How to finance the transition to a low carbon economy: Private finance's role

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Summary

- Financial markets & capital allocation are driven by expectations for future profitability
- While financial markets have huge firepower, there has been little incentive to redirect capital
- Investors recognise the challenge climate change poses…
- …and appreciate the scale of financial impacts could be very significant
- But have little evidence policy makers will support the economics of investing…
- …and challenges translating potential regulatory scenarios into concrete conclusions
- Capital will follow economic returns; clarity on the economic outcome will drive investment flows

Financial markets & capital allocation are driven by expectations for future profitability

Economic, political, social & environmental trends

External political and market trends

- Public funding & support
- Regulatory pricing
- Government interference in competitive
- Market demand
- Etc

Challenge 1
The potential range of market outcomes is huge, spanning highly attractive to very unattractive

Operating business

Company specific drivers

- Strategic position
- Business model
- Management strengths
- Unique assets
- Etc

Challenge 2
The effects of climate change responses on corporate profitability are very challenging to assess accurately given information limitations

Profitability of underlying business

- Political backdrop will dictate the profitability of climate change investments on the scale required

Institutional investors

Value of security

- The value of securities will ultimately track the profitability of the underlying investments

Capital allocation

- Capital will follow profitability

Beneficiaries

Returns to asset owners

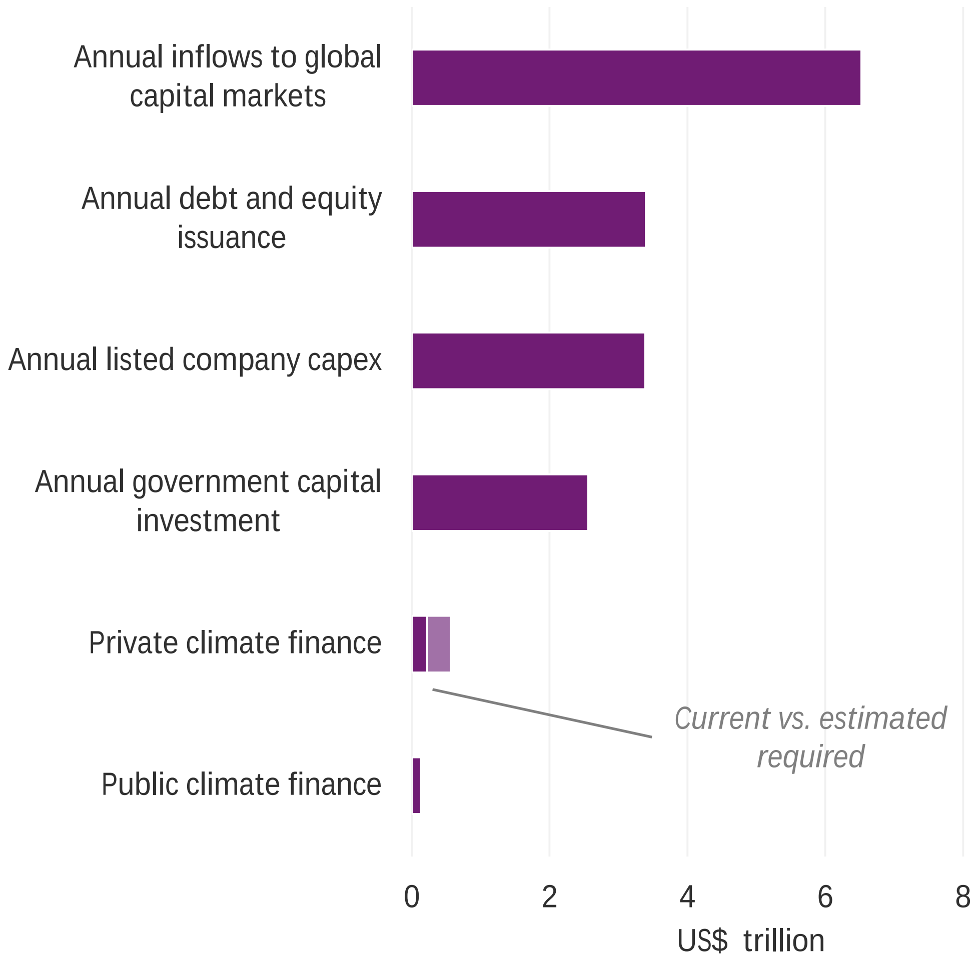
- The investment industry's key responsibility is to its investors

