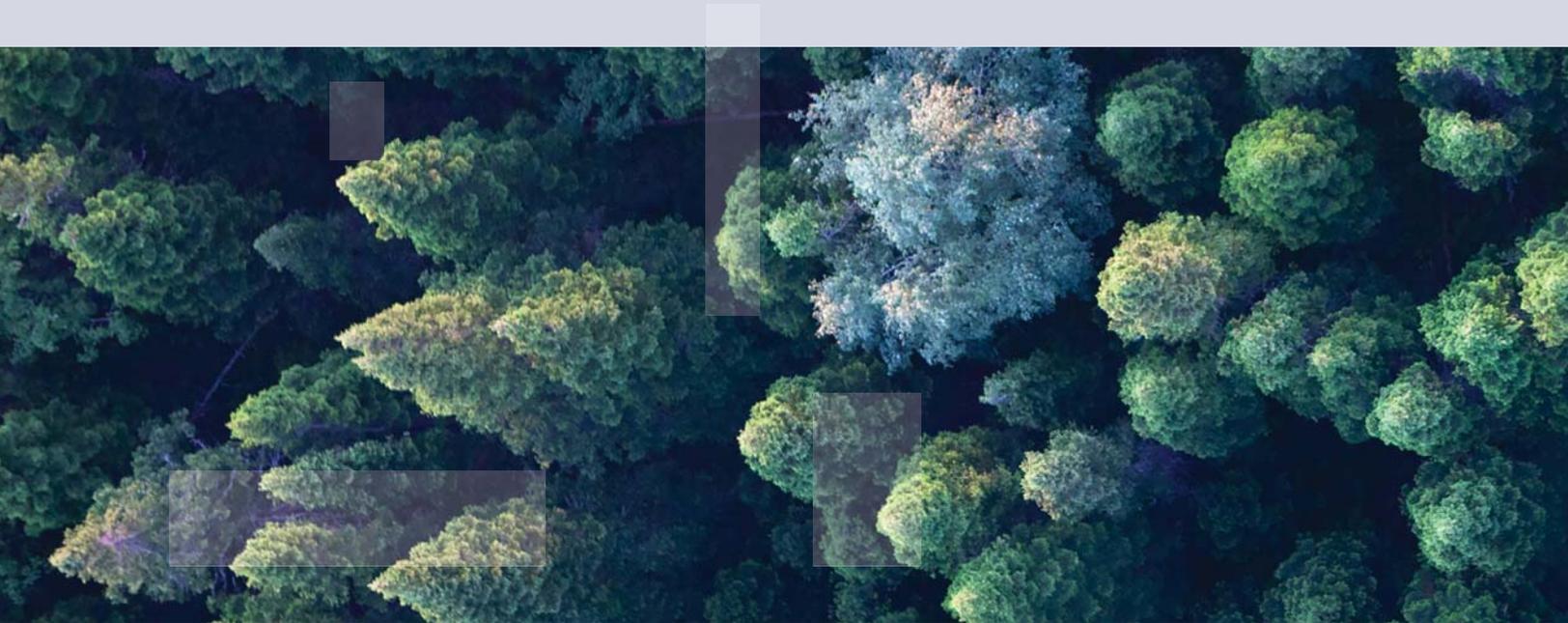


# Incorporating megatrends into portfolio and business planning

By Tom Brooke-Smith



What is a megatrend? Broadly speaking, it's anything that has transformational impacts across society, technology, economies, environment and/or politics (a typical STEEP analysis framework). For us, megatrends also alter the structure of economies, industry and capital markets. Therefore, we believe investors and business leaders should incorporate a megatrend framework into their decision-making process, identifying areas of opportunity and key risks that require hedging.

Any list of megatrends is somewhat subjective in nature, but needs to be finite. Our taxonomy has been developed in concert with the Thinking Ahead Institute members and the PRI Association (PRI). We have tested it through a survey of the investment institutions that make the PRI's signatory list. The framework focuses on five key megatrends with 21 underlying impactful sub-trends. We outline this as follows:

## 1. Technological advances

Technology is everywhere. Despite fears that the “low hanging” advances are behind us, technological progress continues to drive productivity improvements and, at its best, enhances the world's ability to achieve sustainable and inclusive economic growth and development. In terms of sub-trends, we concentrate on five areas of progress: digitization and the Internet of Things; automation and artificial intelligence; fintech; biotechnology and personalized medicine; and cybersecurity and privacy risks.

