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### CANALYST NEWSLETTER: QUANTAMENTAL BULLISH

In this edition, we get to the core of quantamental investing. Also, we dive into Weyco Group, Inc., discuss our role at the Sidoti & Company LLC Spring Investor's Conference, and share our love for the IPO unicorns of late.

#### WHAT EXACTLY IS QUANTAMENTAL?

For starters, it's a term that makes people cringe the first few times they say it. However, it's a lot better than alternatives like *fundative* or *tradomatic* so we think it's here for the long run. If it's going to stick around, it would be nice to narrow in on exactly what lies at the core of quantamental investing.

Quantamental investing is commonly described as being a hybrid of fundamental and quantitative investment approaches. Although that's not untrue, such a broad definition leaves the door open to almost anything. Let's narrow in on what might be described as the "core" of quantamental investing, and start with a high-level view by taking a look at the three stages of the investment process: security selection, risk analysis & portfolio construction, and trading.

There are funds that use a purely fundamental approach for security selection but lean heavily on quantitative techniques in one or both of the latter stages. Quantitative techniques are particularly useful for analyzing massive amounts of data and making very fast decisions which are critical for the tasks in the latter two stages of the investment process.

#### SECURITY SELECTION: FUNDAMENTAL VS. QUANTITATIVE

Fundamental (aka traditional or discretionary), is an investment process in which highly skilled professionals analyze a mosaic of information sources to form a view on a given security. These information sources include a lot of numeric data (such as the financial accounts of the company being analyzed) but they also include softer sources of information such as the impression that the investor forms of the management team. The work product that leads to an investment decision generally consists of a valuation model and an accompanying investment thesis that is presented to an internal investment committee where human judgement is used to decide if the investment will move forward. Fundamental investing is generally characterized by a relatively small number of investments and longer holding periods.

Quantitative may also be referred to as systematic or programmatic investing. In a quantitative strategy, a large amount of data is analyzed to find patterns that are predictive of changes in price. This analysis generally requires advanced knowledge of mathematics and sophisticated tools for analyzing large quantities of data. The quantitative strategy is then encoded into an algorithm that is deployed to analyze incoming data and to automatically make a stream of buy and sell decisions. The types of data that are used in quantitative strategies are wide ranging and include tick data, fundamental data, and alternative data. Similar to how fundamental investing involves the analysis of numeric data, quantitative investing involves a reasonable amount of human input in order to succeed. One of the biggest risks in quantitative analysis is that if you throw enough data at a powerful computer, it will find correlations that have been predictive in the past but are completely coincidental and therefore likely to fail in the future; particularly in the event of economic regime change. Discretionary (human) input is needed to assess whether the patterns have any grounding in reality. The primary work product that leads to an investment decision for a quantitative strategy is a rigorous backtest that evaluates how a given algorithm would have performed in the past. Quantitative investing is generally characterized by a collection of algorithms that make a large number of small investments, often with shorter holding periods than those of fundamental investors.

#### HYBRID SECURITY SELECTION STRATEGIES

With that background, consider two types of hybrid security selection strategies which get us closer to the core of quantamental investing.

In the first hybrid strategy, quantitative techniques are used as a screen to narrow down the list of equities for a fundamental investor to analyze. Let's imagine that a given portfolio manager has a potential investable universe of 5000 possible equities. No portfolio manager can apply fundamental techniques to such a large universe and so a screen is applied. In the past, a screen may have been as simple as narrowing down the universe based on sector, market cap, and/or P/E ratio. Going forward, increasingly advanced screening tools that leverage quantitative techniques will be used by fundamental investors. As an example, the investor may decide to look across the retail sector and screen for companies where customer foot traffic is increasing based on an analysis of alt data that tracks customer location from smartphone apps. In many cases, the screens will even include backtests so that the fundamental investor can check to see if the screening factors could have been effective on their own at selecting a list of equities that would have delivered alpha. The key thing to note about this hybrid strategy is that it is sequential. Once the fundamental investor receives the output of the screen, they still proceed with traditional methods for analyzing the equities and the final investment decision is made in the traditional way.

In the second hybrid strategy, the outputs of fundamental analysis are used as an input to a quantitative strategy. One example of this can be seen today in quantitative strategies that use consensus estimates and changes in consensus estimates as a key input. Estimates are an output of detailed fundamental analysis and are a core part of the fundamental investing process. The key thing to note about this hybrid strategy is that the quantitative investor proceeds to develop an algorithm using quantitative techniques and the final decision to deploy the investment strategy is based on the results of a robust backtest, as it would be for any other quantitative strategy.

