THE NEW KID IN TOWN

A Detailed Study of New Institutional Buys and Sells Found on the MAP Compass 20/10 Report.

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INTRODUCTION: THE NEW WORLD

Every new beginning comes from some other beginning's end. - Seneca

Newness holds a special place in the human mind. It's natural to get excited when something new comes along. It represents an agent of change and a deviation from the norm. New things that come along often have a way of becoming the new norm and even a benchmark by which all other things are measured. Just think of the Beatles or Elvis. There was music before the Beatles and Elvis, and there was music after; a very clear delineation. There was life before the internet and life after. The truth is, as we all know, life is an ever-evolving landscape of newness. Whether it's our environment that is changing, technology, our relationships, or even ourselves, change is the one constant we can all rely on. It is ironic that human nature is to find safety in the predictable and we actually seek out the comfort of the known. But in reality, it is the unknown that holds the key for new growth and evolution. For instance, did you know that your own skin cells are cycled through every few days? In fact, all of our skin cells are fully replaced every few weeks! It may not feel this way, but there is literally a new you every couple of weeks.

Why am I harping on the new? Well, at our research firm here, we have found that a key to explosive performance in stocks lies in when they newly appear on our screens. Those observations lead us to dig deep into our data and analyze how "NEW" stocks appearing in our reports did in terms of performance compared to all of the profiled stocks in our reports. The results were both shocking and illuminating and they are contained here in this report. Our paper essentially discusses one historically very effective way to use our Compass 20/10 reports to identify big winning stocks of tomorrow.

The foundation of what we do is rooted in finding institutional accumulation and distribution. We want to identify early on when big institutions begin making moves in and out of stocks. We then find the strongest/weakest scoring stocks and bet alongside what the institutions are doing. The findings in this paper indicate that this is an effective strategy. <u>As you will see, this strategy successfully identified many stocks with large returns within a 3 to 12-month period.</u>

INTRODUCING THE COMPASS SCORING METHODOLOGY

The Compass Score is a numeric ranking that we assign to an equity based on our proprietary technical and fundamental analysis. We begin our process by defining a universe of US stocks that we deem to be tradable by institutions. We filter for stocks that meet our minimum criteria including: liquidity, market capitalization, average daily volume, and whether options are available. This universe is defined daily and yields an average of roughly 1,400 US stocks each day. The stocks that pass the filters collectively function as an index of institutionally tradable stocks that we refer to as the **MAP 1400.**

At this point, 120+ individual historical data points are retrieved for each stock. A truncated list of example data points is shown in the table below.

STOCK DATA EXAMPLES:

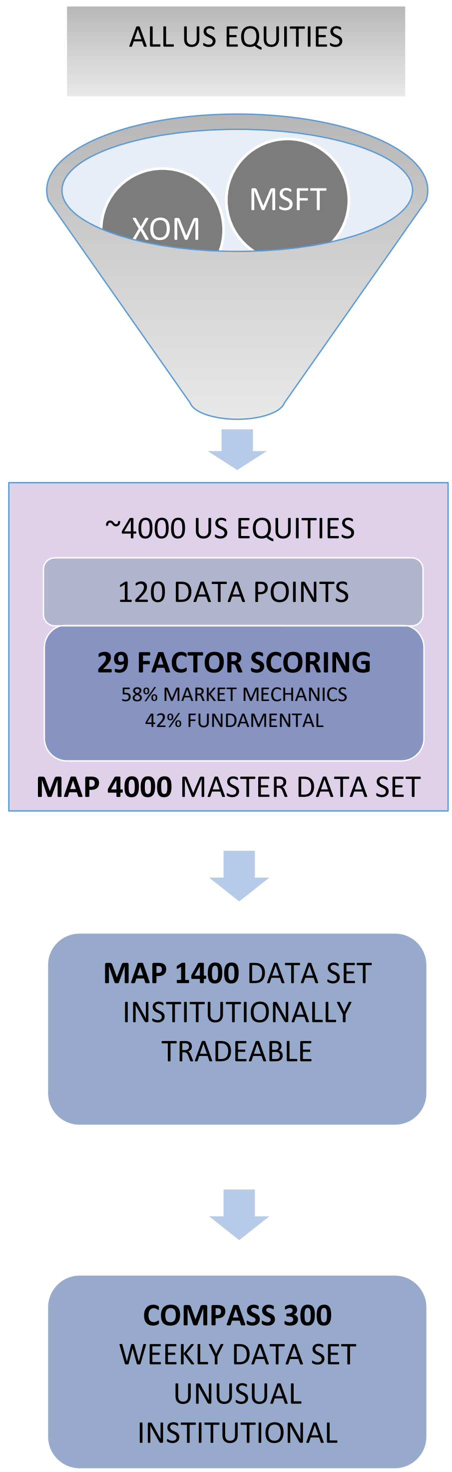
TECHNICAL	FUNDAMENTAL
Price highs and lows within a specified time period	Revenue and Earnings Growth - Single and Multi Year
52 week highs and lows	Analyst Revisions
Average Daily Volume within a specified time period	P/E ratio
Historical Volatility for a specified time period	Debt Levels
Several Moving Averages	Cash Flow
Relative Performance to Sector	Enterprise Value