## 2. Environmental challenges

Our environment impacts all aspects of our activity. We highlight three areas of change over the coming decade. First, the rise of acute environmental events such as hurricanes and typhoons: Data from the National Oceanic and Atmospheric Administration shows that the prevalence of billion-dollar insurance losses (on an inflation adjusted basis) increased by 3.5x from the 80s to the last decade. Secondly, the chronic impact of global warming – heat stress, water



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stress, extreme rainfall and sea-level rise. Finally, a large-scale transition to a low-carbon economy has the potential to mitigate some of the largest impacts of rising global temperatures.

### **3. Globalization and connectivity**

Since 1950, global trade has grown at a faster rate than GDP growth, culminating with China's accession to membership of the World Trade Organization in 2001. We believe that this expansion has reached its peak and trade growth will slow.<sup>1</sup> However, we feel capital market integration and data flows are, and will continue to become more important. Global market integration and the floating of currencies led to an explosion in capital flows between 1990 and 2007. With the opening up of China's capital markets we expect this trend to continue. Finally, we also expect a third globalization/connectivity revolution in data flows.

### **4. Society and demographics**

The material decline in fertility rates and increases in longevity over the past century are well known to investors. When

combined with accelerating societal trends, such as wealth and income inequality and rising public sector debt burdens, demographic shifts have the potential to drive material transformation. We highlight the likely slowing of economic growth, human capital pressures, rise of populism and conflict, changing consumption patterns, savings conundrum and public sector debt burdens as material sub-trends.

### **5. Emerging economy growth and dynamism**

The recent slowing of economic growth could be taken as a sign that the dynamism of emerging market economies is waning. However, we believe concentrating on headline GDP numbers is a mistake. We are long past the point where emerging economy growth supports over half of global economic progress. Led by rapid urbanization, we feel emerging economies will continue to become more influential, with ever-increasing consumer power and expanding corporate competitiveness. Rising geopolitical power will be exerted via new institutions and governance, especially exemplified by China's One Belt, One Road policy.

<sup>1</sup>World Bank national accounts data, and OECD National Accounts data files  
<https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS>

An aerial photograph of a turbulent ocean with white-capped waves. A white rectangular text box is positioned in the lower-left quadrant of the image.

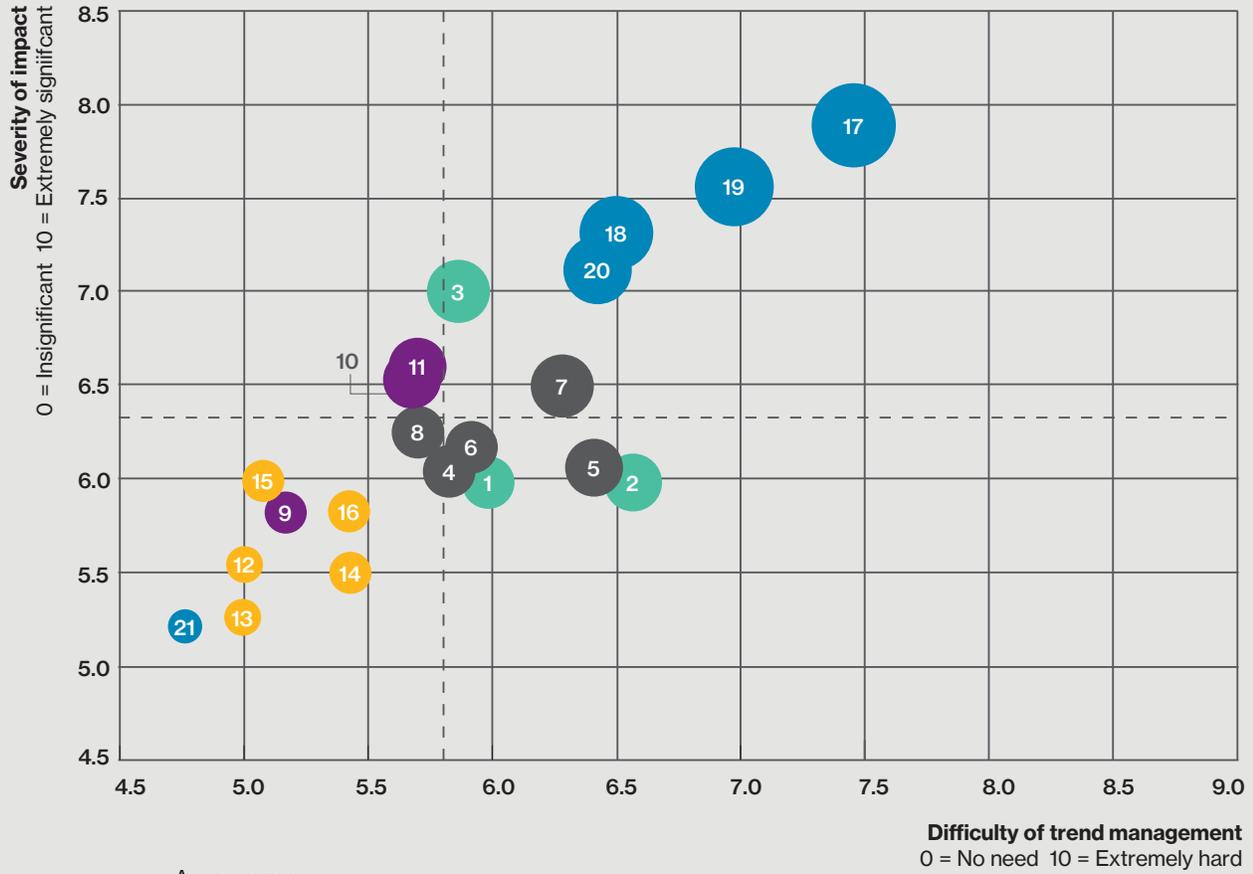
*The difficulty of exploiting the likely premium from long-term investment was cited by survey participants as a critical barrier to megatrend integration.*

