Lazard
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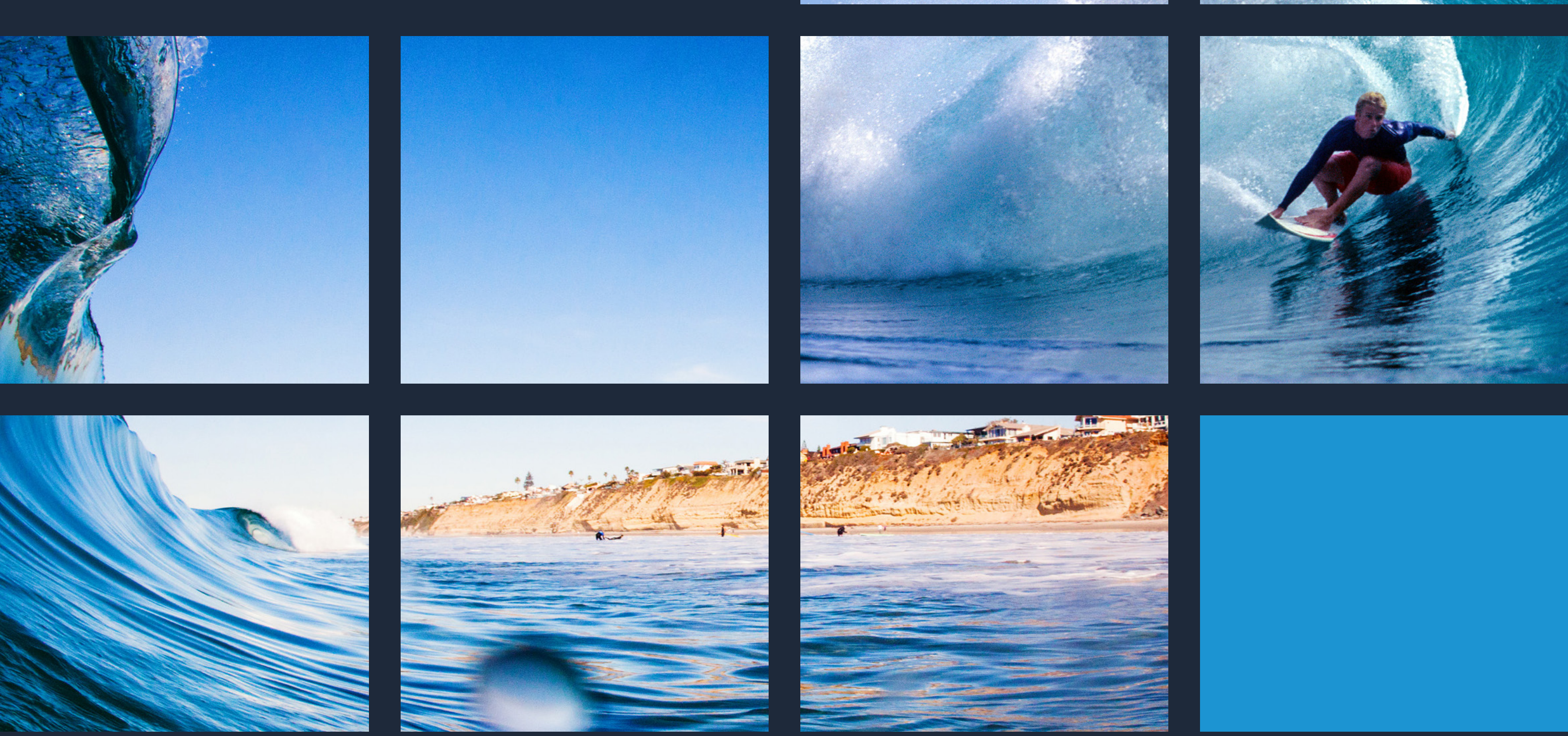

Capturing Structural Change

A Guide to Thematic Investing

How can investors capture the most important opportunities of the next decade? Thematic investing places structural change at the heart of a long-term equity portfolio and, in our view, can enhance returns, mitigate risks, and enable sustainability integration. It is time to change how we think about equity portfolio construction and focus on what matters—the big waves of structural change.

LAZARD
ASSET MANAGEMENT

Executive Summary

A century ago, noted investor and trader Jesse Livermore observed that "the big swings make the big money,"[1] and today his observations on markets and psychology are as relevant as ever. Our world is undergoing waves of structural change that will recalibrate the definition of business as usual. Yet, how do investors capture these changes and turn them into positive investment outcomes?

To paraphrase Livermore, we must face forward, have conviction, and have patience. We believe that benchmark-centric approaches—backward-looking, risk-averse, and short-term—are an impediment to all three of these objectives. Since they are weighted by market capitalization, benchmarks encode an extrapolation of yesterday into tomorrow. Benchmarks effectively embed a fundamental framing bias about what is possible or likely in the future—namely, that change from present conditions will be incremental. However, we believe that truly transformative shifts tend to unfold at a non-linear pace, surprising markets in terms of both size and duration. Yet these structural changes—the most important fundamental driver of long-term investments—are de-emphasized in a benchmark-centric approach.

Instead, a thematic approach to investment places these waves of structural change at the heart of an equity portfolio. As we will show, organizing a portfolio around investment themes offers benefits in terms of return maximization, risk mitigation, and sustainability integration. In aggregate, a portfolio combining a number of themes can transform the inherent uncertainty of timing structural change into a differentiated return stream for long-term investors.

But what really *is* a theme? When many people think of investment themes, they think of fairly abstract, undifferentiated, top-down concepts such as "innovation" or "demographics." These may make for appealing narratives, but more often than not, they fail to translate into a genuine return opportunity. Distinguishing genuine structural drivers from noise is a non-trivial exercise—we share our experience of distinguishing investing from storytelling.