We separately employ a factor scoring methodology on over 4000 US stocks each day (the MAP 1400 is a subset) utilizing 29 factors, each with various combinations of subsets of the 120+ data points. Each factor component is part of an aggregate score. **Aggregate scores of 80+ are indicative of high institutional accumulation; 45 and less indicate institutional selling.** The scores are further divided into technical and fundamental components. The technical score is our factor scoring methodology dealing with market mechanics: trading volumes, buying/selling pressure, price ranges, volatility, etc. The fundamental score is our factor scoring methodology dealing with the core health of a company: revenues, earnings, debt, revisions, etc. The composite Compass Score is roughly 58% market mechanics (technical) and 42% health (fundamentals).

An additional accumulation/distribution filter is applied searching for potentially unusual institutional activity...the hallmark of what we do. We then identify this abnormal activity by studying deviations from normal relationships between price, volume and volatility. Each day finds roughly 100 stocks resulting in accumulation or distribution in total. We aggregate weekly (Monday-Friday) returns and remove duplicate stocks (roughly 40%). This results in an average weekly universe of 300 stocks exhibiting unusual institutional activity. We refer to this weekly pool as the **COMPASS 300.**

We now have a weekly list of unusual institutional buying and selling of roughly 300 stocks, ranked strongest to weakest according to our proprietary process.

The MAP Equity Filtering and Scoring Process



From this pool of 300 average weekly stocks, we select the 20 highest scores (institutional accumulation), and 10 lowest scores (institutional distribution) to assemble a Compass 20/10. We want to bet alongside the institutional trend by going long stocks being bought by institutional players and selling stocks being sold by them. The study examines initiating NEW buys with first appearance on the report on a rolling 90-day period for the top 20 stocks, and a strategy of initiating NEW sells with first appearance on the report on a rolling 90-day period for the bottom 10 stocks. New initiations are highlighted in yellow.

Example of Compass 20/10 basket generated 4/25/17

COMPASS Top 20 and bottom 10 Stocks for the week prior.

Prepared by Macro Analytics for Professionals on 04/25/2017 based on closing prices for the previous day.