Market growth & social change

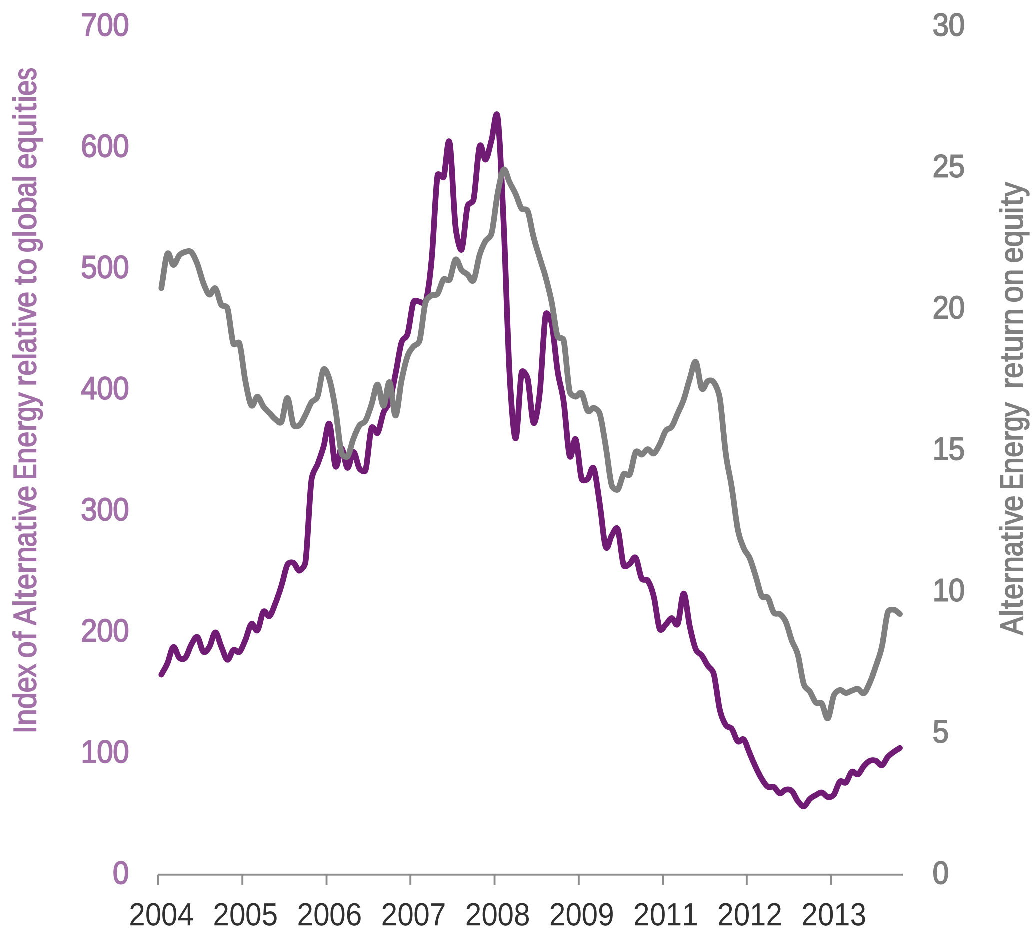
- Increased capacity and social & environmental resilience are a by-product of effective markets

While financial markets have huge firepower, there has been little incentive to redirect capital

Financial markets have significant funding power



But little incentive to deploy those funds



Source: Thomson Reuters, Datastream, Dealogic, OECD, World Bank, Climate Policy Initiative, Didas Research estimates and calculations. All figures are approximate and intended to be indicative. Climate finance bars show current actual and estimated required spending

Investors recognise the challenge climate change poses…

Long list of investor initiatives on climate change

Carbon Tracker Initiative

Financial specialists making carbon investment risk real today in the capital market.

