PUMP UP THE VOLUME

What Waxing and Waning Volume Means For the Future of the Market

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A quick message from the author:
This is a lengthy paper packed with visuals of data on stocks spanning three decades and billions of data points. But I'm going to summarize everything here in two pages. If you're the type to roll up your sleeves and dig deep into understanding, the pages that come after paint the whole picture. For those of you with less time, here's what you need to know:

**Abstract:**
We look at market volume waxing and waning and use data to assign a comfortable probability of future market returns based on conditions. We look at:

- S&P 500 volume
- U.S. equity Big Money (Unusual Institutional) trading volume
- U.S. equity Big Money buying and selling volume, defined as breakouts and breakdowns
- ETF Big Money buying and selling, defined as breakouts and breakdowns

**Hypothesis:**
Heavy volumes are constructive in oversold conditions. Heavy and light volumes are warning signs in overbought conditions.

**Findings:**
Big volume usually appears at troughs in the market. Eerily light volume precedes lower market prices but is constructive long term.

**Summary:**
We can summarize the findings of the detailed broader study beginning on page five in the following matrix:

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Markets that trade with extremely high volumes, huge big money trading volumes, are oversold, along with huge ETF selling, markets rocket higher over the next 1-24 months.</td>
<td>Markets that trade with extremely low volumes, low big money trading volumes, are overbought, along with extreme ETF buying, markets are unimpressive the next 1-6 months, with positive returns kicking</td>
</tr>
</tbody>
</table>
in thereafter. But once they do, according to the data, returns are significantly less impressive than scenario 1:

<table>
<thead>
<tr>
<th></th>
<th>S&amp;P 500 AVERAGE RETURN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1M</td>
</tr>
<tr>
<td>SCENARIO 1</td>
<td>1.61%</td>
</tr>
<tr>
<td>SCENARIO 2</td>
<td>-0.45%</td>
</tr>
<tr>
<td>ABSOLUTE DIFFERENTIAL</td>
<td>-2.06%</td>
</tr>
<tr>
<td>% DIFFERENTIAL</td>
<td>-127.7%</td>
</tr>
</tbody>
</table>

Source: Mapsignals, FactSet

Basically, buying at the top (Scenario 2), you earn a return far worse than buying when there’s blood in the streets (Scenario 1).

The detailed study which follows gives you a context to recognize what market conditions are like at any given point. So, where are we right now? I’m glad you asked...

Let’s assign a grade to each of the four conditions. Scenario 1 being a “1” and Scenario 2 being a “5.” Here we will grade each condition from 1-5: 2.5 being middle of the road.

**S&P 500 DAILY VOLUME**

The 1-year moving average of volume on the S&P 500 is right around 2 billion units according to FactSet. Since November 1st, 2019, volume has averaged 1.7 billion. That’s 15% lower. While it’s not extremely low currently, the U.S. stock market is trading with lower than average volume.

**GRADE: 3**

**U.S. STOCKS BIG MONEY TRADING ACTIVITY**

Part II of the longer study searches for extremely low Big Money Trading as a possible predictor for future market activity. Big Money Trading has not reached extremely low levels recently, but looking at the chart below, you can see that activity over a 252-day moving average (252 trading days is one year) has been falling starting October of 2019:

**252 DAY MA BIG MONEY TRADES**

**INVESTMENTS IN SECURITIES INVOLVES SUBSTANTIAL RISK AND HAS THE POTENTIAL FOR PARTIAL OR COMPLETE LOSS OF FUNDS INVESTED. THIS IS NOT TO BE CONSTRUED AS AN OFFER TO BUY OR SELL ANY FINANCIAL INSTRUMENTS AND SHOULD NOT BE RELIED UPON AS THE SOLE FACTOR IN AN INVESTMENT MAKING DECISION. PLEASE READ IMPORTANT DISCLOSURES AT THE END OF THIS REPORT.**
GRADE: 3
U.S. STOCKS OVERBOUGHT/OVERSOLD

U.S. stocks went overbought 1/12/2018. The S&P 500 dropped more than -4% within weeks. December 27th 2019 pushed stocks into overbought territory once again. We have been continually and increasingly overbought since.