### **Understanding the impact of megatrends**

Megatrends matter. More than 80% of respondents to the Willis Towers Watson/PRI survey just released this year agreed that incorporating megatrends into their investment processes was consistent with their beliefs. Moreover, they expect megatrends to exert an accelerating influence on financial and social outcomes over the coming decade.

A good number of investment institutions have developed a set of sustainability beliefs, and some have excluded or selected securities based on their environmental, social and governance (ESG) characteristics. However, integrating megatrend thinking into portfolio management, right down the investment value chain is something we believe has eluded most institutions to date. The difficulty of exploiting the likely premium from long-term investment was cited by survey participants as a critical barrier to megatrend integration. This gets right to the heart of the problem: How can investment institutions create a truly sustainable portfolio, and how can they be sure they have succeeded?

Figure 1. Investment institutions trend index



# Megatrend and composite trend score (/20)

Overall impact of trend: The relative size of the bubbles is representative of the sum of the severity of trend score and difficulty of trend management score.

- Environmental challenges: (13.6)**
1. Chronic
  2. Acute
  3. Transition to low-carbon economy

- Society and demographics: (14.1)**
4. Managing human capital
  5. Inequality, populism and conflict
  6. Savings deficits
  7. Public sector finance pressures and policy responses
  8. Changing consumption preferences

- Globalization and connectivity: (12.8)**
9. Trade in goods and services
  10. Capital flows
  11. Information and communication flows