TICKER	NAME	INDUSTRY SUBGROUP	PRIOR CLOSE	COMPASS SC	TECHNICAL	FUNDAMENTAL	INITIAL DATE	INITIAL PRICE	RETURN
FTNT	Fortinet, Inc.	Systems Software	39.91	93.1	94%	92%	4/4/2017	$ 38.26	4.31%
ALGN	Align Technology, Inc.	Health Care Supplies	120.34	91.4	91%	92%	3/21/2017	$ 113.23	6.28%
ILG	ILG, Inc.	Hotels Resorts & Cruise Lines	23.11	89.7	94%	83%	4/4/2017	$ 20.57	12.35%
OLLI	Ollie's Bargain Outlet Holdings Inc	General Merchandise Stores	37.5	89.7	94%	83%	2/28/2017	$ 32.40	15.74%
VEEV	Veeva Systems Inc Class A	Health Care Technology	52.55	87.9	88%	88%	3/21/2017	$ 49.85	5.42%
SSNC	SS&C Technologies Holdings, Inc.	Application Software	37.37	87.9	91%	83%	2/21/2017	$ 35.37	5.66%
BABA	Alibaba Group Holding Ltd. Sponsor	Internet Software & Services	114.86	87.9	94%	79%	1/31/2017	$ 101.02	13.70%
FB	Facebook, Inc. Class A	Internet Software & Services	145.47	86.2	85%	88%	1/31/2017	$ 130.98	11.06%
PYPL	PayPal Holdings Inc	Data Processing & Outsource	44.27	86.2	85%	88%	NEW BUY		
SUPN	Supernus Pharmaceuticals, Inc.	Pharmaceuticals	32.4	86.2	88%	83%	3/21/2017	$ 29.90	8.36%
MDXG	MiMedx Group, Inc.	Biotechnology	11.46	86.2	88%	83%	4/18/2017	$ 10.80	6.11%
LRCX	Lam Research Corporation	Semiconductor Equipment	142.51	84.5	94%	71%	3/14/2017	$ 122.40	16.43%
RNG	RingCentral, Inc. Class A	Application Software	30.2	82.8	94%	67%	3/7/2017	$ 26.50	13.96%
FIVE	Five Below, Inc.	Specialty Stores	48.27	82.8	85%	79%	4/18/2017	$ 45.99	4.96%
EDU	New Oriental Education & Technolo	Education Services	62.81	81.0	82%	79%	3/28/2017	$ 58.47	7.42%
AMKR	Amkor Technology, Inc.	Semiconductor Equipment	11.88	81.0	85%	75%	NEW BUY		
SBUX	Starbucks Corporation	Restaurants	61.11	81.0	85%	75%	NEW BUY		
SCSS	Select Comfort Corporation	Homefurnishing Retail	31.3	81.0	91%	67%	4/11/2017	$ 25.63	22.12%
CDNS	Cadence Design Systems, Inc.	Application Software	33.48	81.0	94%	63%	NEW BUY		
NTRI	Nutrisystem, Inc.	Internet & Direct Marketing R	55.05	81.0	82%	79%	NEW BUY		
STO	Statoil ASA Sponsored ADR	Integrated Oil & Gas	16.63	32.8	32%	33%	NEW SELL		
BHP	BHP Billiton Limited Sponsored ADR	Diversified Metals & Mining	36.16	32.8	41%	21%	NEW SELL		
UIS	Unisys Corporation	IT Consulting & Other Service	11.15	31.0	38%	21%	4/18/2017	$ 11.25	0.89%
OAS	Oasis Petroleum Inc.	Oil & Gas Exploration & Produ	11.94	31.0	38%	21%	NEW SELL		
TEVA	Teva Pharmaceutical Industries Lim	Pharmaceuticals	31.6	31.0	24%	42%	1/31/2017	$ 34.24	7.71%
OXY	Occidental Petroleum Corporation	Integrated Oil & Gas	62.07	29.3	21%	42%	2/21/2017	$ 65.49	5.22%
CRC	California Resources Corp	Oil & Gas Exploration & Produ	12.03	29.3	29%	29%	NEW SELL		
NTNX	Nutanix, Inc. Class A	Internet Software & Services	16.08	27.6	21%	38%	4/4/2017	$ 18.15	11.40%
CPG	Crescent Point Energy Corp.	Oil & Gas Exploration & Produ	9.9	24.1	18%	33%	2/14/2017	$ 11.45	13.57%
QEP	QEP Resources, Inc.	Oil & Gas Exploration & Produ	11.25	20.7	18%	25%	2/28/2017	$ 13.95	19.35%

The Compass 20/10 is our comprehensive weekly report of unusual institutional buying and selling coupled with our best and worst scoring stocks. Now that you know a little bit about how the research works, let's look at the following study which analyzes all of the stocks that composed our Compass 20/10 reports from January 1, 2013 until May 2017. How did all of the stocks that this report showcased perform? How did the yellow highlighted new appearances perform in comparison?

COMPASS 20/10 NEW SIGNAL STUDY

Trading Strategy of NEW BUY/SELL based on Compass Scores—Defining optimal Holding Periods and Range of Compass Scores

This study addressed the following questions:

- Does an investor get a better average long return by buying only NEW BUYS as opposed to buying all of the top 20 stocks on the Compass 20/10 report? Also, does an investor get a better average long return by initiating NEW BUYS vs buying the RUSSELL 2000 Index for the same time periods?
- Does an investor get a better short return by initiating NEW SELLS vs selling all bottom 10 stocks on the Compass 20/10 report? Also, how does the return of NEW SELLS compare to returns for the RUSSELL 2000 Index for the same time periods? Do the NEW SELLS greatly under-perform the market?
- What is the optimal holding period for NEW BUYS and NEW SELLS separately?
- What is the optimal range of Compass Scores to construct a long portfolio or a short portfolio with the highest average return?

