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iFlow

VISION

Introducing Equity Style Flows

Mapping Styles and Sectors

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We have revamped our iFlow equity data to map granular investor behavior. Whereas iFlow Equities 1.0 provided country breakdowns only, version 2.0 adds regional aggregates, plus sector and industry cuts. This change allows us to extract useful macroeconomic insights from the patterns of investor flows mapped across industry fundamentals. That in turn provides us with insights into investor appetite for styles and fundamentals in equity markets

Mapping Investor Flows to Equity Styles

In this paper, we describe how we map sectoral and industry equity flows in the United States to some common and important investment styles and trends. For example, we explore flows by Cyclical and Defensive orientation, giving us insights into how equity investors likely view the dynamics of the larger macroeconomy. We also look at flows into inflation-related equities, Growth and Value styles, and firm leverage (by industry group). Our initial findings at this juncture are:

- **Cyclical equities are out of favor.** Investors are purchasing equities in more defensively oriented sectors than they are in pro-cyclical sectors. We interpret this as suggesting that investors are strongly pessimistic about economic prospects.

- **Inflation-related equities are in heavy demand.** Investors are buying industry groups with high correlation to inflation, likely as they hedge rising inflation.

- **Value is preferred to Growth.** After the very strong performance of Growth stocks between the summer of 2020 and the second half of 2021, we see investors rapidly paring exposure to those, and instead favoring Value stocks.

- **Leverage is being avoided.** Industry groups which feature highly levered companies are being sold in favor of less-geared groups. This is not unusual at this point in the cycle, given rising interest rates and growing credit concerns

June 15, 2022

Exploring Investor Style Preferences

The starting point in the entirety of our iFlow database processes is the calculation of asset flows. We do this by adding up all buy and sell transactions in individual financial instruments over the course of a business day. This estimate is subsequently aggregated into groups, which in iFlow Equities 2.0 happens to be a mix of geographies and/or sectors.

iFlow Equity 2.0 reports our flows in US dollars as a fraction of one-year trailing volumes; as a fraction of market capitalization in each aggregate; and over the one-year trailing standard deviation of these flows (scored flow, a measure we use in reports and the iFlow website).

Flow direction remains intact because we do not subtract averages. Scored flows are subsequently averaged or smoothed over one-week, one-month or one-quarter time frames. The data is filtered through a machine-learning process established to remove those datapoints obtained under unusual market conditions. We define unusual market conditions as a mix of thin liquidity (low volumes) and/or a small number of trades.

We aggregate data across 50 equity markets, then slice these flows across nine regions: global, developed markets (DM), Emerging Markets (EM), DM Americas, DM EMEA, DM APAC, EM Americas, EM EMEA and EM APAC. We also segment flows for the GICS (Global Industry Classification Standard) members for just the US equity market.

We examine investor behavior for certain investment styles and equity market properties by looking at sector flows

We can draw data-informed conclusions about investor preference for particular investment styles or macro themes by looking at the orientation of industry flows against industry fundamentals. For example, for those industries that are closely correlated to inflation, if we see investor flows systematically buying such industries and selling those that don’t perform well in an environment of rising inflation, we can infer the presence of inflation-hedging.

The behavior of flows toward Cyclical or Defensive industries gives us information on the market’s view of economic growth and the cycle. For every sector (GICS Level 1, with 11 sectors), industry group (Level 2, 24 industry groups), or industry (Level 3, 69 industries), we can measure a variety of fundamentals, such as valuation, leverage ratios, or inflation correlation, among many others. We can then investigate flows into those industries and infer from their pattern what preferences investors have regarding those fundamentals.

For the purposes of this paper, we examine these patterns for the US equity market, broken down by industry group. We look at investor demand for Cyclicals vs. Defensives, inflation protection, Growth vs. Value, and leverage. We detect a clear late-cycle bias in the pattern of these flows – selling Cyclicals, buying inflation, buying Value, and shunning leverage

Cyclicals and Defensives

Equity sectors can be identified as either Cyclical or Defensive depending on how the firms in each of those categories perform through various parts of the cycle. We can demonstrate that there is useful information in sectoral flows regarding the state of the economic cycle by comparing the dynamic properties of flows for Cyclical sectors versus those in Defensive sectors.