We believe that the significant benefits of thematic investing can only be realized if implementation is robust. We have identified many key implementation errors over the years–and indeed have made a few of our own—and observe that many of these errors are still in evidence today across the industry, with potentially negative consequences for unwitting investors. In this paper we provide our views on some key thematic implementation issues, with more detail in our companion white paper "The Seven Sins of Thematic Investing: Common Implementation Mistakes in Long-Term Equity Strategies."

At a minimum, investors can use an appropriately constructed thematic equity portfolio to diversify their equity allocation alongside more traditional approaches. However, the principles and concepts discussed herein are equally relevant to other asset classes. In conclusion, we believe that a robustly implemented thematic approach offers the means to truly capture the big waves of structural change and access the best investment opportunities of the next decade.

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Introduction

A century ago, noted investor and trader Jesse Livermore observed that "the big swings make the big money," and today his observations on markets and psychology are as relevant as ever. Our world is undergoing waves of structural change that will recalibrate the definition of business as usual. Yet, how do investors capture these changes and turn them into positive investment outcomes?

To paraphrase Livermore, we must face forward, have conviction, and have patience. We believe that benchmark-centric approaches—backward-looking, risk-averse, and short-term—are an impediment to all three of these objectives. Instead, a thematic approach to investment places these waves of structural change at the heart of an equity portfolio.

Contrary to popular misconception, structural change can occur in a variety of different ways and is not limited merely to shifts in companies' growth prospects or disruptive forces. In this paper, we outline many intersecting and non-linear structural changes that can materially transform the inherent value of securities over the long term.

As we will show, organizing a portfolio around investment themes can offer benefits in terms of return maximization, risk mitigation, and sustainability integration. In aggregate, a portfolio combining a number of themes can transform the inherent uncertainty of timing structural change into a differentiated return stream for long-term investors, capture the big waves of structural change, and provide access to the best investment opportunities of the next decade.

> We define structural change as transformational shifts … and we believe that the majority of an equity's value is derived from understanding these shifts over the long term.

Establishing the Right Anchor

In our experience, the majority of equity investors are seeking the same thing: differentiated long-term returns, sensible risk management, and increasingly, the integration of sustainability considerations into investment decisions (Exhibit 1). Yet many equity strategies fail to meet one or more of these objectives. We believe this is because of a framing problem—the majority of portfolios are fundamentally anchored to the wrong thing.

Most equity strategies, and indeed, most of the asset management industry, use benchmarks based on geography, sector, and style as anchors for building portfolios and measuring performance. We believe the tool is ill-suited to these tasks. Since they are weighted by market capitalization, benchmarks encode an extrapolation of yesterday into tomorrow. We do not believe that the past is a good indicator of future returns, and it therefore follows that we see benchmarks as an arbitrary and suboptimal starting point for building long-term portfolios and measuring returns.

Exhibit 1
The Three Objectives of (Almost) Every Investor

For illustrative purposes only.
Source: Lazard

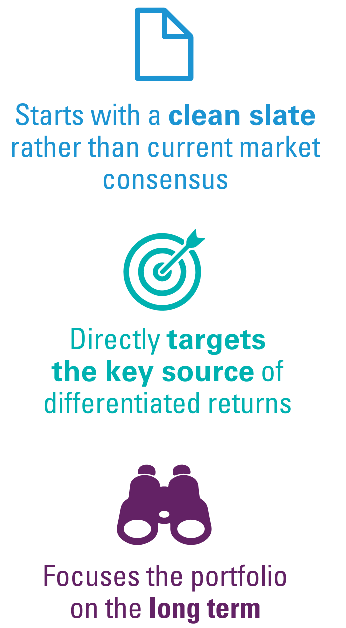
Asset allocators tend to consider the same set of questions: Should I allocate more to my home country as a means of reducing risk, or is domestic bias actually a greater risk to my portfolio? Are the large spreads in performance between sectors indicative of structural trends or imminent mean reversion? Should I allocate to high growth stocks at potentially stretched valuations after a long period of outperformance? Should I add to value stocks even if that means holding stocks with high financial leverage or challenged industry dynamics?

All of these are reasonable questions, but they all assume that an investor's ultimate purpose is to turn certain dials up or down in relation to a particular baseline—a benchmark—to achieve an acceptable level of relative returns. They all embed a fundamental framing bias about what is possible or likely in the future—namely, that change from present conditions will likely be incremental. Such an approach does not target structural change.

Instead, we believe that equity investors should place structural change at the heart of both their portfolios and processes (Exhibit 2). We define structural change as transformational shifts in business models, industries, economies, markets, regulation, and societal norms, and we believe that the majority of an equity's value is derived from understanding these shifts over the long term. The evaluation of these shifts and their expression in a portfolio represents a discipline unto itself and is the core of our thematic investment approach.

Replacing benchmarks with structural change as an anchor also allows us to reimagine investment specialization in a way that we believe better suits today's tightly integrated, fast-changing global