PRI Principles for Responsible Investment

CDP DRIVING SUSTAINABLE ECONOMIES

Climate Bonds INITIATIVE

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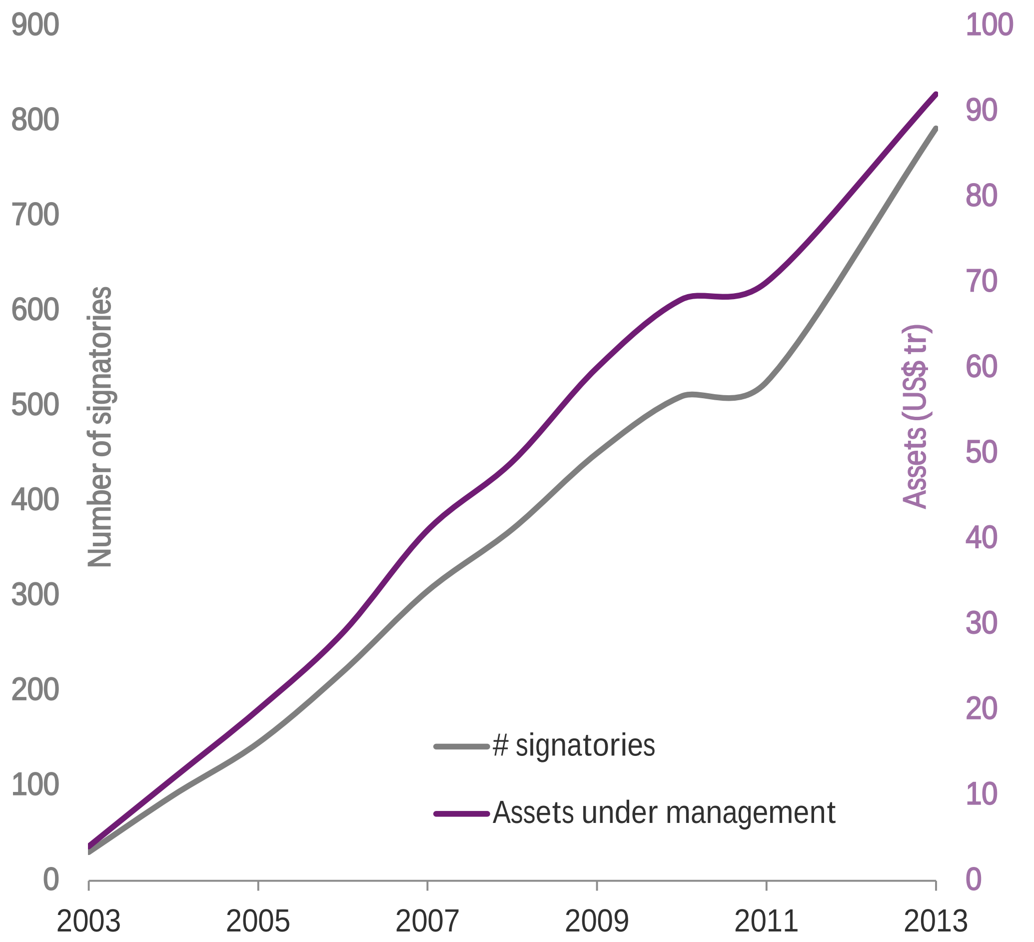
Growing pool of investors recognise the importance of climate change