The chart below compares our measure of Cyclical versus Defensive equity flows to the ISM Manufacturing PMI since 2014. There is a clear relationship between the behavior of flows along this dimension and the economic cycle. The steadily rising – but with some setbacks – ISM index between 2016 and 2018 is matched by the trend in our Cyclical-Defensive indicator.

Note the period before 2016. While the ISM was steadily decreasing from the end of 2014 through most of 2015, our iFlow-based Cyclical-Defensive indicator was much more optimistic. Equity investors were still willing to buy Cyclicals at a faster pace than Defensives, even as industrial sentiment was declining. It turns out that the flows had it right: while the economy cooled somewhat during that period, it never actually went into contraction, and indeed would go on to rebound strongly over the next couple of years.

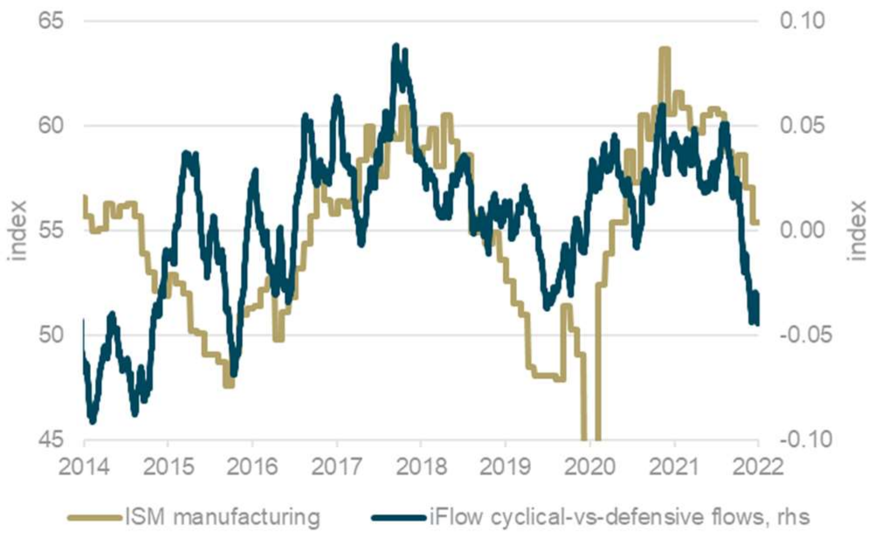
This optimism waned in 2018, however, as growth decelerated and the Fed cut rates in the second half of 2019. Our measure caught this downdraft in growth, and flows started to chase Defensives relative to Cyclicals.

Even though the ISM has deteriorated in recent months, it is still signaling expansion, just at a slower pace. Meanwhile, Cyclical vs. Defensive flows are much more pessimistic on the outlook. This is an important flow-based signal from equities that should be borne in mind when assessing the economy.

Cyclical-Defensive Flows vs. ISM index

We plot the difference between the first principal component of flows (rolling 65-day sum) into 16 cyclical industry groups and the first principal component of flows into 8 defensive groups and compare them to the ISM Manufacturing index.

SOURCE: BNY Mellon Markets, iFlow, Bloomberg



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Inflation-Related Flows

As inflation pressures mount and stay elevated, we can see evidence of inflation-hedging in the equity market via the behavior of flows. Different industry group returns have differing correlations with inflation. For example, the energy industry group has the highest correlation with two-year break-even inflation (51%), while the household and personal products group has the lowest (15%). In other words, in environments in which inflation fears are rising, the energy industry is viewed as offering a degree of inflation protection due to its high correlation with rising prices.

If we determine that equity flows are chasing industry groups highly correlated with inflation and shunning those groups which are less correlated to inflation, then we can reasonably conclude that equity investors are searching for inflation hedges.