GRADE: 5
ETF BIG MONEY BUYING AND SELLING

The last time we saw huge ETF selling was 12/28/2018. The S&P 500 rocketed +35.89% since then. On the contrary, January 2nd, 2020 - 75 ETF buying signals were logged. December also showed the same kind of ETF buying. The last time we saw similar ETF buying prior to that, was January of 2018 prefacing a big drop in U.S. equities: the Russell 2000 Index fell -9%.

GRADE: 5

As you can see, current market conditions place us much closer to Scenario 2.

• Volumes are below average
• Big Money Trading Activity is falling
• The Market is heavily overbought
• ETF buying is extreme

This does not foreshadow a crash and it doesn’t mean go sell stocks. It means the market is due for a pullback and now is not the ideal time to initiate buys. Now is the time to prepare your shopping lists.

That’s it. That’s all you need to know: the quick and dirty.

But if you want to understand how the market really ticks, let’s delve into the data...

INTRODUCTION

I just saw this today:

Source: Twitter - TheRealDonaldTrump
That’s a FOMO flame thrower! You know: fear-of-missing-out!

It’s the second week of January 2020, and the S&P 500 is already up +1.35% after a massive 2019. Look at last year’s returns:

<table>
<thead>
<tr>
<th>INDEX</th>
<th>2019 DIV REINVESTED RETURN</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASDAQ COMPOSITE</td>
<td>35.2%</td>
</tr>
<tr>
<td>DOW JONES INDUSTRIAL AVERAGE</td>
<td>22.3%</td>
</tr>
<tr>
<td>RUSSELL 2000</td>
<td>23.7%</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>28.9%</td>
</tr>
</tbody>
</table>

For perspective, that’s the sixth time in 22 years we’ve seen a performance like that:

![S&P 500’s Annual Return Since 1997](source)

Louis Navellier and I recently talked about the latest bull run in stocks. He wondered if volumes were drying up as we head higher. He noted that if so, it typically prefaces a volatility spike meaning, lower prices ahead. But he wondered if this time might be different.

How is this melt-up going to end? With a bang or with a whimper?

Here’s a better question: Has the melt-up even started?

Investopedia defines a melt-up as: a dramatic and unexpected improvement in the investment performance of an asset class, driven partly by a stampede of investors who don’t want to miss out on its rise, rather than by fundamental improvements in the economy.

Well that’s synonymous with FOMO folks.

So, if this is a melt-up, it means there should be FOMO which means reckless buying on massive volume. To figure out where we are right now, Louie and I decided that a study was in order. I wanted to look at volume of U.S. stocks over the past 3 decades to see what we could glean from similar periods in history. What does this price action mean for the coming year? Should we worry about stocks, or get ready to be locked-and-loaded?

1 Source: https://www.investopedia.com/terms/m/melt-up.asp
Herein we look at volume a few ways.

1. **Historical volume as posted by the exchanges**

2. **Historical volume according to Mapsignals Big Money trades.** These are unusually large trades of roughly 1400 institutionally tradeable stocks. Those are defined as stocks that:
   - Trade a minimum 500,000 shares per day
   - Have share prices greater than $10
   - Have listed options available
   - Have a market capitalization of $500 million or more

3. **Historical volume according to Mapsignals Big Money buy and sell signals.** These are a subset of Big Money trades and happen to only about 100 stocks each day: stocks with great fundamentals that break out or stocks with weak fundamentals that breakdown. We will look at the velocity of big money buying and selling and how it influences overbought and oversold markets.

4. **Huge ETF buying according to Mapsignals Big Money buy and sell signals.** We look at what happens when ETF buying goes nuts and what it means for the market’s future.

The reason I focus so heavily on what big institutional traders do is that according to many estimates, institutional and high frequency trading volumes account for anywhere between 70-90% of all daily volume. With a statistic like that, ignoring big activity would be literally missing 90% of the picture.

Let’s have a deeper look...

**PART 1: PLAIN OLD HISTORICAL VOLUME**

I prepared a bunch of charts for you to ponder. Let’s start with these: they are simply the price of the S&P 500 index overlaid with the aggregate daily volume of the constituent stocks. Here is thirty years of S&P 500 prices, but volume data is only available on FactSet starting with the year 2000.

Next, we zoom in for 2000-2009 and 2010-2019. It’s easier to see the correlation between volume spikes and market troughs.