Source: Carbon Disclosure Project, Didas Research

...and appreciate the scale of financial impacts could be very significant

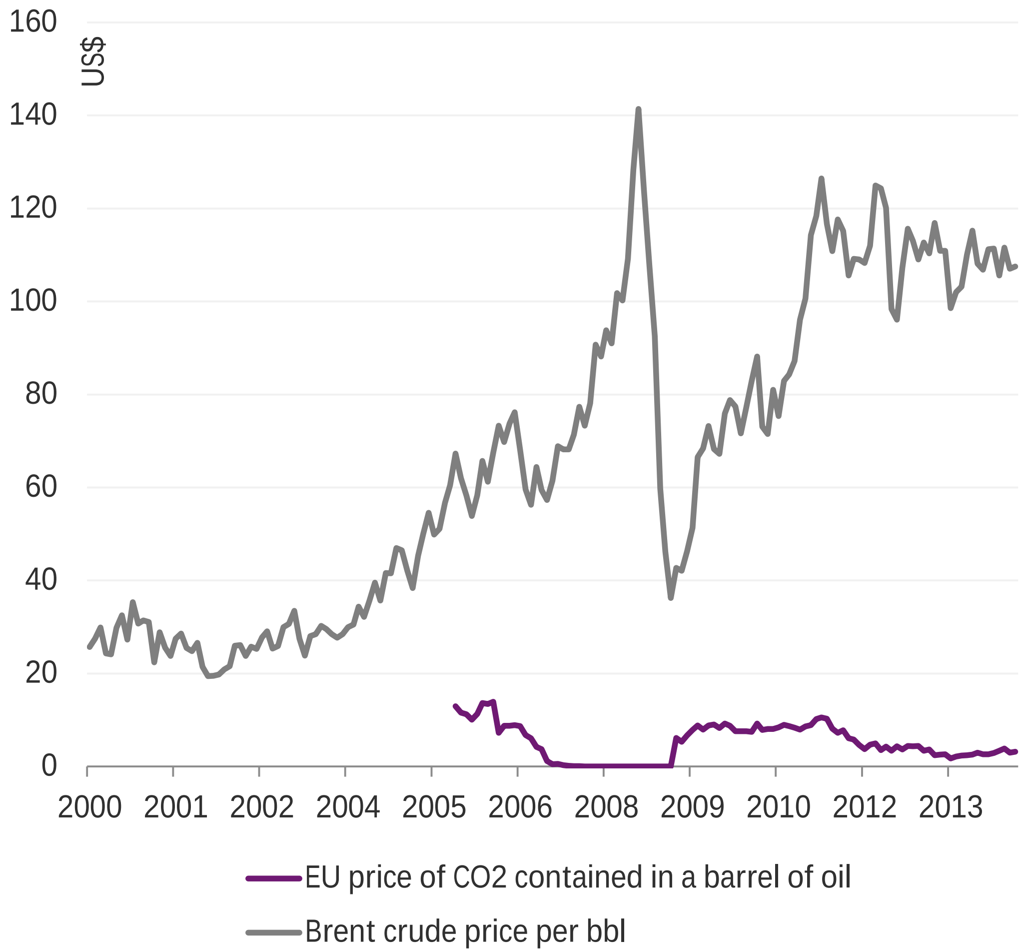
Carbon prices at levels sufficient to drive necessary changes will have a significant financial impact

Source: Thomson Reuters Datastream, Carnegie Mellon University Green Design Institute, US Census Bureau, SEC, Didas Research

Carbon cost estimates combine estimated total direct and supply chain emissions of listed companies with each price scenario, assuming all carbon emissions are priced at that level. Net profit impact is shown to indicate the scale of impact – in reality, higher costs would lead to higher prices in most sectors (with a negative demand impact reflecting demand elasticity in each sector) which would mitigate the impact on earnings