We compute inflation-related flows by first estimating the correlation of each industry group's daily index returns with the daily changes in two-year break-even inflation inferred from the TIPS market. Then, we examine the difference between a 130-day moving average of each industry group's flows to its 260-day moving average. The aim here is to look at the acceleration of flows beyond their yearly trend into each sector. We are essentially determining if, on the margin, flows are chasing inflation hedges as measured by industry group correlation with two-year break-even inflation. Finally, for each day in our sample (runs from the beginning of 2013 through the end of May 2022), we regress the 24 inflation correlations (one for each group) on 24 daily observations on these "surge" flows by industry group. The coefficient of the regression – if high – tells us that investors are chasing those groups which protect against inflation relative to those that do not.

The chart below graphs this coefficient for our sample. Note the two high readings in the middle of 2020 and the most recent. At the onset of the pandemic, inflation hedging took off, only to stall and reaccelerate to its current high. It seems clear that equity investors are loading up on those industry groups which perform well with inflation, at the expense of those which don't keep up with price increases.

Inflation-related flows

Regression coefficient between "surge" flows (130d minus 260d moving averages by industry group) and industry groups' correlation with two-year break-even inflation.

Alongside we plot two-year break-even inflation as inferred from TIPS.

A positive coefficient indicates investors are hedging inflation risk by buying sectors whose performance is more highly correlated with two-year break-even inflation.

Highest and lowest inflation correlations: High – Energy, Insurance, Diversified Financials; Low – Household % Personal Products, Utilities, Food and Staples Retailing.

SOURCE: BNY Mellon Markets, iFlow, Bloomberg

Growth and Value Preferences

Growth vs. Value investing is a key style choice among equity market participants. At different times during the cycle, Growth or Value will be in or out of favor.

We can capture this so-called style rotation through our iFlow Equities 2.0 data by industry group. Going back to early 2014, we obtain the daily price-to-book value ratio for each of the 24 industry groups in the GICS Level 2 categorization. Next, we look at the surge flows (as described above) into each of the 24 sectors.

We collect the coefficient of a daily regression of industry group flows on industry group P/B ratios for every day in our sample. A high coefficient indicates that flows are moving into "expensive" industry groups and out of "cheap" ones; the takeaway here is that the market is chasing growth in those periods. Conversely, a low regression coefficient indicates that flows are moving into "cheap" groups.

In other words, in the first instance, a high regression coefficient is indicative of a Growth regime, while in the second case, we would be observing a Value regime.

Note the chart below, which plots this indicator going back to early 2014. There are clear periods when Growth or Value is either more or less in favor. Currently, the steady retreat lower of the regression coefficient is signaling a deep preference by investors for Value. Note also that for most of the pandemic era until August 2021, Growth was very much in favor; this regime lasted for a while. However, things quickly turned in late 2021, and it's clearly still a Value-investing regime.

This Growth vs. Value indicator, although falling steadily since August 2021, has not yet reached its lowest observation in our sample. There thus appears to be no letup in the Value preference on the part of investors. Note also how our flow-based measure corresponds in large part with the relative performance of Growth over Value as measured by the MSCI USA Growth and Value Indices.