Finally, we zoom in on the past 5 years:

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And then the past 2 years:

After 20 years of data, the old “eye-test” shows us clearly that volume spikes when things get scary. Visually, we can also see that’s been a great time to buy historically speaking.

But notice something else in those charts above. The converse also seems true for the most part: when markets chug along higher, volumes are more muted and measured. That is with a few notable exceptions circled below in red. Sometimes we get feverish buying at market tops. The rush of buying exhausts itself and then the market pulls back near-term.

At this point we understand that volume spikes mean trouble: whether we are the bottom, or sometimes at the blow-off top when everyone rushes in and suddenly there’s no one left to buy.

Average daily volume of the S&P 500 index is 2.2 billion units according to FactSet. I wanted to look at extreme volumes - both high and low. So here, we see two charts. The first red chart shows times when volume was 130% of normal, or when trading exceeded 3 billion. The green shows when volume was 70% of normal, or when trading did not exceed 1.5 billion.
When we filter for volumes 30% greater than usual, that trough/spike relationship is very clear. Only 713 out of 5,032 observation days were above 3 billion - 14% of the time. But notice when volume is 30% less than normal, it’s a little harder to tell. Only 780 days out of the observed 5,032 had volume 70% normal or lower. That’s only 15% of the time.

The irony is that most of those happened in the early 2000’s. This was a period marked by the tech crunch, 9/11, and subsequent numerous high-profile bankruptcies like Enron and WorldCom. That’s not a time we would normally associate with low volume. The subsequent run-up to the local peak in 2008, was marked by mostly light volume as well. Then from 2010, we see that light volume generally preceded higher prices. It’s as if the market paused to catch a breath and then chug along higher. It’s worth noting here that daily volume average was likely skewed by 2008-2012.

Here’s where it gets interesting: What do the forward returns for the market look like for volume extremes over the past 20 years? Here I took each instance of huge (713) or low (780) volume and calculated average returns for the market looking forward. Here’s what I found:

<table>
<thead>
<tr>
<th>S&amp;P 500</th>
<th>1 WEEK</th>
<th>1 MONTH</th>
<th>3 MONTH</th>
<th>6 MONTH</th>
<th>9 MONTH</th>
<th>12 MONTH</th>
<th>24 MONTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE RETURN</td>
<td>-0.16%</td>
<td>-0.92%</td>
<td>-1.09%</td>
<td>-1.70%</td>
<td>-3.08%</td>
<td>-4.02%</td>
<td>-1.77%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S&amp;P 500</th>
<th>1 WEEK</th>
<th>1 MONTH</th>
<th>3 MONTH</th>
<th>6 MONTH</th>
<th>9 MONTH</th>
<th>12 MONTH</th>
<th>24 MONTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE RETURN</td>
<td>-0.05%</td>
<td>0.34%</td>
<td>1.88%</td>
<td>5.19%</td>
<td>7.43%</td>
<td>10.42%</td>
<td>24.29%</td>
</tr>
</tbody>
</table>

That’s right: huge volume days look great for the market’s future. Thin volumes? Not so much.

And just to show you that I looked at all extremes, I wanted to filter for days in which volume was 40% or less than the 1-year moving average daily volume. This is what it looked like:
The even spacing suggests it happened regularly. And it did: naturally most of these days were Thanksgiving or July 4th trading.

Now that we have an idea of what overall volume means to the market, let’s see how big money traders impact things.

PART II: BIG MONEY HISTORICAL VOLUME

If 70-90% of daily stock volume is institutional money\(^2\), we need to pay attention to it. Whether it be high frequency traders, hedge funds, bank desks, or vanilla asset managers, these are the guys that move markets. 10% of all volume is mom n’ pop. So, where do we find metrics on the big money? Mapsignals is my research firm, and it’s dedicated to sniffing out the big money.

To quickly summarize, Mapsignals looks through 5,500 stocks per day. It ranks each one for strength to weakness measuring fundamentals and technicals. Then it overlays a filter looking for unusually large volume and volatility, among other things. When big money moves into and out of stocks in an unusual way, it sends a flag. This happens on about 500 stocks per day. Those signals can be further broken down to when there’s huge buying on breakouts or selling on breakdowns. That happens on only about 100 stocks per day.

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This is important because a wealth of information is in these hidden trading patterns of big money managers. In the next few charts, we will look at these unusual institutional volumes, when they are extreme, and what they mean for the market’s future.