Exhibit 2
Benefits of Anchoring to Structural Change Instead of Benchmarks



For illustrative purposes only.
Source: Lazard

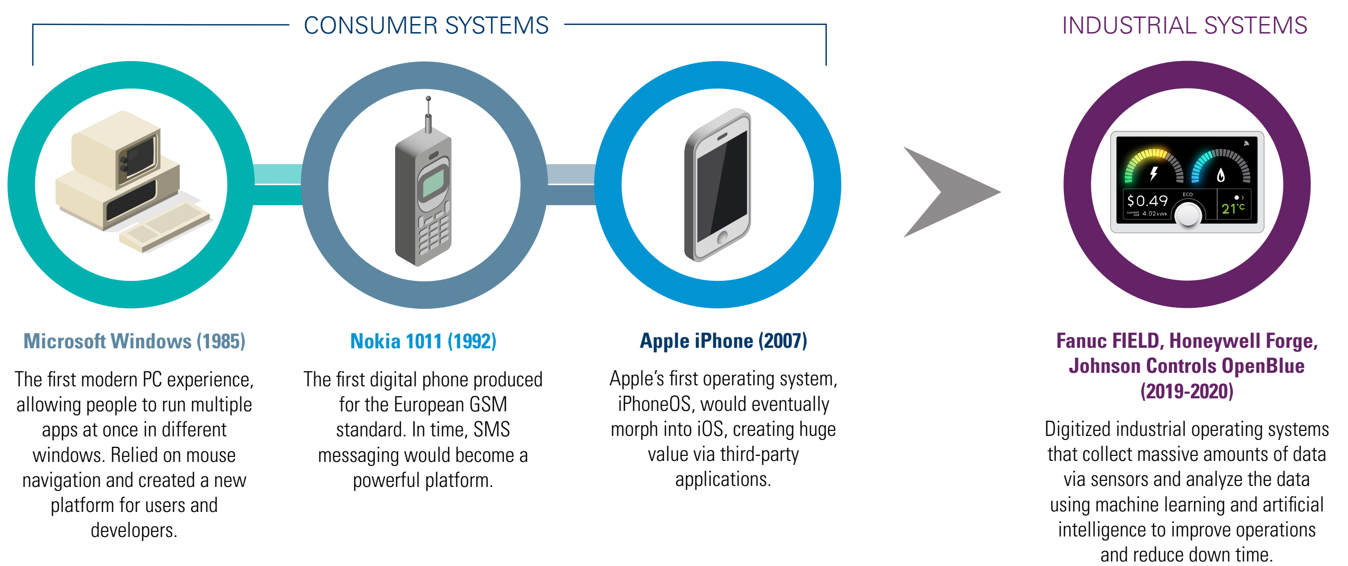
economy. Many asset allocators and managers tend to divide the world into geographic regions and allocate money to regional specialists, yet in the modern world this appears to be an anachronism. Given the global nature of both companies and investors today, a geographic approach precludes the possibility of valuable cross-regional investment insights. Sector specialization makes more sense, given the depth of background knowledge required to understand the nuances of an industry, but it also reduces the potential for cross-sectoral observations. Finally, the division of investment skill into specialization by style, notably growth versus value, remains in our view an arbitrary distinction in that all investors must surely seek to understand both these aspects of any investment.

The ultimate goal of the division of labor should be to improve proficiency in the area that adds the most value. Yet in terms of understanding structural change, the industry often leaves geographic or sector specialists reinventing the wheel, seeking to understand their specific examples of structural change without the benefit of broader context.

- Technology platforms in Asia are leaping forward—what lessons are there for Western companies?
- Analysts in the more conservative, long-cycle industrial sector may only now be tackling problems that those in the fast-moving consumer sector have been grappling with for years—how can that knowledge be shared?
- How can investors assess the potential of disruptors against the advantages of incumbents?

Structural change tends to cut across industries, styles, and geography, blurring the boundaries between them and creating a high degree of commonality among the challenges facing companies today (Exhibit 3).

Exhibit 3
How Smarter Operating Systems in Computers and Smartphones Presaged the Industrial Internet



Computing and communications have evolved more quickly in the short-cycle consumer technology industry. Yet similar structural changes are now appearing in other long-cycle sectors, such as industrial systems.

For illustrative purposes only.
Source: Lazard

Finally, in terms of sustainability integration, the asset management industry is in the throes of a debate about how best to account for environmental, social, and governance (ESG) issues and, in doing so, is recreating many of the limitations of benchmark-centric approaches. In particular, we believe the backward-facing nature of data used in forming benchmarks is ill-suited to a dynamic world in which the approach of a company or an entire industry to ESG and sustainability considerations can evolve rapidly. Placing structural change at the heart of a long-term portfolio compels investors to weigh ESG factors, which are a potent source of change at the political and societal level, just as they do more traditional financial variables. It is the "delta"—where we are going—that matters, whether we are looking for financial returns, sustainability goals, or some combination of the two.

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Is Structural Change Just Growth?

That the world will be different in fundamental ways a decade from now is hardly a surprising idea. Positioning to capitalize on structural change is a trickier proposition. Investors may suspect that it isn't even really possible—that strategies that claim to orient toward structural change, or thematic strategies, are merely growth strategies in disguise. We agree that this may be true of many "thematic" strategies, but we believe a truly thematic approach is *not* limited to compounding growth. A complete approach to thematic investing should include all stages of a company's life cycle (Exhibit 4). It is also true that positive structural changes may result in higher growth in terms of unit sales, pricing power, or both—compounding is a powerful force and a relevant component of many investment themes. But structural change comes in many additional forms as well, such as shifts in industry structure, regulation and policy change, shifts in behavioral and societal norms, among others (Exhibit 5).

Thematic investing is also not synonymous with or limited to investing in early-stage disruptive businesses, where attractive narratives often obscure high failure rates. Such an approach also underappreciates the ability of mature companies to evolve in response to structural challenges and opportunities. A complete view of structural change, in our view, should consider the entire adoption curve and companies in all parts of their life cycles.