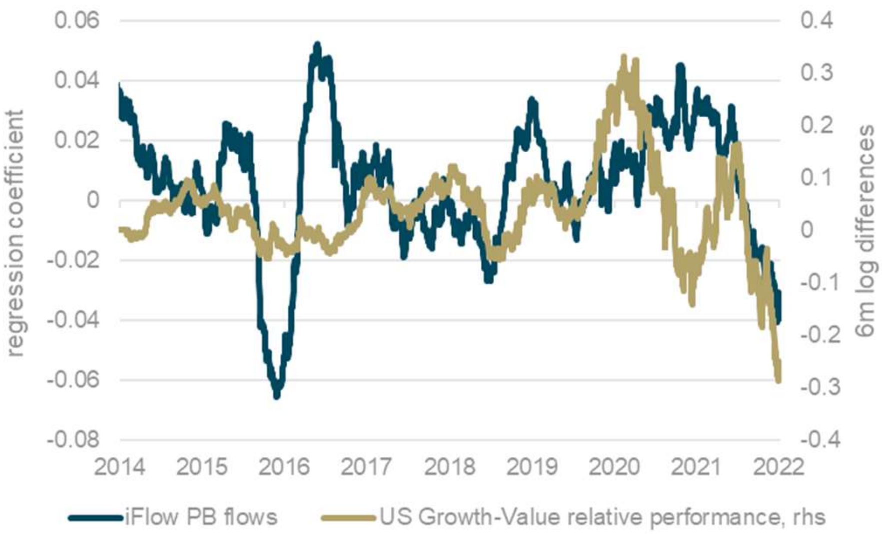
Growth vs. Value

Regression coefficient of daily surge flows by industry group on standardized P/B ratios of the 24 MSCI GIC Level 2 Industry Groups.

Alongside we plot the 6m percentage change in the relative performance of USA MSCI Growth versus Value indices.

Current highest and lowest P/B: High - Consumer Services, Tech Hardware and Equipment, Retailing; Low – Banks, Telecom Services, Insurance.

SOURCE: BNY Mellon Markets, iFlow, Bloomberg



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The Leverage Cycle

We can also examine trends in equity flows as they relate to firms' leverage. During periods in which interest rates are rising or when the economic cycle takes a turn for the worse, investors tend to avoid firms that have excessive leverage. Likewise, during flight-to-safety episodes, firms with high leverage are often seen as undesirable.

We can obtain leverage ratios (defined simply as total debt divided by total assets) over time for the 24 industry groups in the GICS Level 2 classification. By examining whether flows have an affinity for those industry groups that have higher or lower leverage ratios, we can get a sense of investor flows toward this factor.

As above, for the inflation-related and Growth-Value style flows, we look at the regression of "surge" flows (the 130d moving average of industry group flows versus their 260d moving average) on the normalized leverage ratios for the industry groups.

The sign and size of this regression coefficient tells us the daily correlation of industry group flows with industry group leverage. Over the last decade or so (see chart), there have been clear regimes during which leverage was actively sought out by investors, and other periods – like now – during which leveraged industries were being sold.

We normalize leverage ratios across industry groups. Some industries, like Telecoms or Utilities, are naturally more highly leveraged than the market average. Others are frequently under-leveraged relative to the market average. We therefore take z-scores across the 24 industry groups to make apples-to-apples comparisons on a daily basis.

Since August 2021, investor appetite for leverage as a style has clearly fallen. This is consistent with the drift lower in our measure of flow correlation with leverage ratios.

Leverage

Regression coefficient of daily surge flows by industry group on standardized PB ratios of the 24 MSCI GIC Level 2 Industry Groups.

Shown alongside generic 9th Eurodollar future to illustrate expected stance of monetary policy.

SOURCE: BNY Mellon Markets, iFlow, Bloomberg

Conclusion: Equity Flows and Style Preferences

iFlow Equities 2.0 enhances our perspective on equity flows around the globe and within sectors. This unique granularity allows us to examine investor behavior with respect to not just sectors and industries across geographies, but also in relation to investor orientation across different styles and factors within geographies.

For US equities, we find investors increasingly fretting about the economic cycle. Demand for Defensive industry groups outstrips that for those Cyclical in nature.

We examine investor behavior for certain investment styles and equity market properties by looking at sector flows

Moreover, iFlow Equities 2.0 clearly indicates investor preference for inflation-sensitive equities. Sectors that typically outperform when inflation rises provide hedging opportunities, and they are seeing outsized demand from institutional investors, certainly compared to sectors which don't perform well amid inflation.

Our examination of preferences for Growth and Value styles finds exceptional movement by investors into Value starting in Q4 2021. We also observe a preference for deleveraging via equity market industry group preferences: Investors appear keener to buy low-leverage industry groups and sell those with high leverage as the Federal Reserve moves further into its tightening cycle.

The work in this white paper is just an example of the power of regional sector data. Using a broad list of properties, styles and macroeconomic factors at the sectoral level to infer relevant investor preferences merely scratches the surface.

We certainly plan on further refining and investigating these relationships across other geographies, investment styles and macroeconomic themes. Stay tuned

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