If we get 100 Big Money stocks every day, what happens when that volume dwindles or swells? We already saw what happens with normal volume, but what about when big time investors get really active or virtually vanish? The following charts show us.

Here we see each time a stock makes that yellow flag from the funnel chart above. So, when big money is moving into or out of a stock in an unusual way, I count that every day. The most obvious observation is that the number of big money trades has been steadily increasing. At around 2005, they really started to take off. This is largely due to the explosion in popularity of ETFs. With the rise of computerized trading firms and more hedge funds, came the rise of unusually large big money trades right up through the present.

Now let’s look at when big money activity dries up or swells. I wanted to see stretches of time when volumes were out of the ordinary, so individual day readings would result in a lot of noise. That’s why I took a 10-day moving average of big money trade counts. I took a rolling sum of 10 days of activity and divided by 10 to get a moving average. That gives us a moving picture of roughly two weeks of trading activity over 30 years.

Like in the regular historical volume examples let’s start with extremely large activity. Each red line in the chart below is a period in which the 10-day moving average of unusually large (big money) trades is higher than 150% of the 1-year moving average. Basically, the red shows us when big money traders kicked into overdrive: when their activity spiked. Bear market periods are highlighted in gray for reference. The chart on the left is the full 30 years of readings from 1990-2019. The chart on the right zooms in to see the last 12 years, capturing the financial crisis:
Let’s visualize that another way. The chart below is just the S&P 500 with instances of big money trades more than 2 times the daily average. More often we observe them at local troughs. Again: when volume spikes, markets frequently bottom out.

In contrast, each green line in the chart below is a period in which the 10-day moving average of unusually large (big money) trades is lower than 60% of the 1-year moving average. Basically, the green shows us when big money traders went to sleep; when their activity fell off a cliff. Bear market periods are highlighted in gray for reference. The chart on the left is the full 30 years of readings from 1990-2019. The chart on the right zooms in to see the last 12 years capturing the financial crisis:
What do the forward returns for the market look like for Big Money trading extremes over the past 30 years? Here I took each instance of extended periods of huge Big Money trading (372) or extended periods of low Big Money trading (186) and calculated average returns for the market looking forward. Here’s what I found:

<table>
<thead>
<tr>
<th>S&amp;P 500</th>
<th>1 DAY</th>
<th>1 MONTH</th>
<th>3 MONTH</th>
<th>6 MONTH</th>
<th>9 MONTH</th>
<th>12 MONTH</th>
<th>24 MONTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE RETURN</td>
<td>0.04%</td>
<td>0.97%</td>
<td>1.98%</td>
<td>3.47%</td>
<td>4.36%</td>
<td>6.11%</td>
<td>12.05%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S&amp;P 500</th>
<th>1 DAY</th>
<th>1 MONTH</th>
<th>3 MONTH</th>
<th>6 MONTH</th>
<th>9 MONTH</th>
<th>12 MONTH</th>
<th>24 MONTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE RETURN</td>
<td>-0.05%</td>
<td>-0.86%</td>
<td>0.51%</td>
<td>-0.65%</td>
<td>6.72%</td>
<td>9.45%</td>
<td>19.35%</td>
</tr>
</tbody>
</table>

To summarize what happens with extreme volumes with big institutional trading: when volume explodes, it usually aligns with market bottoms and prefaces higher prices short term and long term. When volume dries up in bull markets, it prefaces lower prices short term, but significantly higher prices long term. When volume dries up in bear markets, it prefaces more selling, and lower prices medium term.

Basically, dwindling volume in a bull means we expect longer term higher prices. But when it dries up in a bear, watch out below.

**PART III: THE VELOCITY OF BIG MONEY**

Now that we have looked at all regular volume, and the Big Money volume, we should look at when Big Money is buying (and selling) stocks at the tops (or bottoms) of their ranges. In the market, things get hot when they are stretched to extremes. That applies to Big Money buying and selling too. To simplify big money buying- that’s when stocks break out of their ranges on big volume. The same applies for Big Money selling: when bigtime money managers are blowing out of positions in stocks.