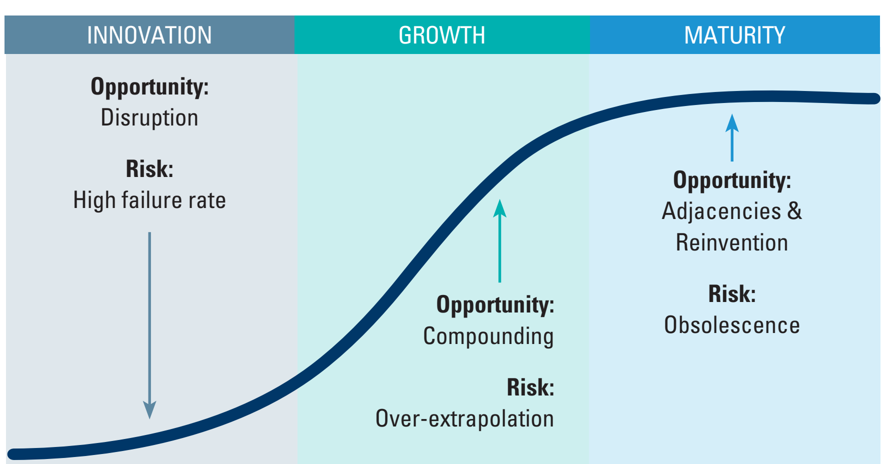
In addition, portfolios managed with structural change at their core part ways with many benchmark-centric portfolios on the subject of mean reversion. Many benchmarked portfolios are managed under the assumption that underperforming geographies, sectors, and investment styles will eventually outperform. However, we believe that truly transformational shifts tend to unfold at a non-linear pace, surprising markets in terms of both size and duration. History is replete with companies that have been unable to adapt to structural change, with disastrous consequences for investors. A true thematic strategy is well placed to evaluate whether an optically cheap, underperforming company has the potential for meaningful recovery, or whether it is a value trap due to structural considerations.

Capturing Structural Change via Equities

Many equity investors are focused on the short term—indeed, a technological arms race is underway in short-term trading

Exhibit 4

A Complete Approach to Thematic Investing Should Include All Stages of a Company's Life Cycle



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Source: Lazard

Exhibit 5
Structural Change Comes in Many Forms

Structural change	Description	Return opportunity	Financial expression
Compounding growth	Volume growth and pricing power support returns that are higher for longer ("beat the fade").	Reinvestment at sustained high returns applied over increased duration.	Market assigns higher multiple based on compounding attributes.
Disruption	Non-linear shift in demand, supply, or both driven by innovation in technology or business model.	Revenue driven by new adoption curve. Barriers to entry determine profitability.	Creation of new future profit pool, possibly cannibalizing incumbents.
Industry structure	Shifting competitive advantages between outsourced/vertically integrated models and supply chain constituents.	Shifts in relative pricing power, operating leverage, or both may drive structural change in which economic rent is accrued. Geopolitical and regulation risk may be impacted.	Structural shift in growth, margin, or perceived risk profile.
Pricing models	Shifts in industry pricing models and conventions.	Transition from cost-plus to market-price model, or unit to bundled (e.g., subscription or project) pricing enables shifts in value capture	Price setters typically valued higher than price takers. Bundled pricing models can capture adjacent revenues and reduce risk.
Risk transfers	Changes in business model can substantially shift the balance of opportunity and risk between customer and supplier.	Shift from product to service model typically transfers returns and risks to supplier.	Improvement or deterioration in growth expectations, margins, return expectations, cyclicality, or cost of capital.
Capital intensity	Relative cost of labor and capital may drive structural change in capital intensity.	Replacement of capital for labor (or vice versa) can materially shift economic rent accrual between factors of production.	Improvements in returns for a given level of capital.
Competition	Industry consolidation, competition, new entrants, and potential substitutes may drive structural change in industry returns.	Industry profit pools are generally supported by oligopolistic characteristics. Monopolistic tendencies and disruptive competitors are risks.	Pricing power, scale advantages, higher margins and returns
Policy / Regulation	Changes in the presence, structure, and goals of regulation may drive structural changes in permitted returns and perceived industry stability.	Non-linear change in assessment of return sustainability.	Pricing of externalities can materially change cost-of-capital and return expectations.
Behavioral shifts/ Societal norms	Shifts in societal norms may drive structural changes in perceived industry opportunities and risks.	Dramatic reassessment of demand forecasts, mitigating costs, or both.	Structural shift in return expectations. Possible concern about continuing viability of business.
Relative scarcity	Stores of value may become increasingly valuable in certain macro scenarios.	Intrinsic scarcity premium can shift over time based on, for example, perceived pricing power.	Repricing of scarce assets as stores of value.

Source: Lazard

and investing, as investors search for ways to be a fraction of a second faster or a hair more efficient than their competitors. Enormous sums are being invested across financial markets to obtain an advantage via new data sources and methods of analysis, including artificial intelligence. The predictable result is that it is becoming increasingly difficult for any investor to have an edge over any other in forecasting near-term financials, yet this is where the majority of investors deploy their efforts.

We disagree with the premise that equities are inherently short-term vehicles and view them instead as an excellent way to harness long-term structural change. Equities have a theoretically perpetual duration, and in fact, we believe that the majority of the value of an equity is derived from the long term—our strategies focus on the next decade. Structural changes that impact long-term metrics can therefore lead to dramatic shifts in the value of equities for an investor with a longer time horizon.

An additional consideration is that algorithmic approaches have less of an edge when analyzing structural changes which, particularly in the early stages, can be hard to identify and measure. Structural change therefore not only represents an opportunity for return enhancement and risk mitigation for long-term equity investors—but additionally it is a genuine area of investment advantage for humans over machines.

Themes and Return Generation

For most equity investment strategies, a benchmark provides an initial anchor for populating a portfolio. Thematic approaches replace this anchor with themes. But what really is a theme? When many people think of investment themes, they think of fairly abstract, undifferentiated, top-down concepts such as "innovation" or "demographics." These may make for appealing narratives, but

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more often than not, they fail to capture in any meaningful way the real competitive landscape, pricing dynamics, or regulatory environment, let alone anticipate exactly how technological disruption or shifts in societal norms will affect how stakeholders share economic gains.