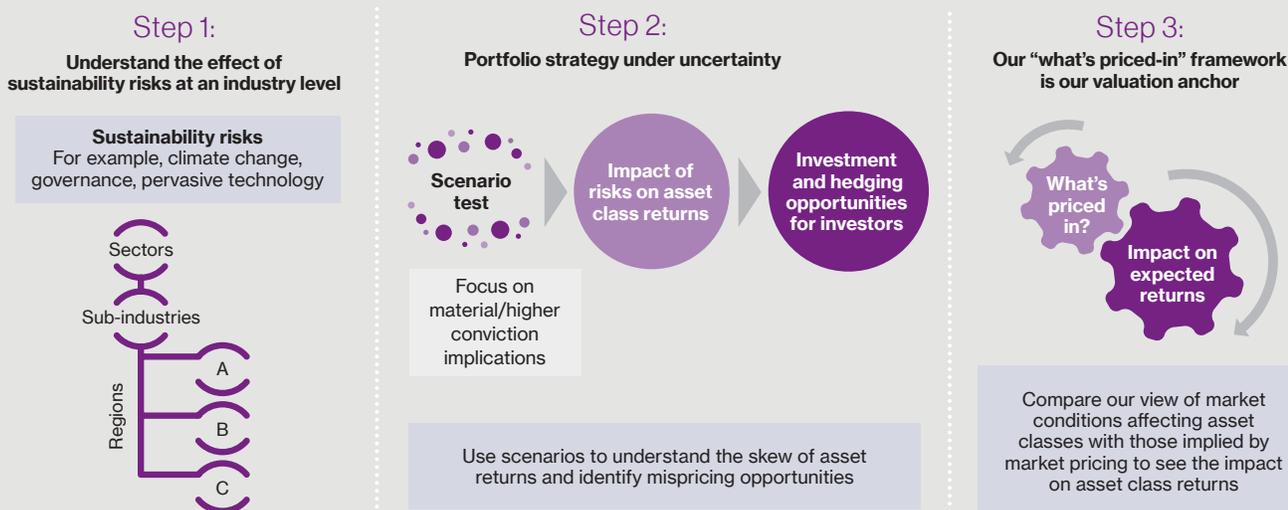
- Emerging economy growth and dynamism: (12.1)**
12. Urbanization
  13. One Belt, One Road
  14. New EM business competitors
  15. New consumers and middle class
  16. New EM institutions, governance and strategic alliances

- Technological advances: (14.5)**
17. Cybersecurity and privacy
  18. Digitization and Internet of Things
  19. Automation and artificial intelligence
  20. New fintech
  21. Biotechnology and personalized medicine

Source: Responding to megatrends, PRI and Willis Towers Watson, 2017



Figure 2. Our framework: identify the impact of sustainability risks on asset class returns



Source: Willis Towers Watson, Thinking Ahead Institute

## Outlining a framework for integrating megatrends

Our three-step framework, developed in concert with the Thinking Ahead Institute, helps investors quantify the impact of sustainability risks on asset returns and can be summarized as follows:

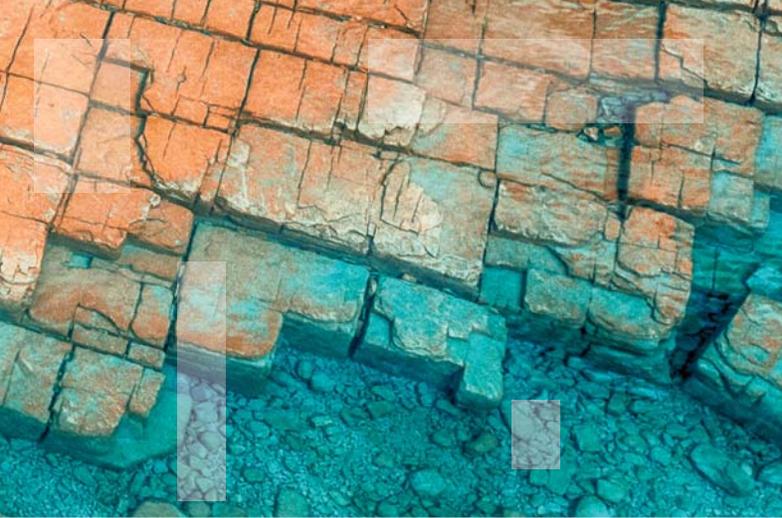
- **Step 1** – analyze megatrend impacts at the industry and/or asset level.
- **Step 2** – based on a given portfolio's exposure to a particular sub-trend, use scenarios to manage material uncertainty, sensitivity test the impact of assumed sustainability risks and build a picture of the likely skew of cash-flow generation outcomes.
- **Step 3** – compare this analysis to current market prices by making use of a “what's priced-in” framework to derive the fundamental conditions currently discounted in the prices of assets significantly exposed to the trend under examination. Take action where expectations differ materially from market prices.

Delving a little deeper into each step:

### Step 1: understanding trend impacts at an industry/asset level reveals the most material changes in profit pools

Our framework breaks down the corporate world into key sectors and sub-industries. We choose an industry and regional breakdown that goes deep enough to understand the primary structural drivers of demand and economic added value, but stays sufficiently high level to provide useful signals from a top-down perspective. Where assets do not fit within this framework we seek to understand the exposure to the trends of the cash flows generated by similar groups of assets. For example, U.K. property is likely too broad as a category and the cash flows generated by a more granular sector/group are required.