The level of buying against selling can be measured. This way we can get an idea of how hard the engine of the market Is working. At Mapsignals, it’s called the Big Money Index and you can think of it as an RPM meter for the market. It is a 25-day moving average.
of all Big Money buying over selling. A reading over 50% indicates more buying than selling while under is vice-versa. When things get heavily oversold (a reading below 25% indicating only 25% of all signals over the past 25 days were buying), the market usually snaps back with a vengeance - often within days. That’s the time to add risk: when we’re oversold conviction is high.

On the flipside, when buys account for 80% or more of all signals over 25 days, the market becomes overbought. Intuitively, one would expect the market to sag shortly thereafter. That would be right, but as John Maynard Keynes famously said: the market can stay irrational longer than you can stay solvent. That means, we can stay overbought for prolonged periods of time.

It looks like this chart: Notice when we get up into the red overbought area, markets frequently top out sometime after. And when we get to the green - extreme selling - markets tend to bounce hard and high soon after.

Here it is simplified to an RPM-like meter:
As I write this study, the BMI, or 25-day moving average of Big Money buying over selling, is over 80%. That means the BMI now says U.S. stocks are officially overbought according to Mapsignals data. What does that mean going forward? What can we expect? In short, you can expect a moderate pullback in the market in the coming weeks. I still suspect after “the January Effect” of managers putting money to work, it will push us further into overbought territory and starting the 3rd week of 2020, I expect the market to have a reversion.

I came to this conclusion looking at BMI readings for the past 30 years. To make it easier to see, I plotted them visually in terms of intensity. Red bars mean a stretch where the market was overbought. Orange means overheated and getting dangerously close to overbought. Green bars mean oversold. Yellow is cruise control, that’s a market where buying or selling is not extreme in either direction. It may however be moving towards one or the other. I represented this later. Let’s walk through a few charts together...

This is 30 years of buying and selling data:

First, notice there are way fewer oversold (green) instances than overbought (red). But also notice how those greens tend to line up with troughs. When it’s green, it’s time to grab stocks with both hands.

That may be a little hard to see over three decades so let’s look at the next chart:
This is half the time (15 years) which also includes the nastiest bear market in recent memory – 2008-2009. We start to see more clearly that green oversold lines up with local troughs in the market. Red overbought instances usually precede a drop or at minimum a “cooling-off” period.

The next chart zooms us in more. The live collection of this data started in 2012. So, this chart begins from there:

Again, those green oversold bars align with troughs. What we can see with overbought periods, is they usually precede cool-downs. These are periods where the market is flat or down a bit. Occasionally reds line up with local peaks too. Like in 2012, 2016, 2018, and notably earlier 2019.

The final chart looks at the velocity of buying and selling activity. It slices up buying and selling into five categories. It just allows us to see when buying is slowing in a neutral zone and approaching oversold or speeding up to overbought. It gives us a better idea of where we are in a neutral market. It’s how fast the market is jamming on the brakes or throttling the gas:

This It may look confusing but let’s break it down...

For example, a yellow period is where buying and selling are fairly balanced: 40%-60% buy signals. If we drop below 40% on the way to 25%, we turn light green. The market...
is putting on the brakes. That is “Hey! We’re getting close to oversold!” When it turns bright green “Hey! we’re oversold!” The same goes for orange and red for overbought, which is what you can see now. Orange before red is “Hey, we’re getting close to overbought!” Red is overbought.

Naturally we measured this data for what to expect. It looks like this since 2012:

