Ilan Israelstam, BetaShares

Ilan Israelstam is a co-founder of BetaShares, and is responsible for strategy and marketing activities at the firm. As part of his role, Ilan has responsibility for BetaShares product initiatives and broader growth strategy.

Don Hoang, BetaShares

Don Hoang is responsible for the portfolio management function of the business. Don previously worked at Macquarie Bank and has experience in structured investment products and fund administration.

INVESTING IN TOMORROW

Understanding Thematic Investing

Ilan Israelstam and Don Hoang

Introduction

> *"We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run"* – **Roy Amara**

The above quote is now referred to as Amara's 'law' and was coined sometime in the 1960s by Roy Amara, Stanford University computer scientist and long-time head of the Institute for the Future. In current times of technology disruption and ultra-fast adoption cycles, the quote has never been so resonant.

In many respects, the idea behind thematic investing is to capitalise on the latter part of the quote – and can be seen as 'investing in the future'.

The rise and rise of globalisation, driven particularly by digital technology, has accelerated the adoption of emerging megatrends faster than ever before. For a practitioner, therefore, while of course one will always invest in the core asset building blocks such as bonds, domestic and global equities, and cash, there is potentially a strong case to be made to invest in companies and sectors that are poised to benefit from structural changes in the global economy.

What is thematic investing?

> *"Thematic investing is about capitalizing on future trends. Its forward-looking nature stands in clear contrast to the more widely used market capitalization approach [which] assumes that past winners will continue to win out… Why is thematic investing a good idea? In a rapidly changing business environment, the winners will be those that anticipate trends and take advantage of new opportunities."* – **Towers Watson, Thematic Investing, 2012**

Thematic investing is a forward-looking investment approach that capitalises on megatrends and structural changes. Some megatrends are so structurally ingrained in the economy that they are all but certain to occur in time. The impact of climate change, ageing demographics and disruptive innovations can be thought of as a paradigm shift from existing models which has important investment implications.

The investment management industry has established and popularised various investment approaches such as passive, smart beta and factor investing. Thematic investing, while a far newer approach, nonetheless is worthy of consideration. It allows an adviser to position clients' portfolios for a future that may look completely different to anything we are accustomed to.

The quote

Thematic investing is a forward-looking investment approach that capitalises on megatrends and structural changes.

Key differences between thematic investing and other investment approaches

Thematic investing aims to identify companies likely to benefit from certain positive structural changes or 'megatrends' taking place across the economy. It is distinct from smart beta and factor investing, which focus on identifying companies with exposure to certain factors, like price momentum, attractive valuations or high return on equity, and tend to generate above-market returns over market cycles. One downside of this approach is that factors are typically cyclical.

A benefit of forward-looking investment approaches like thematic investing is that the timing of entry and exit points is typically less crucial. Rather the key is to identify the appropriate trend that has signs of permanent **structural change.**

Structural changes are non-reverting disturbances that are primarily driven by innovation. They are permanent changes to the economy. Examples include the agricultural advancements that led to the redundancy of many farmers and, more recently, the emergence of e-commerce, which has fundamentally shifted the way goods and services are sold and purchased.

Why thematic investing

Thematic investing makes good investment sense

Because thematic investing focuses on the bigger picture and invests in trends on a global scale, it can help investors be less exposed to short term economic cycles. On the other hand, this also means that the investor is highly dependent on the trend playing out within the next 10 or so years in order to achieve attractive investment returns. Some investors may therefore want to offset some of this risk by investing in several themes to protect them from trends not materialising or taking longer to be established.

In addition, a thematic approach differs from traditional portfolio construction in that it breaks out from the grid-like method of asset allocation, and therefore has an 'unconstrained approach'. Thematic investing, unlike many other investment styles, typically ignores geographic boundaries, style biases and (subject to liquidity requirements) market capitalisation. Importantly, it also transcends traditional industry sector classifications.

Table 1. Key differences between thematic investing and factor investing

	Thematic investing	Factor investing
Investment focus	Invest in trends: disruptive technologies, sectors, demographic changes	Invest in factors: momentum, value, quality, volatility
Type of change focused on	Structural	Cyclical
Length of investment horizon	Long term view	Short to mid-term view
Timing considerations	Entry and exit timing less important	Entry and exit timing important
Illustrative size of portfolio	Smaller universe of securities	Large universe of securities

This unconstrained approach provides investors with some distinct benefits. Investors are able to look beyond region and sector to identify potentially attractive investment opportunities. And, given thematic investing's agnostic approach to geographies and sectors, it can have low correlations to other portfolio strategies, which can be particularly useful from a diversification perspective.