If we were to accept these sequential strategies as quantamental, instead of categorizing them on the basis by which the final investment decision is made, then we would fall into the trap of having to eventually label almost all strategies as quantamental. Over the next decade, fundamental analysts' screens will increasingly use advanced quantitative techniques and quantitative investment strategies will increasingly find ways to leverage the output of fundamental analysis. That brings us to what we are proposing as the core of quantamental investing:

*Quantamental investing is a process in which the final investment decision in the security selection process is simultaneously dependent on both fundamental analysis and quantitative analysis.*

When phrased this way, it's not hard to see why quantamental investing is so difficult to deploy in the real world. Accountability at the point in time when the investment decision is made is at the heart of nearly all investment processes; quantamental investing requires a dramatically new way to think about how to assign and share accountability.

#### WHAT DOES QUANTAMENTAL LOOK LIKE IN THE REAL WORLD?

Three examples of what would qualify as quantamental investing using this criteria:

1) Leveraging alt data that doesn't pass the test for quantitative strategies but can provide useful insight. The cutting room floor of quant shops is full of interesting data sources that don't meet the extremely high bar (breadth, history, ability to be mapped to securities, ability to be queried point-in-time, etc.) required by a purely quantitative strategy. The number that we have heard quantitative analysts ("quants") use is that they reject 95% of the data sources that they evaluate. Although this data is full of useful information, it's not in a format that can be used by fundamental investors and the analysis requires data scientists and quantitative techniques. This is one of the easiest and most obvious use-cases for a truly quantamental strategy: quantitative analysis can provide insights that become directly intertwined into the valuation models used by fundamental investors.

2) Pairing quantitative models with fundamental models. In a crude approximation, quants tend to build probabilistic models that use hard-facts as inputs and fundamental analysts build deterministic models that use estimates as inputs. There is great potential to unlock alpha by leveraging the best of both of these methods. As an example, a quant model may be very accurate at predicting revenue for a specific geographic segment on the basis of a range of alt data sources. However, quant models may struggle to then determine the impact on EPS, cashflow, and other fundamental factors because public companies are highly non-stationary and undergo meaningful changes from quarter to quarter (acquisitions, new business segments, debt financing, etc.). The models built by fundamental analysts capture all of these deterministic relationships between lines in the financial statements and can be used as a lens through which to assess the impact of changes in the input drivers that are provided by probabilistic models.

3) Dealing with regime change and edge cases. Is the input data outside of the normal range? These are used to backtest the algorithm? Has the company made a change to their fiscal year-end? Is this a new listing? That was all scenarios that result in quants blacklisting a data source or equity but which fundamental investors are able to manage quite effectively, and often exploit a major source of alpha as a result. As an analogy, there is a massive difference between building a 100% self-driving car and implementing a car with smart cruise-control that still requires human supervision. The combination of fundamental and quantitative techniques can shine the light of quantitative analysis into many of the dark corners where inefficiencies still linger.

These three examples all have something in common: the final investment decision rests on the trust that the fundamental investment thesis is correct AND that the quantitative analysis is correct. It is impossible to unwind or unravel the two types of analysis. The problem is that taken alone, either of the standard investment decision processes will reject many great quantamental opportunities. A traditional investment decision process will reject the ideas on the basis that the people involved do not have a deep enough understanding of the quantitative techniques to trust them but the investment case falls apart without their contribution. A quantitative investment decision process will reject the ideas on the basis that the strategies do not pass the numerical criteria regarding diversity or backtests and they don't given any extra credit for the contribution from the traditional techniques.

Although there may be some portfolio managers out there today who have enough depth of knowledge in finance and data science to be comfortable putting their name on the line for these truly quantamental strategies, those people are few and far between. A more realistic approach that organizations should consider is to pair fundamental and quantitative portfolio managers into quantamental teams and to give them the freedom to implement new investment decision processes. With these partnerships in place, no investment would move forward until both portfolio managers sign off on it. Accountability and credit would be shared equally by both co-portfolio managers.

#### UNDER-COVERED NAME DIVE: WEYS

Industry trends have continued to push attention away from small-cap equity research. The continuous rise of index and passive investing causes a large-cap concentration on the buy-side, while mounting cost pressures force sellside firms to reduce their coverage of smaller names.