Hypothesis: For a long portfolio, buying only NEW BUYS will outperform buying all top 20 stocks; holding stocks with higher Compass Scores for a longer time will give us a desirable risk-adjusted return. For a short portfolio, selling NEW SELLS will underperform the market, but will not underperform selling all bottom 10 stocks; holding stocks short with lower Compass Scores for a shorter timeframe will give a desirable return.

Results:
We first identified the newly appearing stocks in a 90-day period from all weekly Compass 20/10 data (1/2/13—5/16/17). If the stock did not appear as a top 20 stock or bottom 10 stock within the prior 90 days, it would be marked as a new signal on its first appearance after 90 days. We then utilized only new signals to create a long or short trading strategy, and then calculated returns from 1-month to 12-months.

From the long perspective, average returns for NEW BUYS increased as the return time-period increased. **For the 1,358 NEW BUYS we identified, they exhibited an average 12-month return of 10.85% with a profile of 64.51% positive trades and 35.49% negative trades.**

BUYS

Interpreting the results of our study, we would recommend a portfolio of NEW BUYS over a portfolio of all top 20 stocks.

As we can see in Figure 1, buying NEW BUYS outperformed buying all top 20 stocks for all return periods (1-12 months). We also see that as the return period increases, the outperformance of being long only NEW BUYS increases over being long all top 20 stocks. For the 12-month return, there is a +1.05% difference between two portfolios.

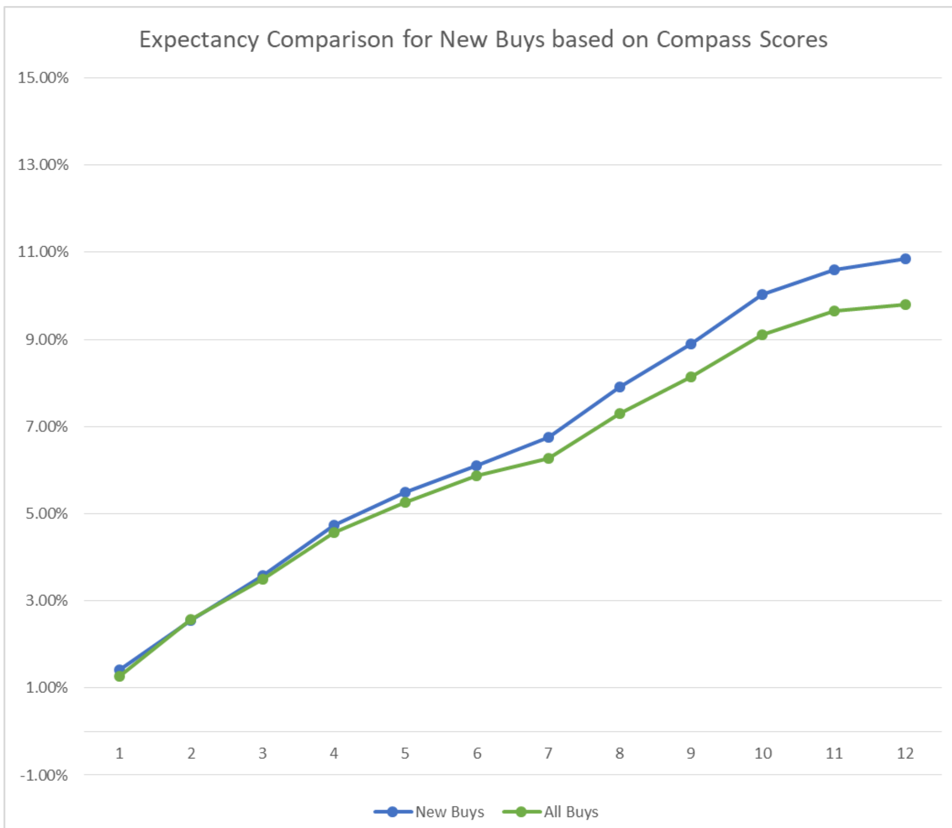


Figure 1

As we can see in Figure 2, it is clear that the returns of a long portfolio of NEW BUYS are greater than the performance of the Russell 2000 index across all return periods. The greatest difference happens at the 11-month return period, which is a +1.46% difference vs. the Russell 2000. **This is important as these are the stocks with the institutional accumulation signal which are outperforming the market.**