For example, consider investing in the solar energy industry during a prior period of peak optimism, around 2007. After an initial boom in demand due to European subsidies, supply exploded in China, structurally driving down investment returns (Exhibit 6). The "theme" played out—solar became a significant industry—but this was of little solace to investors seduced by the simplistic investment proposition that solar would be a success. This was not an investment theme, it was storytelling, or as we would call it, a narrative fallacy.[2]

True investment themes capture significant, long-term structural changes that have the potential to drive materially higher investment returns than the market is currently discounting and can directly contribute to our core objectives of return maximization, risk mitigation, and sustainability integration. Distinguishing genuine structural drivers from noise is a non-trivial exercise that we believe is best implemented by an experienced team of specialists supported by industry experts.

Creating a theme is not as simple as identifying a single source of structural change and screening companies for exposure to that change. In fact, we believe that various structural changes often occur concurrently. At any time companies may be subject to one or more drivers of structural change, each representing a unique opportunity for long-term value capture. Thus, our themes tend to encompass multiple drivers of structural change. Lazard's Global Thematic team designs proprietary themes that precisely target the return opportunity comprising a number of structural changes, rather than a familiar but potentially incomplete narrative. Theme construction requires a scalpel, not a sledgehammer.

History has shown that the market will eventually start to appreciate the sweeping nature of the structural forces driving a theme, at which point, equity valuations are likely to reset higher or lower depending on whether a company is positively or negatively exposed to the change. As illustrated in the Sidebar ("Smart Capex: A Live Thematic Example," see page 10), structural changes can have a very material impact on company valuations and equity prices once they are appreciated.

One benefit of long-term investing, however, is that, unlike a short-term investment thesis, it is not necessary to identify a specific catalyst for this market realization, provided there is reason to believe that it will occur within our investment time horizon. Structural change is often non-linear: Adoption curves can be unexpectedly steep, network effects can be exponential, exogenous shocks can act as catalysts. One need not know exactly when and how structural change will occur, only that it is likely to happen. The inherent uncertainty of thematic equity investing is precisely why a theme can produce a differentiated return stream—it is a feature, not a bug. Structural change may be accelerating even as macro events are pulling down the overall market, a lesson investors will be familiar with in the wake of the COVID-19 pandemic. Structural change also proceeds whether or not certain styles or factors fall out of favor with investors.

The independence of thematic performance from more closely tracked market events may also increase conviction, an underappreciated behavioral aspect of investing. Everyone

Exhibit 6

Solar Investment: A Narrative Fallacy

Cumulative Investment Return (Rolling 10-year, %)

As of 26 February 2021

The performance quoted represents past performance. Past performance does not guarantee future results.

Source: JP Morgan, Bloomberg Finance L.P. Index includes Solarworld, SMA Solar and SunPower.

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knows they should aim to buy low and sell high, but a continual flood of news and price signals can severely test the resolve of even the most disciplined investor. Knowing that this information has little to do with long-term structural change, investors may be more likely to have conviction in the thesis and allocate capital at what in the long run will prove to be attractive entry points, such as short-term, cyclically driven moves or adverse idiosyncratic events. The ability to rebalance among different themes when attractive entry points present themselves represents an additional potential source of alpha.

Genuinely long-term structural investment theses are rare, and if one is identified it makes sense to attempt to exploit it as widely as possible by searching globally and across sectors for places where the thesis might apply. An insight into a business model shift in the US may be highly relevant to that of similar European companies; technological developments in the consumer sector may give advance warning of potential changes in the healthcare industry; and so on. A portfolio unconstrained by geography or sector can maximize the value of these insights.

Themes and Risk Mitigation

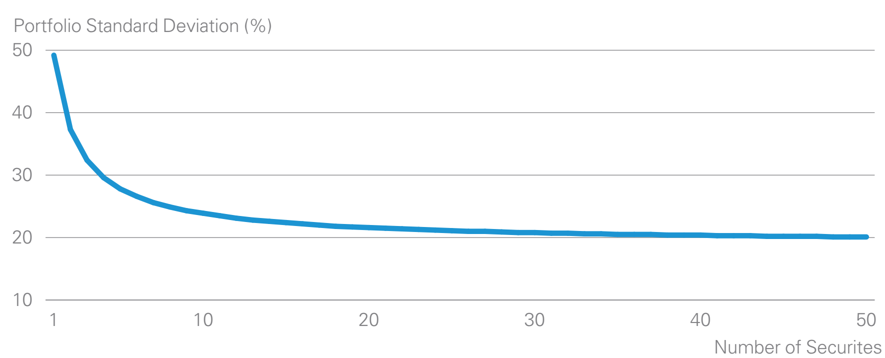
While long-term structural drivers can explain a significant proportion of long-term valuation, every individual stock within a theme will have idiosyncratic factors that can influence its performance in both the short term and long term. Expressing an idea about structural change as a theme rather than a single stock can mitigate these company-specific risks.

The short-term risk for investors picking stocks instead of themes is that volatility around near-term idiosyncratic factors could be difficult to handle in a concentrated portfolio. Individual companies, even those with solid long-term fundamentals, may undergo negative events such as cyclical challenges or exogenous shocks. *The expression of the structural thesis through a basket of related stocks may diversify away some of this short-term volatility and reduce the risk of a manager being forced to reduce positions in order to manage volatility.*

Perhaps more critically, the long-term risk for non-thematic investors is that idiosyncratic factors could ultimately outweigh the benefits of the structural thesis. For example, competitive dynamics change over time, and picking the ultimate winner in an industry can be challenging. Idiosyncratic factors can be long term and unpredictable in nature. A product predicted to become a consumer favorite may not, an eagerly anticipated idea may not work out once research and development work is complete, and reputational issues can surface seemingly from out of nowhere, to name just a few idiosyncratic risk outcomes. A basket of companies associated with a given theme allows for the reality that even a solid investment thesis will encounter many unknown unknowns over the long term. Spreading the risk among a select number of companies with similar exposure to structural change drivers can help diversify away idiosyncratic risk, resulting in a purer expression of the thematic thesis.

