MATRIX
PRIVATE CAPITAL GROUP

MATRIX PRIVATE CAPITAL GROUP

Thematic Investing: A Systematic Approach to Finding Disruptive Trends

April 2021

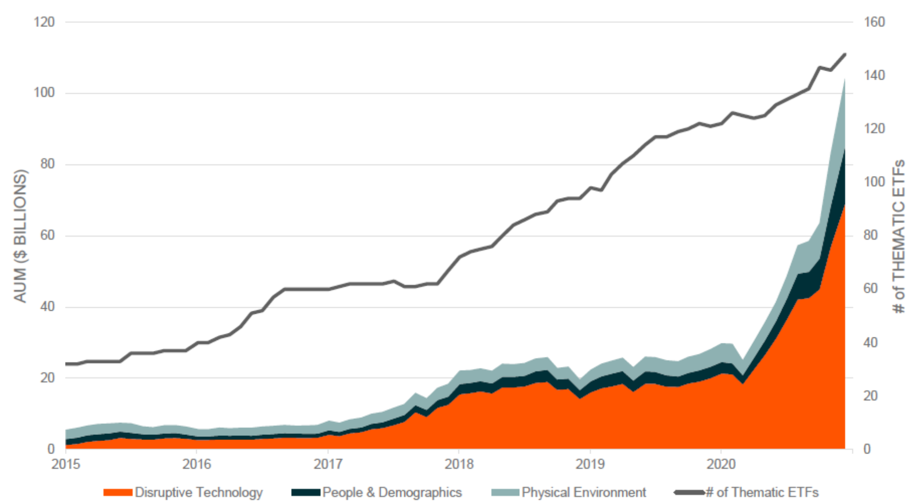
Ing-Chea Ang
Director of Quantitative Research and Investments
iang@matrixpcg.com

Story-Based Investing

The popularity of thematic investing, which takes a top-down approach to finding long-term, disruptive investments, has exploded over the past few years. The allure is obvious – themes are easily understandable, great at capturing the imagination and allow investors to potentially profit from profound trends that may affect our world. Correspondingly, thematic funds, specifically ETFs, have also grown rapidly. According to Mirae Asset, by the fourth quarter of 2020, there were 148 thematic ETFs totaling $104.1B in assets under management - up 78% from the third quarter alone[1]. The growth is nothing short of astounding as asset managers mint a myriad of new products ranging from broad themes like clean energy to narrower subindustries like solar and self-driving cars.

Within the U.S. market, most thematic ETFs are equity-focused and are broadly clustered in areas like technology, demographics and the environment. They can be broadened to encompass values-based ideas (e.g., sustainable investing) and usually cut across sectors and styles. These fuzzy definitions can sometimes create challenges for the end investor. Nevertheless, we still believe that these ETFs represent a nice innovation by allowing investors to express macro ideas through baskets of stocks rather than individual companies, because they contain less idiosyncratic risks. However, like any innovation, it hardly comes without challenges.

Display 1: Thematic ETF Universe Has Ballooned



Source: Global X ETFs, Bloomberg. As of December 31, 2020. AUM includes assets of funds closed until the last month of trading activity

New York (HQ)
400 Park Avenue, 6th Floor
New York, NY 10022

Chicago
311 W. Monroe Street, Suite 304
Chicago, IL 60606

Los Angeles
10250 Constellation Boulevard
Los Angeles, CA 90067

Palm Beach
101 Northpoint Parkway
West Palm Beach, FL 33407

212.254.4876
Investments@matrixpcg.com
matrixpcg.com

1. Source: Global X, Q4 2020, "Global Thematic Report - Fourth Quarter 2020", Mirae Asset

Deceptively Easy, but Challenges Abound

Reaping the rich rewards of thematic investing, however, is easier said than done. According to Morningstar, global thematic funds launched between January 1996 and July 2018 underperformed the MSCI ACWI Investable Market Index by 3.3% annually over the first two years of their lives. Now, it would be fine if most of these losses were made up in later years. But history shows that about 50% of funds will not survive past the fifth year and only 15% make it to their fifteenth anniversary[2]. In fact, of all the U.S. thematic funds available in June 2020, only 45% had more than $50 million in assets under management, meaning most have not taken off[3].

Why is thematic investing so difficult? One possibility is that investors are usually late to the game. As many ETF launches correspond with strong performances in their respective markets, investors tend to buy at the peak and sell as the market is deflating. Secondly, the funds might not appropriately reflect their stated themes, i.e., you can choose the right macro idea but not capture excess returns because of poor implementation. This is particularly true in narrow markets that might prevent 'pure plays' and are implemented via a basket of stocks that are only peripherally involved in the desired segment. Lastly, many of these funds come with higher expenses than your broad market indices, with the average above 60bps[2]. All else equal, higher fees mean lower returns.