Going into earnings season with a full suite of models on small and mid-cap names can help you identify opportunities in under-covered names. One name with low sellside analyst coverage is Weyco Group, Inc. [NASDAQ: WEYS]. Incorporated in 1906, Weyco Group is a designer and wholesaler of quality footwear under a portfolio of well-recognized brands. These include Stacy Adams, Florsheim, and Nunn Bush. The company operates through three segments: North American Wholesale, North America Retail, and Other. Wholesale includes wholesale sales and licensing revenue. The retail segment consists of nine retail locations and internet-based sales in the United States. The Other group sales consists of wholesale and retail sales in Australia, South Africa, Asia Pacific, and Europe.

The summary page tab of a Analyst model is a great place to start on any name. Highlighting the main points for each company, the page includes segment figures, income statement, a cash flow summary, balance sheet ratios, and profitability ratios to name just a few items. The cash flow analysis section can help you get up to speed on how a company is using cash. Here we can see Weyco Group has been consistently spending on capex, working capital, and to buy back stock. They've also historically paid out around 50% of their net income per share in dividends.

Weyco Group Inc.	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	
Revenue	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Operating Cash Flow Before WC	18.2	19.8	21.0	26.6	27.6	27.9	25.3	25.0	23.1	23.0	4.5	8.1	7.9	10.3	25.9	26.4	27.3	28.2	29.1
Operating Cash Flow Per Share	11.3	12.1	12.8	15.1	15.3	15.1	14.0	13.8	12.8	12.8	(0.3)	(0.3)	(0.3)	1.0	15.0	15.0	15.0	15.0	15.0
Dividend Paid	(8.6)	(7.7)	(7.2)	(6.9)	(5.9)	(5.9)	(5.7)	(5.7)	(5.7)	(5.7)	(6.7)	(7.3)	(7.3)	(7.3)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)
Capital Expenditures	(9.3)	(2.4)	(2.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.7)	(0.7)	(0.7)	0.0	0.0	0.0	0.0	0.0	0.0
Change in Cash Position	29.7	(29.7)	(19.3)	19.7	22.2	(10.1)	(11.1)	(9.3)	20.3	11.8	19.2	1.2	(22.8)	(9.2)	(4.7)	(3.7)	(4.4)	(4.0)	(4.7)
Operating Cash Flow Per Share	1.8	1.8	1.8	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0.4	0.4	0.4	1.0	1.0	1.0	1.0	1.0	1.0
Free Cash Flow Per Share	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.3	0.3	0.3	0.7	0.7	0.7	0.7	0.7	0.7
Dividend Payout Ratio to Cash FCY, Pre Div	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	167.0%	167.0%	167.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%
Adjusted Payout Ratio to Cash FCY, Pre Div	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	118.0%	118.0%	118.0%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%
Free Cash Flow Growth %	1.3%	18.8%	8.8%	1.8%	4.2%	8.8%	7.6%	14.8%	8.8%	8.8%	1.8%	11.6%	3.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Operating Cash Flow	n/a	n/a	0.8	0.8	n/a	n/a	0.1	n/a	n/a										
Net Debt / Cash Flow	n/a	n/a	1.0	0.7	n/a	n/a	0.2	n/a	n/a										
Net Debt / Capital	n/a	n/a	10.8%	8.0%	n/a	n/a	3.2%	n/a	n/a										
Profitability Ratios	7.8%	8.1%	9.0%	11.1%	9.7%	10.0%	9.2%	8.2%	7.5%	10.1%	10.1%	9.9%	9.8%	9.2%	9.0%	9.1%	9.0%	9.0%	9.0%
ROE	6.3%	6.6%	6.8%	7.4%	6.7%	7.3%	6.5%	6.3%	6.3%	7.5%	7.7%	7.5%	7.5%	7.1%	7.1%	7.2%	7.1%	7.1%	7.0%
ROA	8.0%	8.1%	8.0%	8.8%	8.2%	8.5%	8.1%	7.8%	7.8%	9.0%	9.2%	9.0%	9.0%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%
ROIC	9.2%	9.4%	11.5%	14.1%	15.1%	15.1%	15.1%	16.0%	16.0%	18.0%	11.2%	11.2%	11.2%	11.6%	11.6%	11.6%	11.6%	11.6%	11.6%

Opening up the model page, we can quickly get a grasp on product sales performance and margin performance. The top of the model highlights sales for the different products in the company's wholesale channel as well as sales performance in North American wholesale and retail. The model also includes same store sales growth metrics which helps you gauge performance in their North America retail division. We can see significant year over year growth in the Florsheim line continuing in Q4 resulting in a total increase of 20% for the year. Sales growth for BOGS/Rafters was strong, increasing 35% year over year, the brand's strongest quarter since 2014. Retail same store sales growth, while driving a smaller part of overall sales, was strong, increasing 21% year over year for Q4.