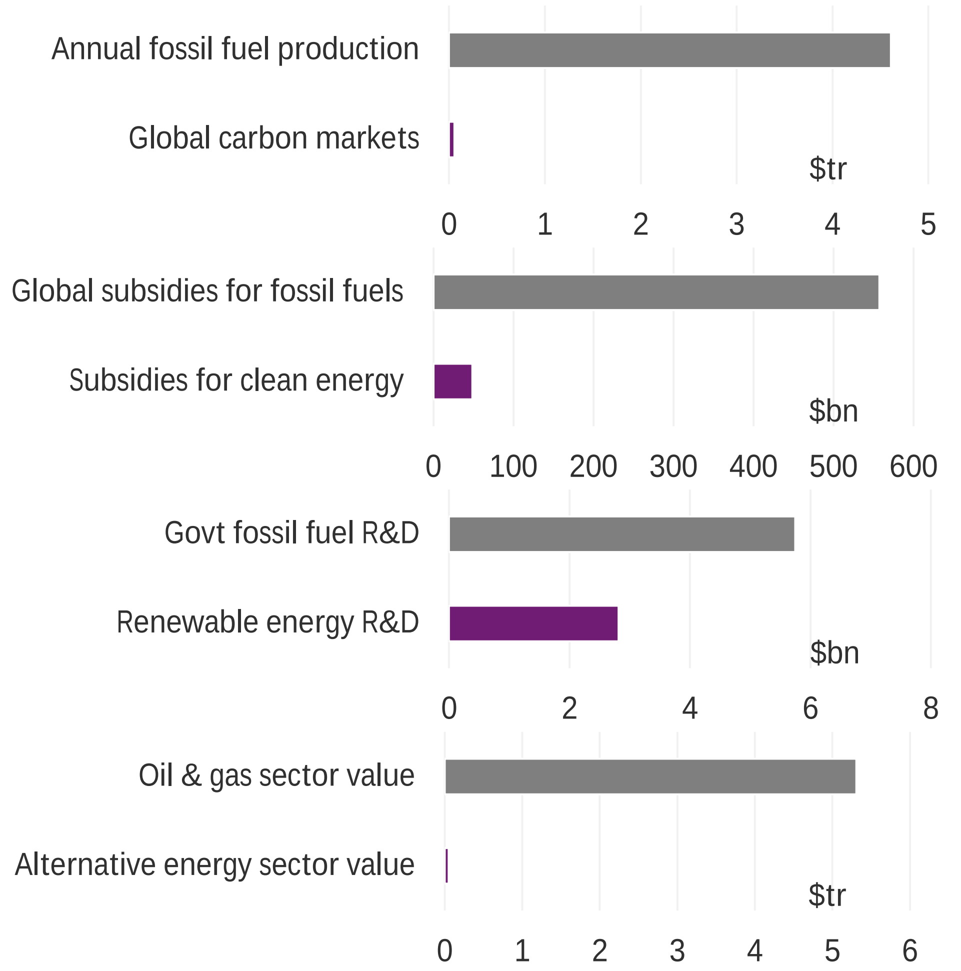
But have little evidence policy makers will support the economics of investing…

Carbon price trends do not provide a material economic signal



Source: Thomson Reuters Datastream, Didas