC | RCKY | STAGE STORES INC | SSI |
| RUSH ENTERPRISES INC | RUSH/B | STEIN MART INC | SMRT |
| STAPLES INC | SPLS | TUESDAY MORNING CORP | TUES |
| STARBUCKS CORP | SBUX | UNDER ARMOUR INC | UAA |
| WALGREENS BOOTS ALLIANCE INC | WBA | VITAMIN SHOPPE INC | VSI |
| WEST MARINE INC | WMAR | WILLIAMS SONOMA INC | WSM |
| WHOLE FOODS MKT INC | WFM | | |
| YUM BRANDS INC | YUM | | |

Source: IHS Markit



## Conclusion

Disruptive companies and technologies have impacted the retail industry for years and the Research Signals Retail model has performed well under the changing faces of the sector. The model's composition includes general signals alongside key industry specific alpha factors geared around attributes including same store sales, store growth and operating strength, among others.

We review recent performance of the composite model as well as its main components.  Over the past three years, the Retail model posted an average monthly quintile spread of 0.89%.  Outperformance was driven by sub-composites including Short Sentiment (1.72%), Same Store Sales & Earnings Expectations (0.63%) and Price Momentum (0.34%). Furthermore, recent performance since December 2016, a period of particular underperformance of the sector relative to the market, was accentuated by a robust 2.04% average monthly spread with a 78% hit rate.

We also analyze recent trends in the sector to provide more detail around the current state of the retail industry. From a stock price perspective, a higher degree of stocks are priced further away from their highs, while overall industry fundamentals suggest higher financial distress and debt burden. Analysts have also revised earnings estimates lower as companies struggle to beat expectations. In addition, short sellers and options traders have priced in more negative sentiment.

Lastly, we drill down to the stock level with focus on the model and Short Sentiment current scores. Rocky Brands, McDonalds and Yum Brands are among the favorably ranked names, while Tuesday Morning, Freds and Boot Barn are poorly ranked by both measures.

# Appendix

Retail model

- Management Quality
  - Abnormal Capital Investment
  - Change in Net Operating Assets
  - Store Location Attractiveness
  - TTM Capital Expenditures (Capex) to Sales
- Operating Strength
  - Change in Sales vs Accounts Receivables
  - 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
  - 12M Price Momentum
  - 1M Price Reversal
- Short Sentiment
  - Abnormal Short Interest Shares
  - Short Interest Position
  - Short Interest Ratio
- Same Store Sales (SSS) & Earnings Expectations
  - 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
  - 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
  - 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

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