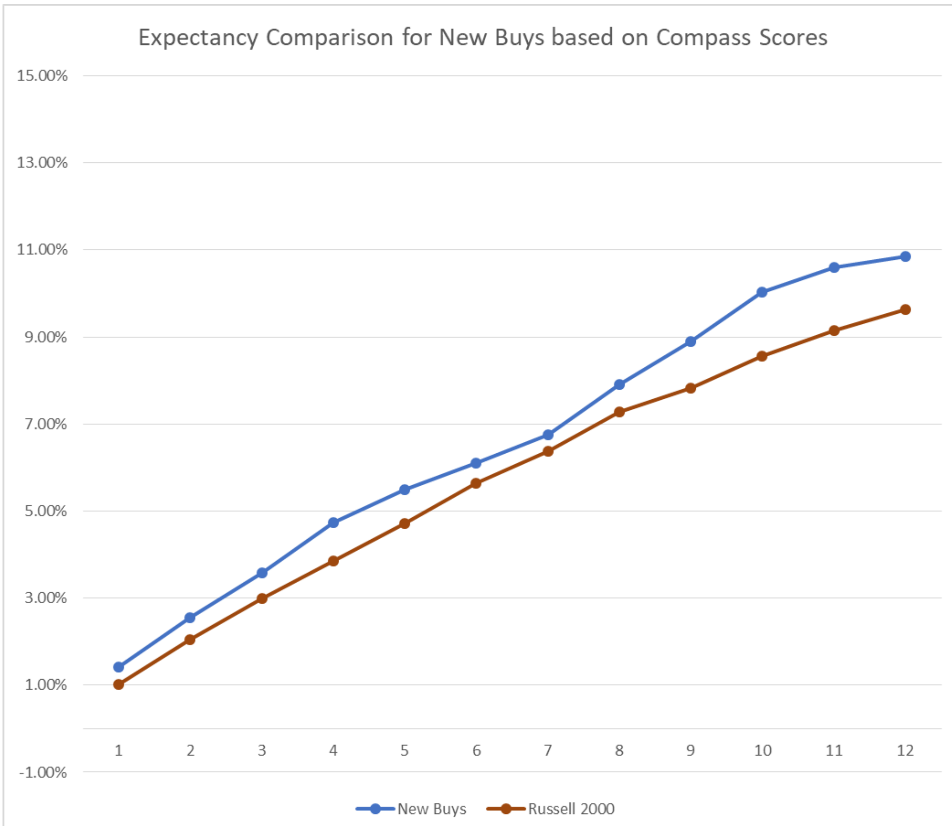


Figure 2

Additionally, we further filtered all NEW BUYS based on the range of their associated Compass Score. We sought to identify which Compass Scores would give us the best performance in terms of returns. The result shows that when the portfolio was constructed with only the top 20%—30% range of available Compass Scores, the investor achieved the highest returns in every return period (1month—12 month). **In other words, we found investors should consider buying NEW BUYS with a Compass Score of 81 or higher.**

Not surprisingly, we also found that the longer the duration of the hold, the higher the return that was achieved. As we see in Figure 3 below, with a base of 1358 NEW BUYS, we constructed a portfolio utilizing only the top 27% of Compass Scores. (The lowest score being 81.48). The portfolio exhibited a 14.28% 12-month return with 65.78% of trades being positive. **The largest return difference between our portfolio and Russell 2000 happens for the 11-month return, which is a +4.65% difference.**