More broadly, we believe many of the challenges can be traced back to the behavioral biases that this investing style triggers among investors (such as overconfidence, short-termism, confirmation bias), which leads to poor investment decision-making. We believe the appeal of this strategy - that it is story-based, is also its primary weakness. As any serious investor would know, a good story does not guarantee good returns, but often, this is a lesson learned the hard way. As such, any good approach to thematic investing should make allowances for the investors' propensity to make mistakes.

Risk Management and Asset Allocation

Returns aside, we also have the issue of risk and how to allocate to these funds within a strategic allocation. Thematic ETFs typically have exposures that extend beyond U.S. large caps and can contain material bias towards smaller capitalization stocks and non-U.S. equities. As such, they often have higher risks than the broad market. To mitigate this issue, a common approach for the buy-and-hold investor is to invest a small amount in a satellite portfolio of themes over the longer-term, and ride out the bumps along the way. Another approach, for the shorter-term investor, is to use these ETFs tactically and try to time the entries and exits.

Both approaches sound reasonable in theory, but the implementation is harder, if not impossible, for many. For example, for the market timer, how does one know when to get in or get out? For the long-term investor, how does one size risk appropriately within a strategic allocation? When investing in multiple thematic ETFs, how do we avoid unwanted concentration risks because of holdings overlap? As one can see, the problems get thorny pretty quickly.

New York (HQ)
400 Park Avenue, 6th Floor
New York, NY 10022

Chicago
311 W. Monroe Street, Suite 304
Chicago, IL 60606

Los Angeles
10250 Constellation Boulevard
Los Angeles, CA 90067

Palm Beach
101 Northpoint Parkway
West Palm Beach, FL 33407

212.254.4876
Investments@matrixpcg.com
matrixpcg.com

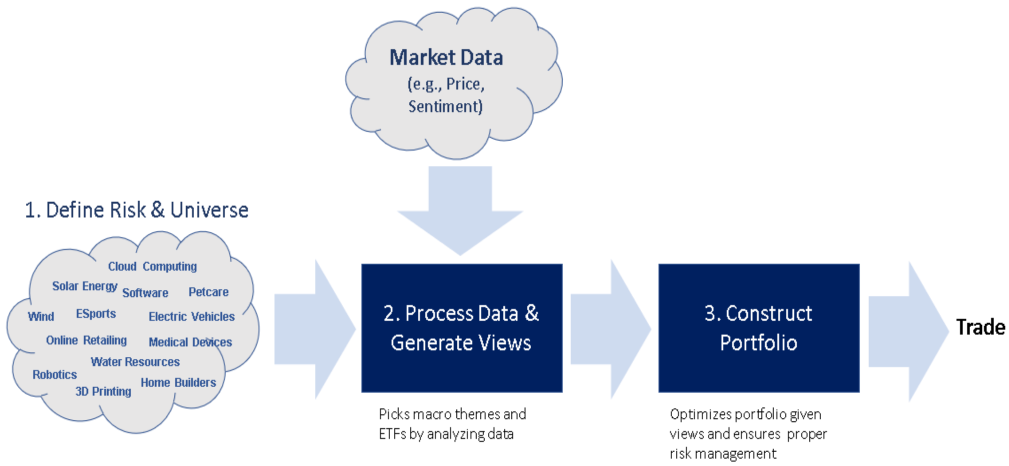
MATRIX
PRIVATE CAPITAL GROUP

2. Ben Johnson, Kenneth Lamont, Dan Sotiroff, February 2020, "Global Thematic Funds Landscape", Morningstar
3. Daniel Sotiroff, January 2021, "High Burnout Rate for Thematic Funds", Morningstar

A Better Approach: Let the Data Speak

What if there was a strategy that helps us circumvent these issues? We believe there is one, and it involves the use of computer systems to evaluate themes in an objective manner, thus removing the noise that affects our decision-making. Additionally, it also assumes the hard work of constructing portfolios that are commensurate with our desired risk constraints. This process can be summarized in three steps.

Display 2: A Systematic Approach for Evaluating Themes



Source: Author

1. **Define Risk and Universe:** Our process begins with determining the amount of risk we are willing to take and the universe of themes we can trade. Because different themes contain varying levels of volatilities and can be highly correlated, this step allows us to define, in a loose way, the kind of losses we are willing to assume. Here, we define our benchmark to be the S&P 500, simply because it is a well-known index that represents U.S. stocks.