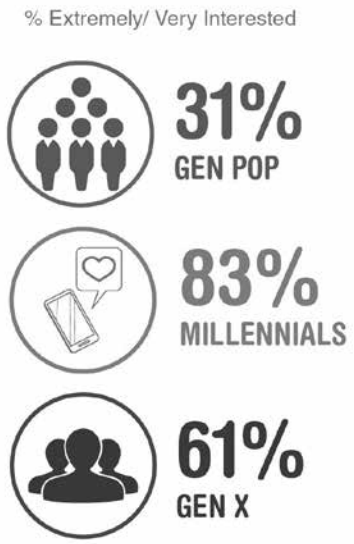
Thematic investing as a client value-add

Many investors today want to see their money do more than just grow over time. Thematic investing represents another avenue that can provide additional benefits beyond the traditional risk and return profiles of indices such as the more traditional MSCI World Index or the S&P 500 Index. One-way thematic investing achieves this is by catering to an investor's philosophy or value by tilting their portfolio towards a specific theme that resonates with them, such as environmental, social, or technology-focused themes.

Therefore, beyond serving merely as a growth play, themes can also be utilised to relate investing to an end-client, as some prefer making allocation decisions based on things they know and can observe. According to respondents in the 2017 Global X study 'Beyond baby boomers: the investable assets of tomorrow survey', 83% of affluent US Millennials expressed that they are extremely interested or very interested in thematic investing as a part of their portfolios. In this way, advisers are able to use thematic investments as a way to attract and relate to a potentially new and lucrative generation of clients.

Figure 1. Responses to Global X Investable Assets Study (2017) - Interest in thematic investing

Q: "How interested are you in thematic investing?"



Source: "Investing in Tomorrow – A Whitepaper on Thematic Investing", Jay Jacobs, Global X.

The current context for thematic investing

Over a product or technology's full lifecycle, the rate of adoption closely mirrors the path of an S-shape curve.

Historically, the adoption rate of technology rose over long periods (as demonstrated in Figure 2 by the path of early inventions such as the telephone, electricity, cars and radio). As new innovation emerges, the rise of digital technology, such as the internet, smart phones and social media, help provide a digital platform that has access to a larger pool of participants, increasing its rate of diffusion. For example, in Figure 2, the adoption rate of the smartphone is nothing short of mind-boggling!

Technological convergence and divergence

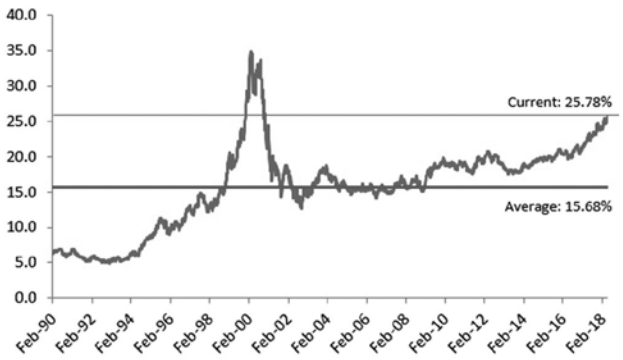
The emergence of new sectors such as fintech (financial services and IT), payment systems (financial services and IT), e-commerce (consumers discretionary/staples and IT) and biotech (health care and IT) are disrupting traditional models. As new sectors are created and materialised, old sectors become reductant and are left behind.

Technology, being the core of most recent innovation, now represents a quarter of the Global Industry Classification Standard (GICS) sectors, 10% above the long-term average and increasing.

Through the lens of thematic investing, technology can be particularly attractive when there is a convergence of two or more existing technologies. Convergence of themes is rare and typically depends on multiple themes simultaneously emerging that provide opportunities for new innovations to rise. Consider the adoption of video calling, which was only made possible by improvements to high definition cameras, reliable internet speed, and data processing.