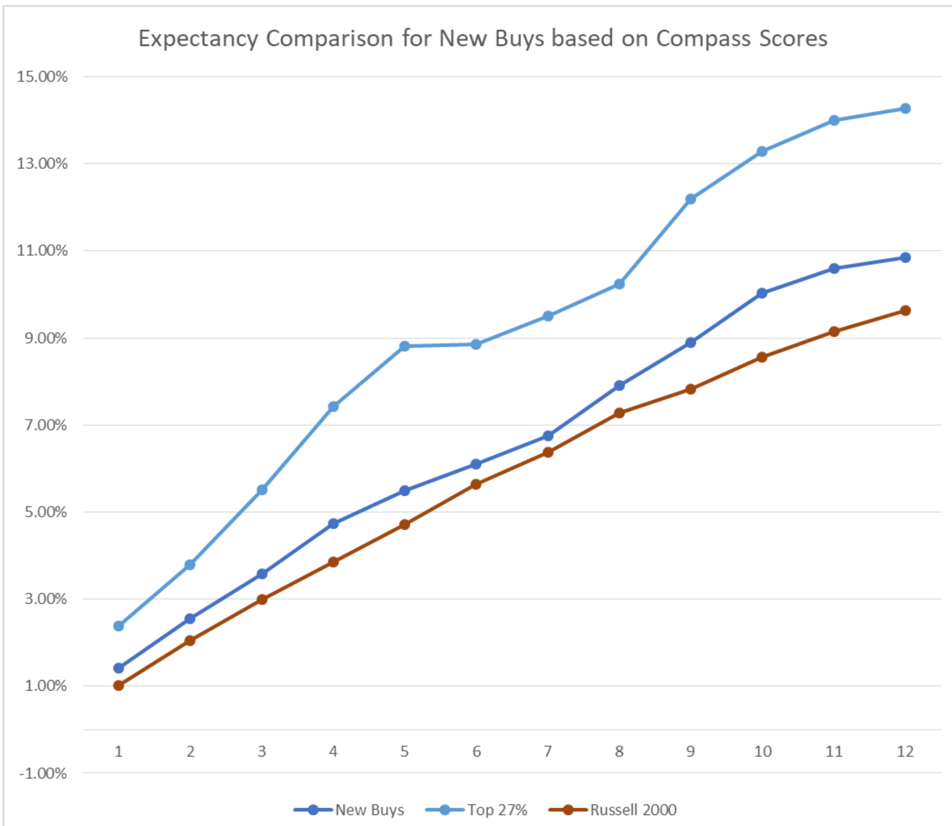


Figure 3

Because these returns were so strong, we singled out names from different sectors to showcase the power of the institutional signal. The tickers below exhibited an average Compass Score of 82.92 and an average **+50.86% 12-month return**. This group of stocks would best be described as leading names under accumulation with high Compass Scores. We found the returns kept increasing as the return period increased. The returns for each of the stocks are listed below:

- AAOI from first appearance returned **+126.98% in 4 months**
- QCOR from first appearance returned **+107.65% in 12 months**
- GMCR from first appearance returned **+91.85% in 10 months**
- AKRX from first appearance returned **+92.38% in 9 months**
- SFLY from first appearance returned **+69.01% in 5 months**
- AFSI from first appearance returned **+56.88% in 9 months**
- XEC from first appearance returned **+51.34% in 11 months**
- LRCX from first appearance returned **+33.89% in 12 months**
- TXRH from first appearance returned **+17.78% in 8 months**

SELLS

For Compass bottom 10 signals, investors would have found a better short return by shorting all of the 10 bottom stocks. As we see in Figure 4, by shorting all NEW SELLS, the average return increased as much as 1.85% outperformance. However, as we find in Figure 5 on the following page, NEW SELLS still underperform compared to the performance of the Russell 2000 Index. Returns of NEW SELLS are much weaker than the market. **Therefore, although NEW SELLS did not underperform all sells, NEW SELLS did underperform the comparison market by as much as -2.83% difference. This is important because these stocks represent institutional distribution signals and the fact that the stocks underperform the broader market suggests it is key to pay attention to stocks signaling distribution.**