Portfolio theory can help determine the right number of stocks in a theme. After all, a theme is ultimately a highly focused portfolio. A previous Lazard paper[3] demonstrated that the risk management benefits of diversification are subject to the law of diminishing returns, and that the majority of benefits accrue before the addition of the tenth security (Exhibit 7). Similarly, our experience is that a theme of approximately 10 securities reduces idiosyncratic risk without diluting the thematic insight.

Exhibit 7
Number of Securities and Risk Reduction



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Source: Lazard

SIDEBAR:

SMART CAPEX:
A Live Thematic Example

One of our current themes, Smart Capex, offers an apt illustration of how a thematic thesis around structural change can significantly impact stock valuation.

The idea behind this theme is that the industrial complex is digitizing, connecting, and managing physical assets with a new set of industrial operating systems. These systems offer the potential for significant efficiency gains through the use of sensors, real-time data analysis, and closer integration between customers and suppliers. Efficiency gains mean new profit pools to share between customers and suppliers.

Some of the industrial sector's quirks are relevant for constructing the theme. Product cycles are long, which leads to high switching costs, while domain expertise and direct industry knowledge are key to both developing solutions and winning customers' trust in order to adopt them. As a result, barriers to entry are high, which makes it easier to pick winners, and change, while incremental to start, is likely to be highly durable.

From a fundamental perspective, digitization in a sector with these characteristics can create value in multiple ways for companies. To make the point, we'll track a highly simplified valuation measure, 10-year discounted cash flow (DCF), of a hypothetical firm called Company A, which has certain commonalities with current holdings. The purpose of the example is to make the basic point that changes in long-term forecasts can have a significant impact on valuation. Prices can move significantly as evidence builds to support shifts in long-term expectations. Critically, the terminal multiple and discount rate, even in a relatively long-duration 10-year DCF, are highly significant inputs into a valuation. Since the long term is inherently uncertain, shifts in perception powered by the structural change of a thematic thesis can be powerful in creating value.

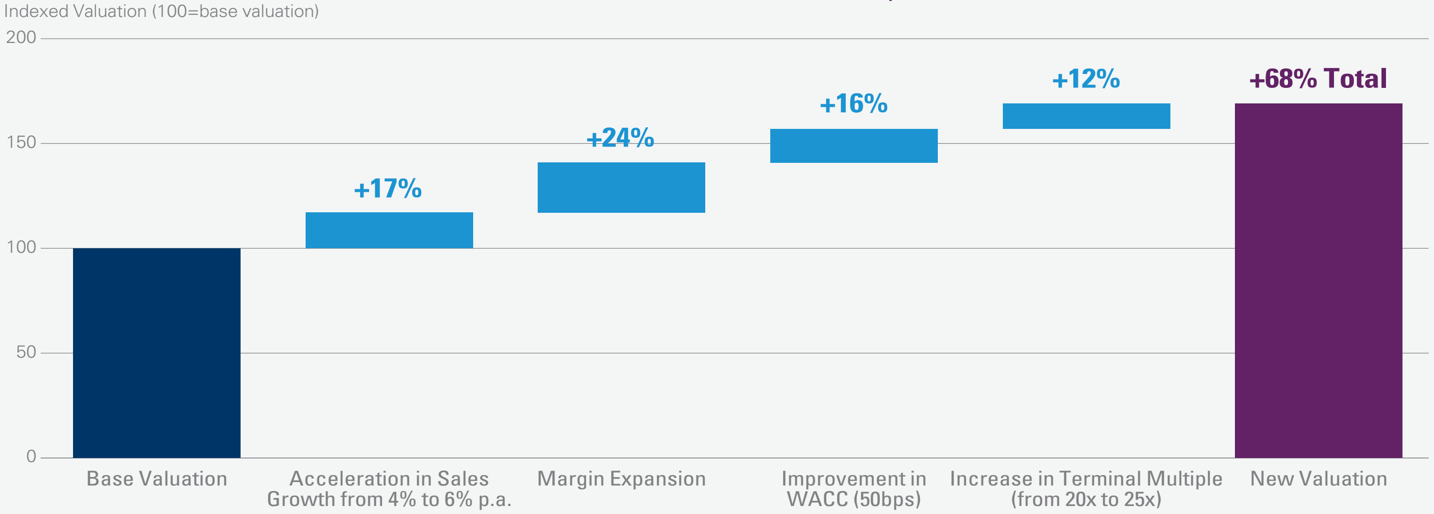
First, there is the potential for increased demand. A step forward in technology has the potential to accelerate the growth of the entire market. The efficiency gains enabled by this theme also align with sustainability objectives, which also raises the prospect of regulatory support, which in turn may further increase growth rates. Leading companies may also be able to take market share through new products and revenue models. Incremental digital offerings are appearing as both new software line items in company P&Ls and a higher share of aftermarket services as new offerings improve efficiency while products are in operation. This has the potential to lead to a structural shift higher in revenue growth. For the purposes of our example, we assume revenue growth accelerates from 4% per annum to 6% per annum over a 10-year horizon, resulting in a 17% increase in the value of our hypothetical company.

Second, new revenues from software and aftermarket services carry higher margins. For the purposes of our example, we assume this mix improvement drives mid-cycle margins from 12% to 15% over the course of a decade, driving a further 24% increase in value.

Third, the relative stability of the new software and service revenues could be perceived as a more secure and stable cash flow stream by the market, giving rise to higher valuations via a lower discount rate and overall cost of capital. A 50-basis-point (bp) reduction in the weighted average cost of capital drives a further 16% increase in value.

Finally, expectations for persistent growth prospects beyond the 10-year DCF may lead to an increase in expectations for terminal multiples and growth. Increasing the terminal multiple from 20x to 25x free cash flow, which is equivalent to a 50-bp increase in terminal growth expectations, drives a further 12% upside for a total increase in value of 68%.