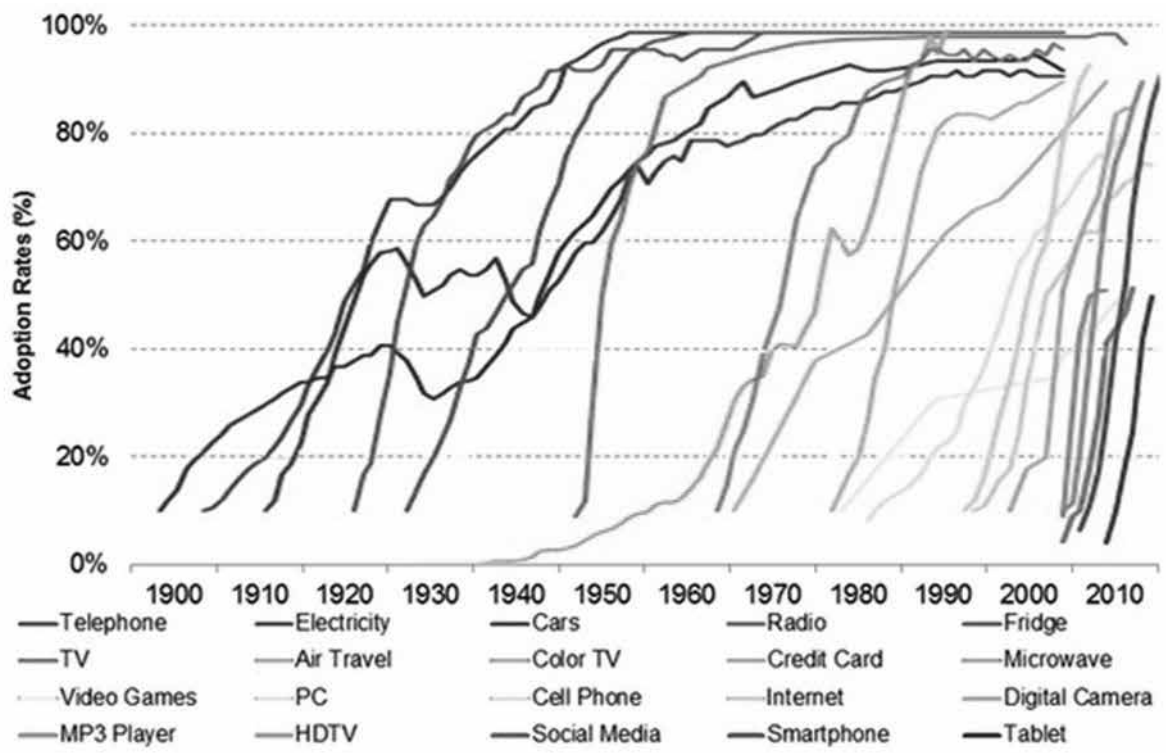
In our view, the most disruptive innovation occurs when two themes come together. This type of innovation typically leads to permanent structural shifts to existing business models, product differentiation and efficiency across multiple business lines. These

Figure 3. S&P 500 Index technology sector weighting: 1990 – Present



Source: Bespoke

Figure 2. Adoption of technology in the US (1900 to present day)



Source: Asymco, BlackRock

technology convergences are rare; however, it provides investors with an attractive opportunity to position themselves to profit from the merging themes.

We believe the recent advancement in core technologies such as semiconductors and processing units have reached a tipping point for existing sectors to fully utilise the tools to innovate outside of their traditional models. The result of these technology advancements suggests that we are witnessing a new era of major disruption to our current ecosystem.

How to position for thematic growth

Relationship between stock price and adoption

One of the dangers many investors often fall victim to when investing for thematic growth is buying into hype. Hype in thematic investing is important to be particularly wary of, given the increasing, and potentially misleading, impact of digital globalisation and social media. The unprecedented reach of these platforms can greatly influence stock prices in the short term despite the technology lacking any material substance.

Moreover, although the relationship between the adoption rate and stock price is typically positive, this can vary significantly throughout a lifecycle. The company's stock price, especially for internet and related technologies, is often speculatively valued by the potential growth in number of future users and the size of the potential market. Their revenues are indirectly accumulated through advertisement or data seeking businesses, and as such, user adoption will vastly out pace earnings.

While the correlation between the adoption rate and stock price is low, the adoption curve can be used as an indicator for potential future profits and the likelihood for the technology to succeed or fail. Understanding the stage at which the technology is currently can substantially hone an investor's ability to evaluate potential risk and return profiles. An earlier adopter is likely to expect higher risk and higher returns, while a late adopter is likely to expect lower risk and lower returns.

For long-term investors, we believe the aim of thematic investing **is to be a relatively early adopter.**

Active vs passive strategies

Active vs passive strategies have long been a major discussion point by those in the investment management industry. Success for some active strategies is usually defined by picking individual winners. However, in our view, given the forward-looking approach of thematic investing, picking individual stock winners is akin to picking the next Roger Federer at a tennis competition.

This view suggests that a passive approach is better suited to the unpredictable nature of thematic investing, so long as the passive basket is suitably concentrated to the thematic. A good passive approach to thematic investing selects companies, usually starting from a global universe, that have direct exposure to the relevant sector or theme. Despite its simple approach, the ability for passive thematic investments to identify themes accurately is not easy. Most companies have many sources of investments and revenue streams. Essentially, an investor seeking exposure to a thematic has a high conviction view, and for those reasons, building a pure-play portfolio has important implications.