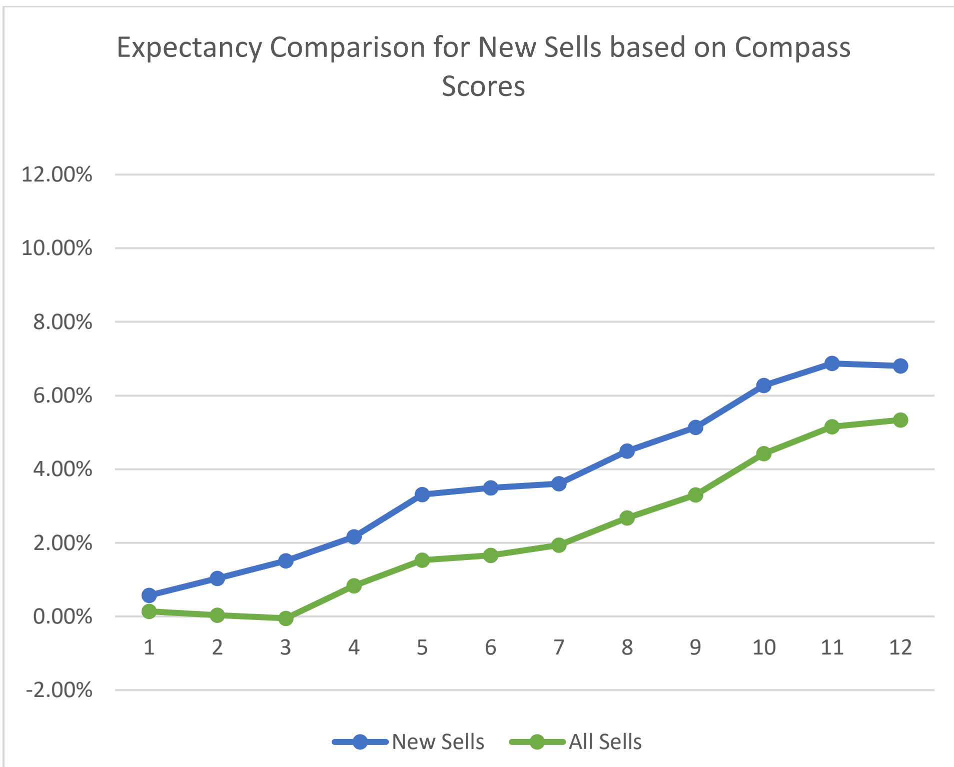


Figure 4

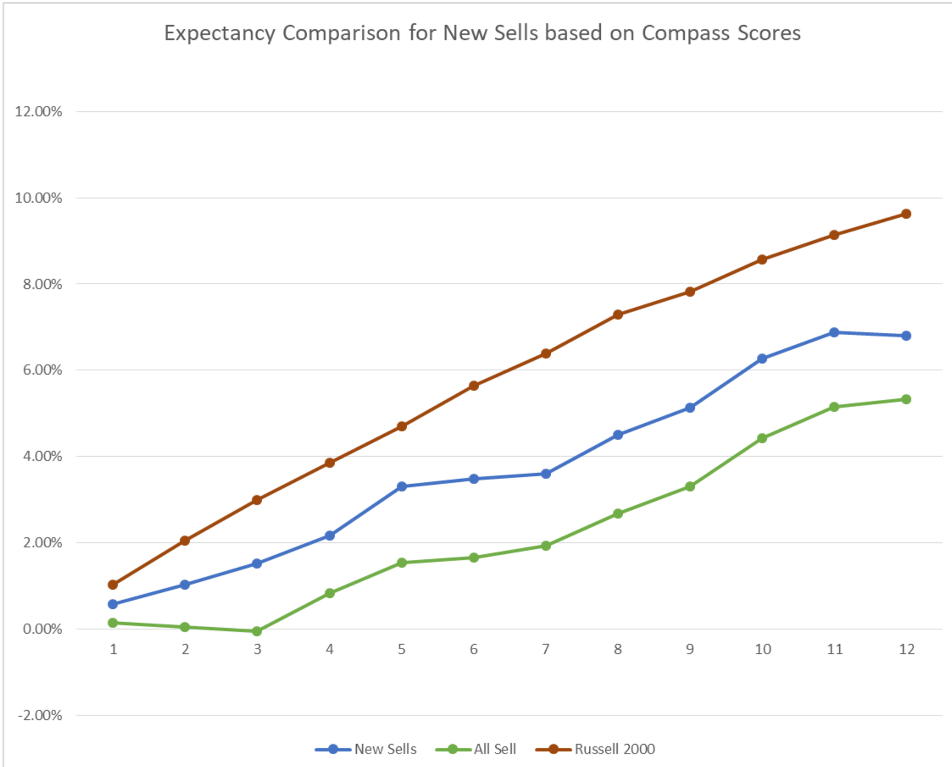

Expectancy Comparison for New Sells based on Compass Scores
12.00%
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%
-2.00%
1
2
3
4
5
6
7
8
9
10
11
12
New Sells
All Sell
Russell 2000

Figure 5

Furthermore, we attempted to isolate which range of the Compass Scores of NEW SELLS would produce a better short performance compared to shorting all of the NEW SELLS. The result, when a short portfolio was constructed eliminating the top 10% of NEW sell signals, more underperformance was observed; that is the sell signals remaining (bottom 90%) went down more than all NEW sells (100%). This can be seen in Figure 6 following.