<table>
<thead>
<tr>
<th>Overboug</th>
<th>Day</th>
<th>Date</th>
<th>BMI</th>
<th>Year</th>
<th>SP50</th>
<th>1 week</th>
<th>2 week</th>
<th>3 week</th>
<th>4 week</th>
<th>5 week</th>
<th>6 week</th>
<th>7 week</th>
<th>8 week</th>
<th>3 month</th>
<th>6 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thursday</td>
<td>9/6/2012</td>
<td>81.34</td>
<td>2012</td>
<td>1432.12</td>
<td>1.9%</td>
<td>2.0%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>0.1%</td>
<td>1.8%</td>
<td>-1.3%</td>
<td>-0.3%</td>
<td>-0.3%</td>
<td>7.6%</td>
</tr>
<tr>
<td>2</td>
<td>Tuesday</td>
<td>1/15/2013</td>
<td>80.59</td>
<td>2013</td>
<td>1472.34</td>
<td>1.4%</td>
<td>2.4%</td>
<td>2.6%</td>
<td>3.2%</td>
<td>4.0%</td>
<td>1.7%</td>
<td>4.6%</td>
<td>5.4%</td>
<td>5.4%</td>
<td>14.3%</td>
</tr>
<tr>
<td>3</td>
<td>Monday</td>
<td>5/20/2013</td>
<td>80.21</td>
<td>2013</td>
<td>1666.29</td>
<td>-1.0%</td>
<td>-1.6%</td>
<td>-1.4%</td>
<td>-1.6%</td>
<td>-5.6%</td>
<td>-3.5%</td>
<td>-1.6%</td>
<td>1.0%</td>
<td>-0.8%</td>
<td>6.9%</td>
</tr>
<tr>
<td>4</td>
<td>Tuesday</td>
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<td>82.37</td>
<td>2013</td>
<td>1665.96</td>
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<td>0.5%</td>
<td>-2.0%</td>
<td>-3.3%</td>
<td>-2.7%</td>
<td>-0.1%</td>
<td>1.1%</td>
<td>0.7%</td>
<td>4.6%</td>
<td>6.4%</td>
</tr>
<tr>
<td>5</td>
<td>Wednesday</td>
<td>3/12/2014</td>
<td>80.02</td>
<td>2014</td>
<td>1866.2</td>
<td>-0.4%</td>
<td>-0.8%</td>
<td>1.2%</td>
<td>0.2%</td>
<td>-0.3%</td>
<td>0.4%</td>
<td>0.8%</td>
<td>0.5%</td>
<td>3.3%</td>
<td>6.3%</td>
</tr>
<tr>
<td>6</td>
<td>Tuesday</td>
<td>3/18/2014</td>
<td>80.53</td>
<td>2014</td>
<td>1872.25</td>
<td>-0.4%</td>
<td>0.7%</td>
<td>-1.1%</td>
<td>-1.6%</td>
<td>0.4%</td>
<td>0.3%</td>
<td>-0.2%</td>
<td>1.3%</td>
<td>4.5%</td>
<td>7.4%</td>
</tr>
<tr>
<td>7</td>
<td>Thursday</td>
<td>6/20/2014</td>
<td>80.45</td>
<td>2014</td>
<td>1962.87</td>
<td>-0.1%</td>
<td>1.1%</td>
<td>0.2%</td>
<td>0.8%</td>
<td>0.8%</td>
<td>-1.9%</td>
<td>-1.6%</td>
<td>-0.4%</td>
<td>2.4%</td>
<td>5.5%</td>
</tr>
<tr>
<td>8</td>
<td>Monday</td>
<td>11/24/2014</td>
<td>80.72</td>
<td>2014</td>
<td>2069.41</td>
<td>-0.8%</td>
<td>-0.4%</td>
<td>-5.9%</td>
<td>0.4%</td>
<td>1.0%</td>
<td>-2.4%</td>
<td>-2.0%</td>
<td>-2.4%</td>
<td>2.2%</td>
<td>2.7%</td>
</tr>
<tr>
<td>9</td>
<td>Friday</td>
<td>3/18/2016</td>
<td>81.57</td>
<td>2016</td>
<td>2049.58</td>
<td>-0.7%</td>
<td>-1.1%</td>
<td>-0.1%</td>
<td>1.5%</td>
<td>2.0%</td>
<td>0.8%</td>
<td>0.4%</td>
<td>-0.1%</td>
<td>1.1%</td>
<td>4.4%</td>
</tr>
<tr>
<td>10</td>
<td>Tuesday</td>
<td>7/26/2016</td>
<td>80.47</td>
<td>2016</td>
<td>2169.18</td>
<td>-0.6%</td>
<td>0.6%</td>
<td>0.4%</td>
<td>0.8%</td>
<td>0.3%</td>
<td>0.8%</td>
<td>-1.9%</td>
<td>-1.4%</td>
<td>-1.4%</td>
<td>5.9%</td>
</tr>
<tr>
<td>11</td>
<td>Tuesday</td>
<td>2/1/2017</td>
<td>80.10</td>
<td>2017</td>
<td>2365.38</td>
<td>-0.1%</td>
<td>0.3%</td>
<td>0.0%</td>
<td>-0.9%</td>
<td>-0.3%</td>
<td>-0.2%</td>
<td>-0.5%</td>
<td>-1.0%</td>
<td>0.7%</td>
<td>2.7%</td>
</tr>
<tr>
<td>12</td>
<td>Wednesday</td>
<td>9/26/2017</td>
<td>81.60</td>
<td>2017</td>
<td>2137.54</td>
<td>-0.5%</td>
<td>-5.5%</td>
<td>-4.3%</td>
<td>-4.8%</td>
<td>-4.4%</td>
<td>-3.9%</td>
<td>-3.1%</td>
<td>-4.4%</td>
<td>-7.2%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>13</td>
<td>Thursday</td>
<td>7/1/2019</td>
<td>81.00</td>
<td>2019</td>
<td>2706.05</td>
<td>1.5%</td>
<td>2.5%</td>
<td>2.9%</td>
<td>1.6%</td>
<td>3.8%</td>
<td>5.5%</td>
<td>4.0%</td>
<td>6.4%</td>
<td>6.6%</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