For our tradeable universe, we want ETFs that are large and liquid to limit trading slippages and avoid fund closures. Additionally, we want to focus on narrower themes to minimize holdings and sector overlaps. For example, instead of choosing the clean energy ETF, we would rather choose a solar and wind ETF to represent the individual segments. This allows the data to dictate where the opportunities are rather than to impose beforehand where the opportunities should be. All else equal, we also want funds with lower expenses and longer track records.

2. **Process Data and Generate Views:** Once we have a universe, we can then define our security selection criteria. Obviously, for anyone who believes in thematic investing, riding long-term trends is a major component of the strategy. Our philosophy expands on that idea but incorporates shorter-term considerations to help avoid the bumps that inevitably come along the way. To that end, we build our strategy around the concept of momentum – a well-researched market anomaly that shows that asset prices tend to follow recent performances. Said differently, securities that have been appreciating tend to continue rising, possibly because investors underreact to news or exhibit herd behavior[4]. An advantage of using this strategy is that by allowing the market to validate the themes first, we hope to avoid being too early.

4. Narasimhan Jegadeesh, Sheridan Titman, March 1993, "Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency", The Journal of Finance, Vol. 48, No. 1. pp. 65-91.

New York (HQ)
400 Park Avenue, 6th Floor
New York, NY 10022

Chicago
311 W. Monroe Street, Suite 304
Chicago, IL 60606

Los Angeles
10250 Constellation Boulevard
Los Angeles, CA 90067

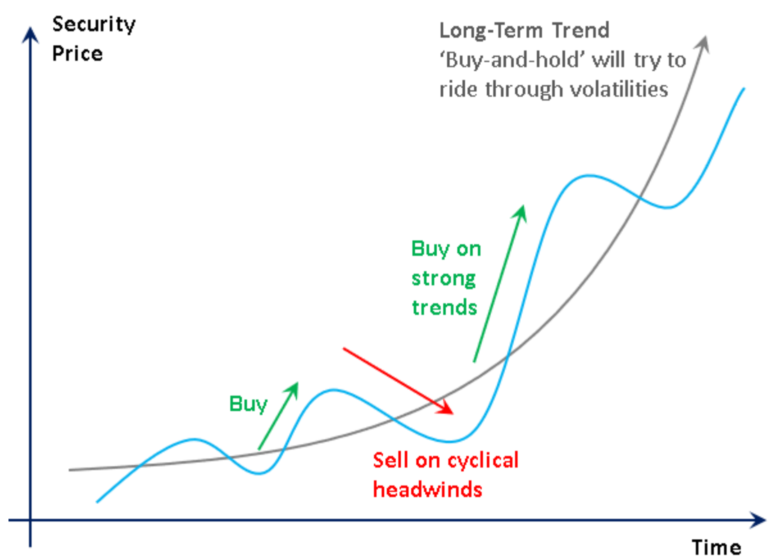
Palm Beach
101 Northpoint Parkway
West Palm Beach, FL 33407

212.254.4876
Investments@matrixpcg.com
matrixpcg.com

MATRIX
PRIVATE CAPITAL GROUP

But momentum alone is not sufficient – trends can suffer short-term breaks and we want to smooth the ride out. To that end, we employ additional indicators, e.g. macroeconomic and sentiment data to help us along. The goal is to find themes with strong secular trends but with cyclical tailwinds, so that we avoid taking undesired risks. We do all this by exploiting the processing power of computers to crunch through the data for us. And like any software, we seek to improve the process over time by including additional indicators that can help the portfolio generate better risk-adjusted returns.

Display 3: Illustrative Security Selection Philosophy



Source: Author

3. Construct Portfolio: The final step of our process is to create a portfolio that fits within the many constraints we imposed at the outset. For example, we know our portfolio should have risk levels commensurate with the S&P 500, themes should have concentration limits, and characteristics like turnover and expenses should be limited. It would certainly be a task for any individual to manage all these considerations, but the program can easily manage.

The result is a diversified portfolio of themes with hundreds of stocks, that tracks the S&P 500 but with an active risk budget[5]. The active risk parameter is important because it not only limits the potential underperformance of the portfolio relative to the S&P 500, but prevents the strategy from being a closet indexer. Now of course, a process like this might seem terribly stoic compared to the traditional story-based approach. But without a crystal ball, we would rather let the data speak.