Thematic Value Creation Example



For illustrative purposes only.

Themes and Sustainability

We believe that a properly implemented thematic approach should by definition fully integrate sustainability considerations. Societal norms change over time, whether due to sudden events or subtle shifts, and ideas that once seemed radical or impossibly idealistic become widely accepted. Eventually, these norms become codified into policy by way of regulation and legislation. Both policy changes and an evolution in what society deems acceptable have potentially game-changing implications for a company's long-term fate. One need look no further than the impact of climate change policy on the coal industry for a recent example.

ESG issues are a key determinant of the longevity of investment opportunities and therefore are ultimately linked to confidence in long-term financial forecasts. They are therefore particularly relevant for strategies with long-term time horizons. Indeed, adding ESG and sustainability considerations as further inputs at both the theme and stock level in a portfolio could materially improve potential investment returns and reduce risk. Strategies with long-term time horizons should, by definition, seek sustainable investments.

It seems reasonable to us that any analysis of structural change should incorporate an analysis of non-financial externalities alongside more traditional areas of financial research. All too often, investors hold policy as a comfortable constant until faced with an imminent potential change. We believe that this misses a large opportunity to add value through anticipating likely policy changes over a long-term time horizon. As with other sources of structural change, thematic investing is well suited to the non-linear nature of policy change, as it does not require investors to identify precisely when and how policy shifts will occur. A thematic approach can both capture the potential benefits of structural shifts in policy and seek to avoid the risk of being on the wrong side of history.

> “Strategies with long-term time horizons should, by definition, seek sustainable investments.

We note that there are a number of shifts underway in the world that are often specifically highlighted as sustainability themes. A thematic approach can evaluate the fundamental case for these shifts and whether they represent valid investment ideas in their own right or are merely inputs to the design of other themes. Looking at any structural change in isolation however, including those related to sustainability, provides an incomplete thesis—recall the earlier example of the solar industry in 2007. Rather than seeking out themes built around popular conceptions of sustainability, we seek themes that offer genuine opportunities for investment returns and risk mitigation while fully integrating sustainability considerations.[4]

Putting It All Together—Building a Thematic Portfolio

Having outlined how themes can improve returns, risk, and sustainability objectives, we now consider how themes can be brought together at a portfolio level. Just as we believe there are misconceptions about what thematic investing is, we feel that the process of thematic portfolio construction is often misunderstood. And just as we believe many so-called investment "themes" do not deserve the title, we also feel that many thematic portfolios are constructed without the key ingredient we believe is needed for success: competition for capital across themes.

Our portfolio construction process starts with a major decision: theme selection. Single-theme strategies outsource this most critical investment question to the client and often offer little more than what we previously described as the thematic narrative fallacy, a nice story driven primarily by marketing considerations rather than a robust theory grounded in the potential for long-term returns and subject to rigorous analysis of potential spoilers. We reiterate this critical point—a major part of thematic investing is distinguishing between nice stories and genuine structural investment opportunities.

Thematic specialists spend a great deal of time thinking about theme selection, particularly those who run multi-theme portfolios where the theme line-up can change. Ultimately, we believe that theme selection is a specialized skill. Unless an asset owner has substantial in-house theme selection expertise, we believe theme selection should fall to the portfolio manager and hence we generally advocate for a multi-theme structure that allows the portfolio manager to select the most appropriate themes at any point in time.

The second key point is that long-term investing does not mean buy and hold forever. We believe true investment themes should have a finite lifespan and when fully discounted by the market should either evolve or be eliminated. Evolving themes, however, are more complicated to develop, manage, and market. And the retirement and elimination of single theme strategies, with subsequent dissolution and return of capital to clients, runs counter to asset manager incentives.

One potential solution to this issue for multi-theme managers is to allow themes to evolve over time, mitigating the risk that an investment thesis becomes redundant. This "dynamic" thematic approach requires greater communication and transparency than simple "static" thematic narratives

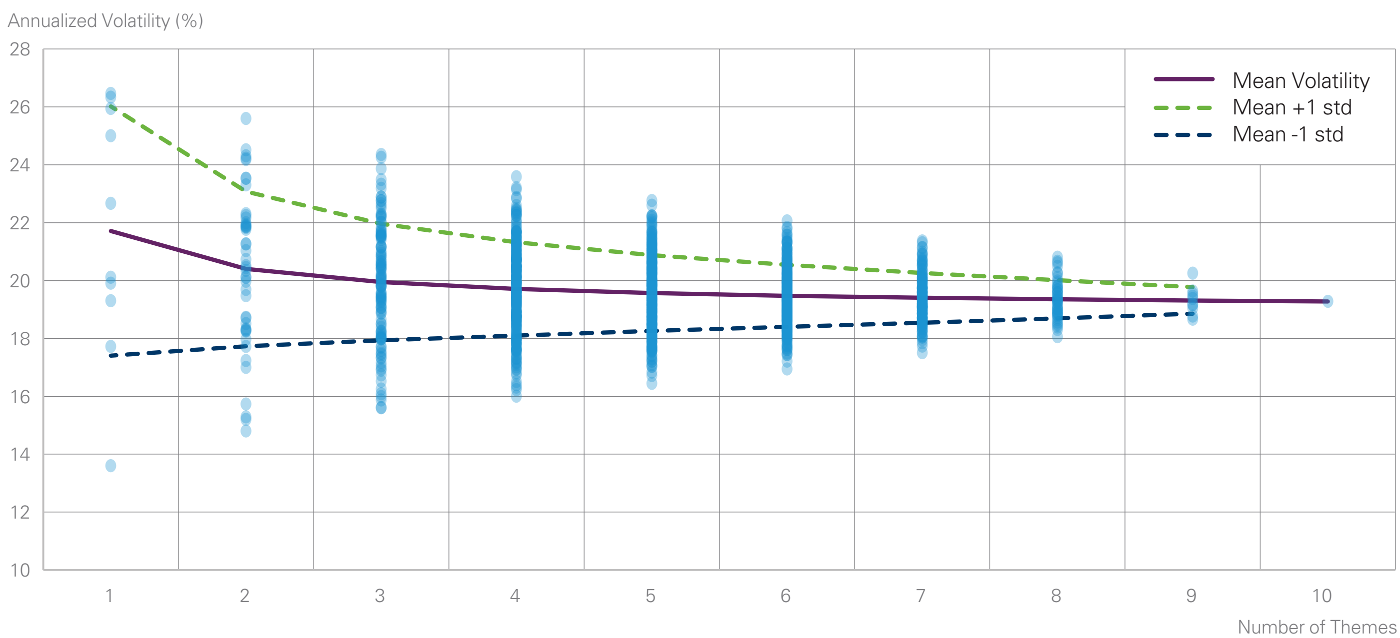
> Many thematic portfolios are constructed without the key ingredient we believe is needed for success: competition for capital across themes.