Source: Mapsignals, FactSet

The bottom line is this: when the market becomes overbought, the average returns three to seven weeks later are negative. The market rebounds about two months later and chugs along its bull cycle.

Let’s look at this another way to hammer the point home. This next chart shows Big Money buying slowing down. The green and red bars show net buying to selling. For example, if we saw 100 Big Money buy signals and 40 Big Money sells, we would get a net of 60 buys. That’s represented by a green bar below with a value of 60.

In short: When buying picks up, markets rise (the green arrows). When buying dries up, markets soon fall (red arrows).
This makes sense. Big money moving in and out of markets logically has an impact. When the BMI (Big Money Index) falls, it means buying is slowing. Money is coming out of the market.

We can observe this on a sector level as well. Here is an example of the Health Care sector looking at that same velocity of Big Money: When you get a crossover, a shift from red to green, markets tend to zoom. Logically, buying is picking up: accelerating. As money floods in, prices rise.

We can measure sectors as overbought or oversold as well. The following charts show Health about to take a pause and pull back. The level of buying has become unsustainable and the sector is now overbought. The light blue line shows the ratio of buying over a 25-day moving average. When it peaks above 11.7, the red line, Health Care is overbought. We expect a correction sometime thereafter.

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So where are we now?

Stock buying has been **huge** recently. Here’s a table of all signals for the second week of December 2019. Nine of the 11 sectors saw buying in more than 25% of the universe. Meaning, if a sector has 100 stocks, at least 25 stocks made buy signals during the week. The yellow boxes are when more than 25% of the universe logged buys.

<table>
<thead>
<tr>
<th>SECTOR RANKINGS</th>
<th>MAP 1400</th>
<th>UI SIGNALS</th>
<th>%BUY</th>
<th>%SELL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MAP SCORE (AVG)</td>
<td>STOCKS</td>
<td>BUYING</td>
<td>SELLING</td>
</tr>
<tr>
<td>Information Technology</td>
<td>66.17</td>
<td>182</td>
<td>69</td>
<td>12</td>
</tr>
<tr>
<td>Industrials</td>
<td>62.22</td>
<td>146</td>
<td>57</td>
<td>12</td>
</tr>
<tr>
<td>Financials</td>
<td>62.21</td>
<td>176</td>
<td>81</td>
<td>7</td>
</tr>
<tr>
<td>Consumer Discretionary</td>
<td>60.17</td>
<td>146</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>Materials</td>
<td>59.88</td>
<td>78</td>
<td>37</td>
<td>3</td>
</tr>
<tr>
<td>Health Care</td>
<td>59.86</td>
<td>176</td>
<td>86</td>
<td>3</td>
</tr>
<tr>
<td>Consumer Staples</td>
<td>58.38</td>
<td>100</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>Real Estate</td>
<td>55.88</td>
<td>103</td>
<td>16</td>
<td>51</td>
</tr>
<tr>
<td>Utilities</td>
<td>54.90</td>
<td>44</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Telecommunication Services</td>
<td>53.12</td>
<td>26</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Energy</td>
<td>51.27</td>
<td>80</td>
<td>25</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Mapsignals

Buying is great, it moves markets higher. That’s what we all want. But too much buying is like a party getting out of control. The cops eventually show up.