New York (HQ)
400 Park Avenue, 6th Floor
New York, NY 10022

Chicago
311 W. Monroe Street, Suite 304
Chicago, IL 60606

Los Angeles
10250 Constellation Boulevard
Los Angeles, CA 90067

Palm Beach
101 Northpoint Parkway
West Palm Beach, FL 33407

212.254.4876
Investments@matrixpcg.com
matrixpcg.com

MATRIX
PRIVATE CAPITAL GROUP

5. The active risk budget lets us specify how far we want to deviate from the benchmark. It is calculated using a measure called tracking error, which estimates the standard deviation of the portfolio's excess returns relative to the benchmark.

'We Are Our Own Worst Enemy'

With this, we have largely answered all the thorny questions on security selection, risk and portfolio construction. We have reduced this portfolio of 'passive' funds that track different benchmarks to an active equity strategy that tracks the S&P 500. As such, the sizing of this strategy within a broader strategic allocation now depends on the level of active risk one is willing to take, the conviction in the strategy and how this strategy correlates with the rest of your portfolio – its 'top-down' nature might offer some diversification to more 'bottom-up' managers.

Just as importantly (if not more), we now have a solution to one of the biggest hurdles to generating excess returns: Ourselves. Research has shown that investors can underperform passive benchmarks by up to 4% annually[6]. If true, that far exceeds the excess returns most active strategies tend to deliver! Why? As discussed above, our cognitive biases most often result in poor investment decision-making. We believe thematic investing is a particularly dangerous area because of the saliency of themes and ease of access: it's hard to ignore constant news about a 'hot' asset or be impervious to the prospects of easy gains during a financial bubble. For many investors who will be engaging in these ETFs anyway, mitigating costly errors is a concern that almost no one is thinking about, but should be.

New York (HQ)
400 Park Avenue, 6th Floor
New York, NY 10022

Chicago
311 W. Monroe Street, Suite 304
Chicago, IL 60606

Los Angeles
10250 Constellation Boulevard
Los Angeles, CA 90067

Palm Beach
101 Northpoint Parkway
West Palm Beach, FL 33407

212.254.4876
Investments@matrixpcg.com
matrixpcg.com

MATRIX PRIVATE CAPITAL GROUP

6. Murray Coleman, May 2020, "Dalbar QAIB: Investors are Still Their Own Worst Enemy", Index Fund Advisors

Disclosures:

Except where otherwise indicated, the information contained in this presentation is based on matters as they exist as of the date of preparation of such material and not as of the date of distribution or any future date. Matrix Private Capital Group assumes no liability for errors and omissions in the information contained herein. This report is for informational purposes only and may not be reproduced or distributed without the prior consent of Matrix Private Capital Group. This material is not financial advice or an offer to sell any product. Nothing herein should be construed as a recommendation to buy or sell any of the securities or sectors represented. The opinions referenced are as of the date of publication and are subject to change without notice. Past performance is no guarantee of future results. Investments involve risk, including loss of principal.

The S&P 500 is a market-capitalization weighted index that includes the 500 most widely held companies chosen with respect to market size, liquidity, and industry. It is not possible to invest directly in an index.

This letter contains certain forward-looking statements, opinions and projections that are based on the assumptions and judgments of Matrix Private Capital Group with respect to, among other things, future economic, competitive and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of Matrix Private Capital Group. Other events which were not considered in formulating such projections, targets or estimates may occur and may significantly affect the returns or performance of any client portfolio managed by Matrix Private Capital Group. Because of the significant uncertainties inherent in these assumptions and judgments, you should not place undue reliance on these forward-looking statements, nor should you regard the inclusion of these statements as a representation by Matrix Private Capital Group that any client portfolio will achieve any certain strategy, objectives or other plans. For the avoidance of doubt, any such forward looking statements, opinions, assumptions and/or judgments made by Matrix Private Capital Group may not prove to be accurate or correct.

Matrix Private Capital Group is an investment adviser registered with the U.S. Securities and Exchange Commission. Registration does not imply a certain level of skill or training. More information about Matrix Private Capital Group including its advisory services and fee schedule can be found in Form ADV Part 2 which is available upon request.

New York (HQ)
400 Park Avenue, 6th Floor
New York, NY 10022

Chicago
311 W. Monroe Street, Suite 304
Chicago, IL 60606

Los Angeles
10250 Constellation Boulevard
Los Angeles, CA 90067

Palm Beach
101 Northpoint Parkway West
Palm Beach, FL 33407

212.254.4876
Investments@matrixpcg.com
matrixpcg.com

MATRIX
PRIVATE CAPITAL GROUP