but solves for the agency problems above and arguably better reflects the inherent dynamism of the capitalist system, a constant force for corporate structural change. Put another way: The world changes incrementally, so why shouldn't investment themes? We often find that our themes become more refined over time as facts emerge and our understanding improves.

A key benefit of a multi-theme portfolio is that it ensures competition for capital across themes. When the retirement of a theme is not an existential crisis for a money manager, but rather an allocation decision, it can be approached more dispassionately. There is every incentive to identify the themes that are truly compelling at any given time and no penalty for an honest assessment that a theme has run its course.

In addition to properly aligning incentives, a multi-theme portfolio offers important diversification benefits. Our analysis suggests that combining around five themes into a portfolio offers the majority of cross-theme diversification benefits in terms of reducing overall portfolio standard deviation (Exhibit 8). Around five themes is the right number for a return-seeking strategy that also seeks to exploit the benefits of diversification, our analysis suggests. Extending the portfolio to around 10 themes can increase the level of certainty around standard deviation outcomes, and we believe it is therefore more suitable for a strategy seeking risk-adjusted returns. Thematic strategies with other objectives are likely to find optimal implementation with some 5–10 themes.

Exhibit 8
Number of Themes and Risk Reduction



As of 30 June 2020
Source: MSCI

> **Placing structural change at the heart of an appropriately constructed long-term equity portfolio immediately faces us forward. Structural change over the next decade may represent a differentiated and valuable source of returns.**

Conclusion

We conclude this paper where we began, by paraphrasing Livermore—we must face forward, have conviction, and have patience. We believe that benchmark-centric approaches–backward-looking, risk-averse and short-term—are an impediment to all three of these objectives. Instead, a portfolio anchored to themes can offer a forward-facing, robust, and long-term alternative.

Placing structural change at the heart of an appropriately constructed long-term equity portfolio immediately faces us forward. Structural change over the next decade will, in our view, represent a differentiated and valuable source of returns. At a minimum, investors can use an appropriately constructed long-term equity portfolio to diversify their asset allocation alongside more traditional approaches.

We believe that a thematic approach to capturing structural change can anchor portfolios to core investor objectives. Return prospects should be improved by themes that capture multiple structural changes. Idiosyncratic risks are mitigated by populating themes with multiple stocks. The natural integration of ESG and sustainability considerations provides additional support and conviction.

We have discussed a number of common thematic portfolio considerations and conclude that, for most investors, a portfolio consisting of multiple, evolving themes, built with the help of both fundamental and quantitative tools, is the most robust approach. Our experience suggests that a portfolio of around five themes should deliver strong, differentiated returns while offering some simple diversification benefits. In keeping with the notion that diversifying exposure to any one set of factors or events can smooth returns, we believe a more diversified portfolio of around 10 themes can reduce the level of uncertainty around return levels. In both cases, competition for capital is the key objective.

We believe that the significant benefits of thematic investing can only be realized if implementation is robust. We have identified many key implementation errors over the years—and indeed have made a few of our own—and observe that many of these errors are still in evidence today across the industry, with potentially negative consequences for unwitting investors. Readers interested in our views on implementation of a thematic strategy are directed to our companion white paper "The Seven Sins of Thematic Investing: Common Implementation Mistakes in Long-Term Equity Strategies."

In conclusion, we believe that a robustly implemented thematic approach offers the means to truly capture the big waves of structural change and access the best investment opportunities of the next decade. Beyond that, the only other prerequisite for both investors and money managers is patience, a topic on which we have nothing to add to this observation from Livermore: “It was never my thinking that made the big money for me. It was always my sitting.”

We appreciate your interest in this paper and in Lazard’s Global Thematic Equity strategies. We believe our strategies offer the possibility of achieving a combination of a strong differentiated return stream, enhanced risk management, and integration of sustainability considerations. At this time of great structural change, we believe our strategies could offer a compelling opportunity for long-term investors willing to consider a thematic approach.

This content represents the views of the author(s), and its conclusions may vary from those held elsewhere within Lazard Asset Management. Lazard is committed to giving our investment professionals the autonomy to develop their own investment views, which are informed by a robust exchange of ideas throughout the firm.

Notes

1 All Jesse Livermore quotes from: Lefevre, Edwin. *Reminiscences of a Stock Operator*. (1923).

2 The term narrative fallacy was used in: Nassim Nicholas Taleb. *Fooled by Randomness*. (2001).

3 Lazard Investment Research. *Less Is More: The Case for Concentrated Portfolios.* As of 12 February 2015.

4 For more on the Lazard Global Thematic team's approach to sustainability please see our paper, "A Sustainability Framework: Societal Shifts as Investment Risks."

Important Information