When they do, we would expect the market to come back to earth a little bit. Our data indicates a pullback is near. It’s important that you know this: I don’t think a crash is coming. I think it will correct - or revert to the mean a bit. This is necessary and healthy to resume its broader bull market path. If you ask me how far along are we in the bull market, we’re closer to the end than the start. That said, just because a baseball game is supposed to be 9 innings, doesn’t mean they don’t go to extra innings. Some games have lasted days...

So, if the market pullback is close, I’m sure you want to know: *When is it coming and how bad will it be?*

I think the answer is in the buying habits of big money. Recently, ETF buying has been off the charts. We saw an **immense** number of buy signals during a recent two-day stretch: 73 and 53 respectively. Let’s put those numbers into context: going back to January 1, 2010 (about 2,500 trading days), the daily average ETF buy signal count is 6.5. So, we’re talking about 10 times the average buying. Yeah- *that* big.

We wanted to know what this means for stocks in the coming weeks. We went back and looked at similar instances of ETF big money buying. We looked at days of over 60 buy signals and found seven out of 2,500. It’s a rare thing but it almost happened twice on consecutive days.

So, when monstrous ETF buying happens, what comes next? The following table shows us a sell-off will likely follow. The averages of the events suggest the near-term market high will come within five trading sessions for an average +1.92% gain.
<table>
<thead>
<tr>
<th>Date</th>
<th>ETF Buy</th>
<th>Days to High</th>
<th>Peak Gains</th>
<th>Days to Low</th>
<th>Peak Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/4/2010</td>
<td>65</td>
<td>2</td>
<td>1.91%</td>
<td>14</td>
<td>-7.28%</td>
</tr>
<tr>
<td>9/13/2012</td>
<td>75</td>
<td>1</td>
<td>0.44%</td>
<td>43</td>
<td>-6.93%</td>
</tr>
<tr>
<td>9/14/2012</td>
<td>72</td>
<td>0</td>
<td>0.00%</td>
<td>42</td>
<td>-7.35%</td>
</tr>
<tr>
<td>3/1/2017</td>
<td>61</td>
<td>0</td>
<td>0.00%</td>
<td>32</td>
<td>-2.79%</td>
</tr>
<tr>
<td>1/4/2018</td>
<td>72</td>
<td>15</td>
<td>5.51%</td>
<td>24</td>
<td>-5.15%</td>
</tr>
<tr>
<td>1/12/2018</td>
<td>80</td>
<td>9</td>
<td>3.12%</td>
<td>18</td>
<td>-7.30%</td>
</tr>
<tr>
<td>1/17/2018</td>
<td>66</td>
<td>7</td>
<td>2.49%</td>
<td>16</td>
<td>-7.86%</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>70.1</td>
<td>4.9</td>
<td>1.92%</td>
<td>27.0</td>
<td>-6.38%</td>
</tr>
<tr>
<td>12/12/2019</td>
<td>73</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

Source: Mapsignals

**S&P 500 vs. ETF UI Signals**

Markets fall after huge ETF buying.

Source: Mapsignals

**S&P 500 vs. ETF UI Signals**

Markets rise with light ETF selling, and fall when it spikes.

Source: Mapsignals
The downside, however, will likely be more than three times larger. The average loss from days of extreme ETF buying is -6.38%. And we could expect it to come within the next 27 trading days from extreme buying.

The data indicates a market sell-off starting potentially in the second half of January. That allows for the “January Effect” of new money being deployed in the market typically the first days of the year. Note: in the table above, the fewest number of trading days to the low was 14. That translates to about three calendar weeks.

When our data shows a market overbought, you can generally set your watches to it that a pullback or cooldown period is around the corner.

**What that means for investors:** Don’t add risk now. Look to take profits or lighten positions in trades you feel are mature. Long term core longs should remain in place as the data indicates a pullback is near, not the end of the bull market.

**CONCLUSION**

The market currently is:
- Trading with lower volume
- Big Money activity is slowing
- Overbought
- ETF buying is high

These conditions indicate a pullback for the market is near. But long-term we expect higher markets. Data over thirty years backs this up.

Will FOMO fuel the next leg of a melt-up? Has the melt-up really started? Fundamentals are strong and risk-on is the current environment. Let the volumes show us the path for what’s to come. Near term we expect some turbulence, but mid- to long-term we expect a nice ride higher...

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