Identifying pure-play thematic exposures

A pure-play portfolio refers to a basket of securities that represents a particular theme or a sector without diluting its focus with exposure to other themes or sectors. Conglomerates often have many business lines, such as Amazon and Google, which both have several separate revenue streams.

This diversification compounds the difficulty for ETF issuers to construct a complete pure-play theme. What we have found is that themes or sectors that have existed for longer periods tend to show characteristics that closely resemble a pure-play theme. In contrast, newer and niche themes tend to have portfolios that are less focused.

One method for analysing just how 'pure-play' a prospective thematic exposure is can be done by analysing the correlation of returns to the market (S&P 1200 Technology Index and Nasdaq 100 Index are often used as benchmarks for broad technology). A lower correlation to the market can suggest a strong pure-play thematic, while a high correlation to the market can suggest a lower pure-play themat-

Figure 4. Thematic correlation and holdings overlap

	S&P 1200 Tech	Nasdaq 100	Cybersecurity	Asia Tech Top 50	Robotics and A.I.	Blockchain
S&P 1200 Tech		0.98	0.83	0.67	0.52	0.81
Nasdaq 100	43%		0.82	0.69	0.53	0.81
Cybersecurity	5%	3%		0.63	0.54	0.76
Asia Tech Top 50	5%	1%	0%		0.65	0.77
Robotics and A.I.	3%	2%	0%	0%		0.65
Blockchain	21%	14%	2%	12%	2%	

Correlation (1yr)

Holdings overlap (%)

Source: BetaShares, Bloomberg. Based on data from Oct 17 to Oct 18. Holdings data as at 31 Oct 2018. Technology themes as represented by the following indices: SGI Index, NDX Index, NQCYBR Index, SOLATECN Index, IBOTZNT Index, RSBLCN Index.

ic. It is important to note that thematic exposures are influenced by movements in the broader sector and correlation only, is not enough.

In order to build a more complete picture on how 'pure-play' a thematic is, it is instructive to analyse the holdings overlap against the market. Obviously, the lower the holdings overlap, the better, in this respect. The combination of the two methods is clearly not a perfect indication of a pure-play thematic, however it does suggest its construction has a strong divergence from the broader theme. Assuming the thematic materialises over time, we expect the portfolio to take on its own shape and characteristics more and more.

Table 2 provides one framework that can be used to determine the characteristics that demonstrate the optimal approach to thematic investing, based on conviction, 'investability' and time frame.

Table 2. Potential framework for optimal approach to thematic investing

	Better approach	Worse approach
Conviction	High, due to observable structural changes in demographics, technology, behaviours, or politics/regulations	Limited, due to conjecture and low likelihood of theme materialising
Investability	Broad group of publicly traded companies with high liquidity, that provide targeted exposure to the theme	Narrow group of companies with low liquidity, and only tangential exposure to the theme
Time frame	Medium to long term, making market timing less of a factor	Shorter term, placing greater importance on timing

Source: Global X.

Implementation of thematic investing using ETFs

As the industry matures, ETFs are increasingly providing a broad range of highly cost effective and transparent exposures. As more and more ETFs are created and come to market, investors have increasing options to express their views on the economy through a single trade represented by dozens of companies around the globe. ETFs providing pure-play thematic exposures are now available.

Many investors are already familiar with the inherent advantages of ETFs, including the typically lower costs of index-based investment strategies compared to actively managed funds, along with tax efficiency and transparency. Within the context of thematic investing these advantages still play a large role. An additional key benefit to using thematic ETFs is the ability to access dozens of companies around the world with a single trade. Traditionally, thematic investing has been limited to more sophisticated institutional investors due to the research required to pinpoint companies with high exposure to a theme and the need to access a variety of international markets for themes that are global in nature. Thematic ETFs aim to track indexes that take care of the security selection part of the process and can provide access to a broad set of companies around the world with exposure to a particular theme.

Conclusion

In a world that is constantly and rapidly evolving at an unprecedented pace, thematic investing may at first seem like a speculative bet. However, as this paper sets out, we believe that thematic investing offers a compelling opportunity for high conviction investors to express their views and capitalise on emerging megatrends. Quite literally, a way to invest in the future. **FS**

Table 3. Relevant ETFs

ASX code	Name	Thematic
NDQ	BetaShares Nasdaq 100 ETF	Global disruptive technology
ASIA	BetaShares Asian technology tigers ETF	Asian disruptive technology
RBTZ	BetaShares global robotics and artificial intelligence ETF	Leaders in global robotics and artificial intelligence
HACK	BetaShares global cybersecurity ETF	Leaders in global cybersecurity industry