Research. Carbon price trend based on EU ETS carbon price and assumption of 0.43 tonnes of CO2e in each boe

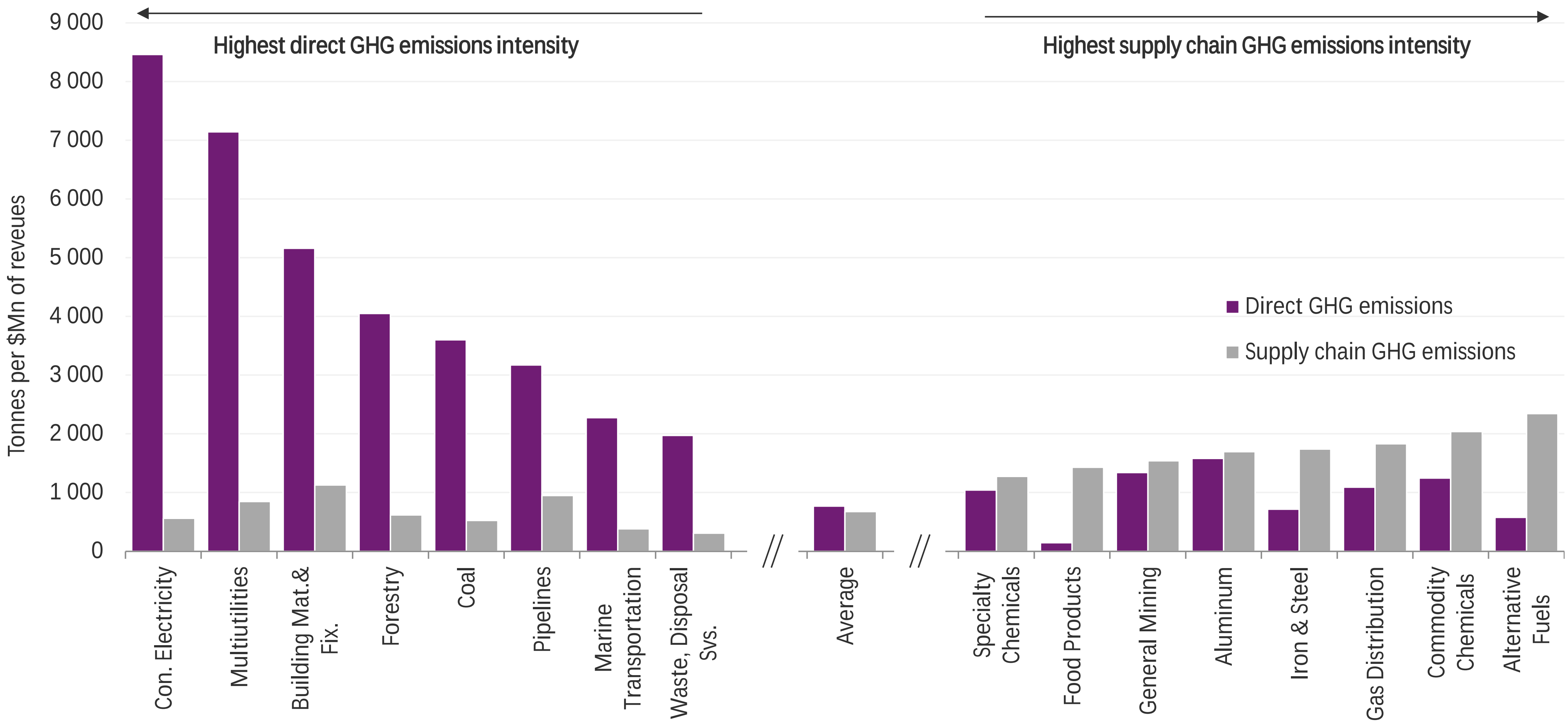
Limited evidence of political commitment to establish incentives