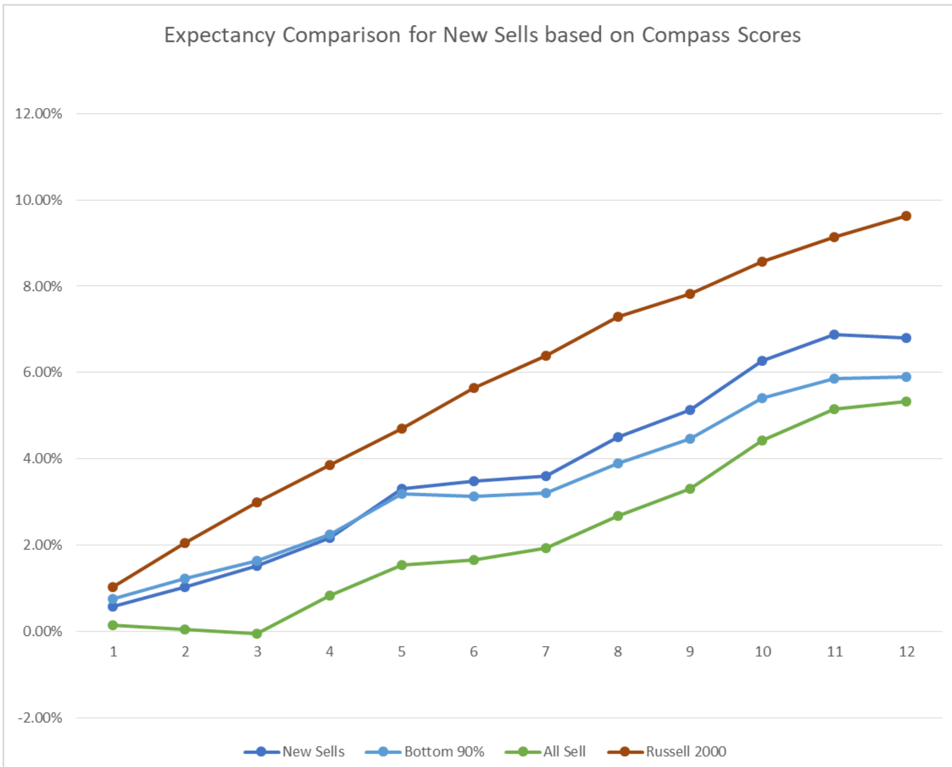


Figure 6

In terms of NEW sells, we found Compass Scores exceeding 44 should be omitted from a short portfolio. Take note of this important finding: we do not recommend shorting stocks for a long period; instead, we recommend a maximum short hold period of 1 to 3 months as the optimal short holding period. These findings exhibited statistical significance.

In summary, for the period tested we found that shorting all stocks achieved a more desirable short return profile than only shorting NEW SELL signals. We also found that shorting NEW SELLS with a maximum Compass Score of 44 achieved better short returns than all NEW SELLS with a hold period of between 5 and 12 months.

CONCLUSION

At MAP, we devote all our time to studying stocks in ways that others just simply aren't doing. We discovered the power of walking in the footsteps of giant institutional investors because we happened to be the traders executing those immense orders while sitting on trading desks of Wall Street banks. We realized when we were the ones buying a stock, and it outsized the market, we were moving them, but not right away. We did our best to not impact the movements of the stocks, but there is only so much you can do when your client is bigger than the market!

We then knew what to look for in the future. This is what makes our research unique. With that said, when we dug down deep to analyze our years of data with the help of some extremely bright quantitative minds, we found real power in when our proprietary signals appear for the first time in a while. This intuitively makes sense. If an institution takes days to build a position, there might be market impacts felt for weeks. And when do you want to hop on board a trend? As early as possible naturally!

That is what this study is all about. We found that real measurable outperformance occurs when we pay special attention to the new yellow signals on our Compass 20/10 reports. This is where the future powerhouse stock gains live, according to our method.

In applying the old, but time-tested saying "out with the old and in with the new," we point out that today's old leading stocks which may have given us so much, all started as new signals some time ago. Our whole goal is to find early on, the leaders of tomorrow which will all eventually get old. We certainly hope so, because we will have known long before, when they were all new.

There's a new kid in town. I don't want to hear it.
There's a new kid in town. I don't want to hear it.
There's a new kid in town. There's a new kid in town.

-The Eagles