We seek to understand the impacts of each trend on prospective industry value add and, in so doing, identify the industries most exposed to a particular sub-trend. For example, transitioning to a low-carbon economy could result in a material shift from hydrocarbon-based energy profit pools (and associated industries) to renewable/clean energy generation sources.



Almost all financial assets provide access to a stream of cash flows, which can be discounted back at some rate to give a present value or price. We can derive the stream of cash flow conditions currently discounted in the market price. By comparing these conditions with the distribution of outcomes generated in steps 1 and 2, we can make meaningful and quantifiable statements about how our view of the world materially differs from that implied by market pricing.

### Step 2: outline uncertainty and optionality

We are less interested in the “most likely” impact of a trend. This will always struggle against a credibility/conviction problem given the uncertainties of the judgements at play. More important is sensitivity testing the impact of assumed shifts and building a picture of the potential distribution of outcomes. To do this, we use scenarios – either a small number of discrete scenarios or an assessment of the range of outcomes – to build up our information set.

For example, the shift of profits above should be tested for various different climate outcomes ranging from a “business as usual” scenario to one where global warming is mitigated and remains below the two-degrees Celsius threshold (by 2100 relative to preindustrial levels) outlined in the 2015 Paris Agreement on climate change.

### Step 3: transform our scenarios to investment recommendations

In order to make an investment decision we need to incorporate a notion of value into our process. Our “what’s priced-in” framework, typically used to assess the cyclical economic conditions discounted by asset prices, allows us to do this.

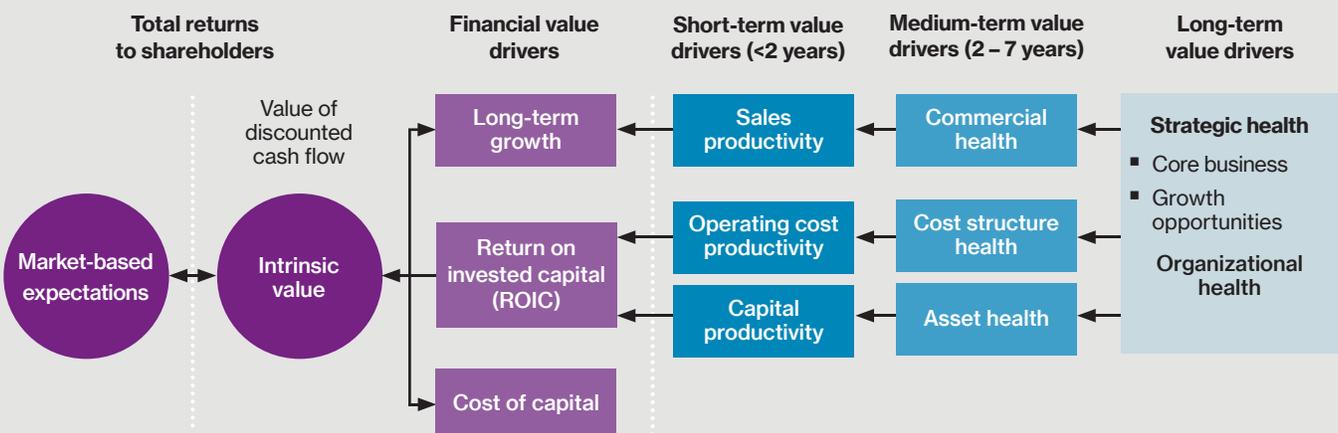
### Conclusions

It is tempting to make sweeping conclusions when it comes to determining the impact of megatrends – such as climate change, inequality and pervasive technology – on expected returns. However, such conclusions lack credibility and objectivity and, therefore, struggle to support meaningful action.

Ultimately, we are seeking to identify the direction and size of the impact of megatrends on specific portfolio exposures. Once we find a significant mispricing and have clear understanding of why it exists, investors can determine the best implementation options to take advantage of an underexposed opportunity or hedge an overexposed risk. We seek to be approximately right rather than precisely wrong. This recognizes that our goal is to gain an understanding of the material opportunities and risks for portfolios from megatrend analysis, given starting market prices.

By using this framework, we believe investors will be able to dispassionately and repeatedly consider options available to them in terms of accessing megatrend-related opportunities or hedging risks.

Figure 3. The linkages between sustainability trends, economies, industry economic value and total returns to shareholders



Source: McKinsey & Company, Willis Towers Watson