Source: Datastream, BP Statistical Review, Point Carbon, OECD, IEA, Didas Research. All figures are based on a number of working assumptions and approximations and are indicative of orders of magnitude rather than precise values

...and challenges translating potential regulatory scenarios into concrete conclusions

Supply chain emissions are higher than direct emissions in 80% of sectors (although similar on average)



Source: Thomson Reuters Datastream, Carnegie Mellon University Green Design Institute, US Census Bureau, SEC, Didas Research

Carbon emissions are based on lifecycle analysis of carbon emissions in major economic industries, which we have mapped to stock market sectors. The outcomes are approximate rather than precise specifications

Capital will follow economic returns; clarity on economic outcomes will drive investment flows

Lever	Mechanism	Direction to pull
Economic incentives	Evidence that corporate value will be significantly impacted by climate change policy	Clarity on the degree of political commitment to addressing causes of climate change and the sticks or carrots employed
Information	Sufficient information for investors to examine impacts of climate change at a company level and to make informed decisions	Sufficient transparency in corporate reporting to allow impacts on corporate value to be assessed

Appendix

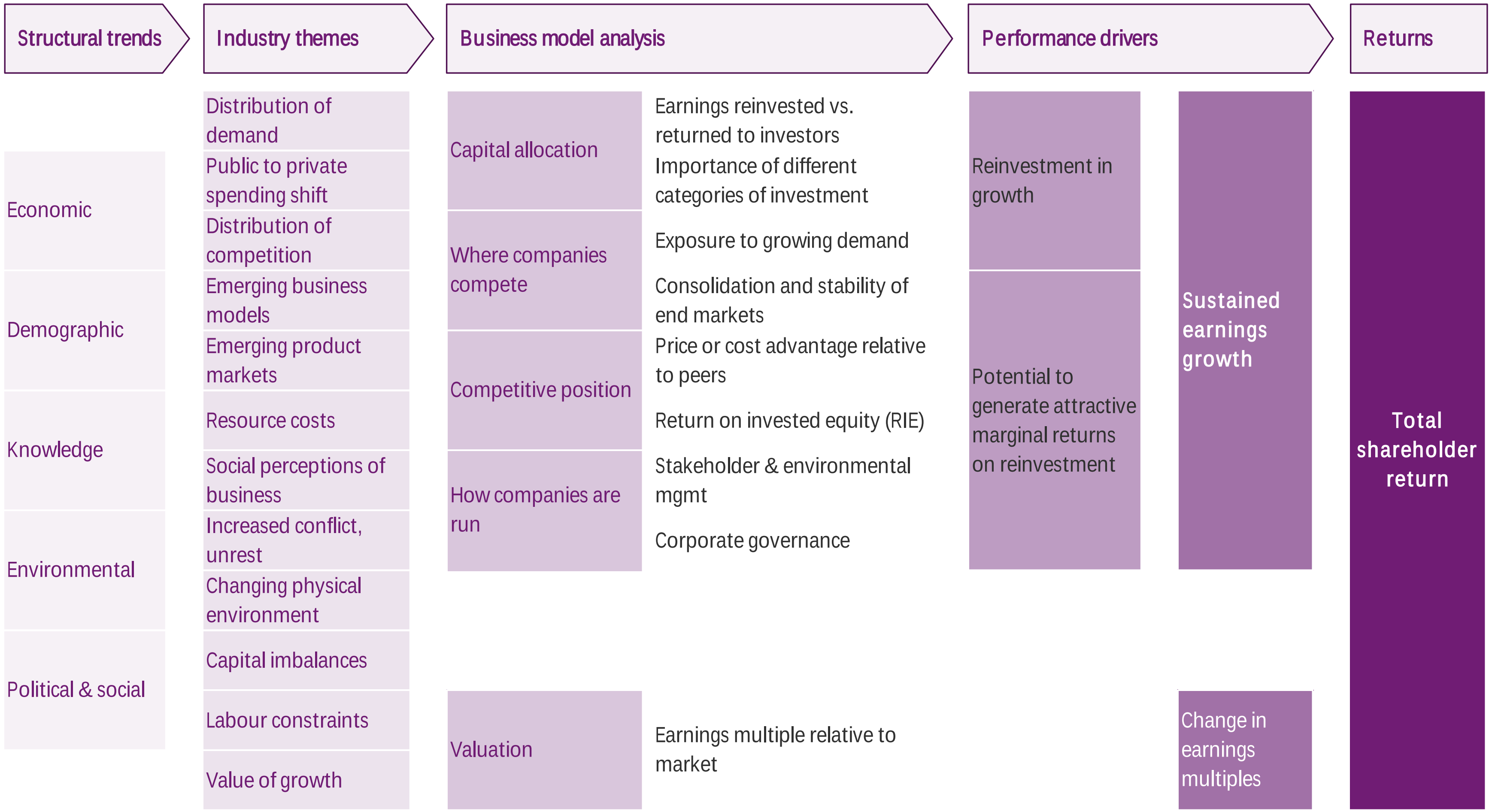
Didas Research overview

Didas Research: Long term investment research

- Didas Research is an independent research firm focusing solely on long term equity investing
- Extending investment horizons offers significant opportunities for outperformance but new tools are needed to take advantage of that opportunity
  - Equity markets have become increasingly myopic
  - Leading to a lack of discrimination in valuations of companies with high & low long term growth
  - Creating opportunities for investors able to approach investing as a long term decision
- We start from objective analysis of the drivers of long term equity market performance
  - Sentiment (multiples) drive performance in the short term; growth drives long term returns
  - Long term growth is largely company specific; sector, country or thematic exposures have limited impact on long term earnings
- Growth from shareholder perspectives
  - Rather than tracking returns on the value of total assets, we focus on the growth from the vantage point of equity investors; the earnings available to them and the total capital they have invested in a business
- We focus on the drivers of sustainable growth, rather than forecast earnings growth
  - Consensus forecasts are of little use in comparing companies' long term growth prospects; earnings models are designed to capture the effects of changing macro conditions on specific assets rather than growth in those assets
  - We view growth as a function of capital allocation decisions and the strength & scalability of competitive advantage (ie how quickly can companies grow their capital base and what returns will they generate as they expand)
  - Our analysis examines objective drivers of capital allocation decisions and competitive advantage:
    - How companies allocate capital: proportion of earnings reinvested annually
    - Where they operate: end market and regional exposures
    - How they are positioned: competitive position and relative profitability
    - How they are run: effectiveness of stakeholder management
    - Red flags to avoid: weak corporate governance, sharp deterioration in earnings, excessive leverage
- Bringing growth potential and valuation together to identify opportunities
  - The conclusions of our analysis across 1,400 large global companies are available through the Didas Research website
  - The Didas Research focus list highlights global leaders

Tying structural industry change to business model analysis and investment returns

A consistent framework to analysis of industry change, business models and investment returns



Source: Didas Research

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