Weyco Group Inc.	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	
Revenue	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Operating Cash Flow	18.2	19.8	21.0	26.6	27.6	27.9	25.3	25.0	23.1	23.0	4.5	8.1	7.9	10.3	25.9	26.4	27.3	28.2	29.1	29.1	29.1	29.1	29.1
Operating Cash Flow Per Share	11.3	12.1	12.8	15.1	15.3	15.1	14.0	13.8	12.8	12.8	(0.3)	(0.3)	(0.3)	1.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Dividend Paid	(8.6)	(7.7)	(7.2)	(6.9)	(5.9)	(5.9)	(5.7)	(5.7)	(5.7)	(5.7)	(6.7)	(7.3)	(7.3)	(7.3)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)
Capital Expenditures	(9.3)	(2.4)	(2.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.7)	(0.7)	(0.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change in Cash Position	29.7	(29.7)	(19.3)	19.7	22.2	(10.1)	(11.1)	(9.3)	20.3	11.8	19.2	1.2	(22.8)	(9.2)	(4.7)	(3.7)	(4.4)	(4.0)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)
Operating Cash Flow Per Share	1.8	1.8	1.8	2.2	2.2	2.2	2.2	2.2	2.2	2.2	0.4	0.4	0.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Free Cash Flow Per Share	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.3	0.3	0.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Dividend Payout Ratio to Cash FCY, Pre Div	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	50.1%	167.0%	167.0%	167.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%
Adjusted Payout Ratio to Cash FCY, Pre Div	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	43.1%	118.0%	118.0%	118.0%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%	38.1%
Free Cash Flow Growth %	1.3%	18.8%	8.8%	1.8%	4.2%	8.8%	7.6%	14.8%	8.8%	8.8%	1.8%	11.6%	3.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Operating Cash Flow	n/a	n/a	0.8	0.8	n/a	n/a	0.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Net Debt / Cash Flow	n/a	n/a	1.0	0.7	n/a	n/a	0.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Net Debt / Capital	n/a	n/a	10.8%	8.0%	n/a	n/a	3.2%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Profitability Ratios	7.8%	8.1%	9.0%	11.1%	9.7%	10.0%	9.2%	8.2%	7.5%	10.1%	10.1%	9.9%	9.8%	9.2%	9.0%	9.1%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
ROE	6.3%	6.6%	6.8%	7.4%	6.7%	7.3%	6.5%	6.3%	6.3%	7.5%	7.7%	7.5%	7.5%	7.1%	7.1%	7.2%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%	7.1%
ROA	8.0%	8.1%	8.0%	8.8%	8.2%	8.5%	8.1%	7.8%	7.8%	9.0%	9.2%	9.0%	9.0%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%
ROIC	9.2%	9.4%	11.5%	14.1%	15.1%	15.1%	15.1%	16.0%	16.0%	18.0%	11.2%	11.2%	11.2%	11.6%	11.6%	11.6%	11.6%	11.6%	11.6%	11.6%	11.6%	11.6%	11.6%

Scrolling down we can see margin evolution for the three segments. In Q4, strong sales drove higher gross margins in North America wholesale. This led to higher profitability for the segment, a full percentage point higher than the same quarter in the previous year. The fiscal year was the best since 2012. Similar story for North America retail, which saw strong sales growth through their website more than making up for lost sales from the closure of one of their brick and mortar locations. The increase in online sales helped push Quarterly EBIT margins to their highest point since over 2013. Overall, Q4 operating profitability is at the highest level since Q4-2014.

Tying this into stock performance, the fact that Analyst models have all routinely-reported information by the company

Weyco Group Inc.	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Revenue	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Operating Cash Flow	18.2	19.8	21.0	26.6	27.6	27.9	25.3	25.0	23.1	23.0	4.5	8.1	7.9	10.3	25.9	26.4	27.3	28.2	29.1	29.1	29.1	29.1	29.1	29.1
Operating Cash Flow Per Share	11.3	12.1	12.8	15.1	15.3	15.1	14.0	13.8	12.8	12.8	(0.3)	(0.3)	(0.3)	1.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Dividend Paid	(8.6)	(7.7)	(7.2)	(6.9)	(5.9)	(5.9)	(5.7)	(5.7)	(5.7)	(5.7)	(6.7)	(7.3)	(7.3)	(7.3)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)	(6.4)
Capital Expenditures	(9.3)	(2.4)	(2.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(0.7)	(0.7)	(0.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change in Cash Position	29.7	(29.7)	(19.3)	19.7	22.2	(10.1)	(11.1)</																	