in conjunction with

ARBOR

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RepuTex

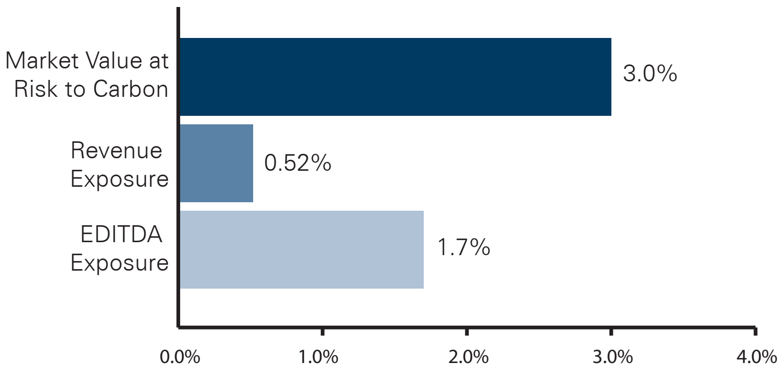
Carbon Risk - Seeing though the uncertainty

Measuring the impact of CPRS revisions on S&P ASX 200 companies - December 2009

IN BRIEF

- **Impact of policy changes.** The revised CPRS will see an additional $146m in subsidies flow to S&P ASX 200 companies annually over the period 2011 through 2022.
- **Significant exposure remains for the S&P ASX 200.** Despite the amendments, the S&P ASX 200 retains significant exposure to carbon risk - approximately 3% of market value.
- **Highly exposed industry groups include Food & Staples Retailing, Energy, Transportation and Materials,** all of which have a value at risk of over 4.5%. For companies within these industries, low revenue and high EBITDA impact can be indicative of a firm which is unable to pass on its carbon costs in the form of increased prices.
- **Indirect (supplier, electricity) carbon liabilities outweigh direct permit trading costs.** Across a ten year average the S&P ASX 200 will face direct (permit trading) costs of $2.1bn, as well as indirect (supply chain and electricity) related costs of $3.1bn. Indirect costs account for 60% of the S&P ASX 200's total carbon liability – these costs must therefore be better considered by companies and investment professionals.
- **Carbon cost pass through rates reveal new competitive dynamics are at play.** Carbon exposure depends not only on direct and indirect costs, but also on the amount of that cost that can be passed through to consumers.

ASX 200: Annual CPRS Liability ($26 per tonne)



Source: RepuTex 2009

TABLE OF CONTENTS

INTRODUCTION

As the dust settles in the aftermath of the Federal Opposition leadership spill and the latest round of CPRS negotiations between the major political parties, the Australian emissions trading policy landscape remains uncertain.

The investment community faces continued uncertainty relating to carbon risk over the coming months driven by:

- Negotiations in Copenhagen and the likelihood of stricter emissions reductions targets for Australia
- The re-tabling of any revised Australian CPRS policy in February 2010

By their nature these considerations are both short term (CPRS) and long term (Copenhagen). The revised CPRS has become official government policy and will be the proposed mechanism for implementing any targets negotiated at Copenhagen; it therefore remains an important policy for the investment community to understand.

RepuTex, the foremost provider of global carbon risk analytics, and Arbor Partners, a leading provider of investment advice to institutional investors on strategic and tactical implications of carbon risk, have collaborated to provide perspective for institutional investors on managing carbon risk.

This joint analysis provides perspective for the Australian investment community, measuring the impact of likely revisions to the CPRS on S&P ASX 200 companies, including the pricing of permit costs, compensation, energy and supply chain cost increases.

Our analysis is underpinned by RepuTex's extensive models to measure corporate greenhouse gas (GHG) emissions, and the direct and indirect (supply chain, electricity) costs these represent.

REVISED CPRS

On 24th November 2009, the Australian Government announced further changes to its proposed Carbon Pollution Reduction Scheme (CPRS). These changes were aimed at securing Federal Opposition support for the legislation and have since become Government policy, to be considered by Parliament again in February 2010.

This background paper considers what these changes mean for investors - specifically studying the impact of new policy on S&P ASX 200.

The paper is the first in the Australian market to quantify potential liabilities to the revised CPRS on both a direct and indirect basis.

UPDATED MODEL

Our revised analysis provides an opportunity for RepuTex to update our cost models based on carbon footprint / liability changes, including:

- Updated scope 1,2,3 GHG analysis on all S&P ASX 200 companies, including constituent changes.
- Refinement of CPRS obligations, including a reassessment of CPRS liable footprint/facilities and pass through rates

COMPETITIVE DYNAMICS

We review at a company and industry group level, what some of these risks and considerations are based on updated policy information.

COPENHAGEN AND BEYOND

Dynamics at play in the lead up to Copenhagen and beyond. The main challenge at Copenhagen will be overcoming divergences in national positions that currently exist, especially on mitigation and finance. Recent pledges from the USA, China, India and Brazil are positive developments, however a globally binding emissions reduction target is now almost certain not to eventuate. Some Parties may be ready to make final commitments but others may still be reluctant to come forward until they are fully satisfied with the comparability and equity of any commitment.

REVISED CPRS

GOVERNMENT POLICY REVISED

The CPRS remains the primary tool of Australian Government policy relating to managing carbon emissions and meeting international commitments, and as such is a key consideration for investment institutions.

Post negotiation with the Federal Opposition, changes to the CPRS policy position are:

Electricity Generation

The Electricity Sector Adjustment Scheme (ESAS) has seen an increase in the total value of permits from $3.3b to $7.3b. These are comprised of three new measures – a Low Emissions Transition Incentive, an Energy Security Assurance Mechanism and deferred payment arrangements to maintain energy security and transition low pollution future.

Electricity Prices: Transitional Electricity Cost Assistance Program (TECAP) of $1.1b to assist medium and large manufacturing and mining businesses with CPRS-related increases in electricity prices in the first two years of the scheme post the fixed price year. EITEs are excluded from this assistance.

Coal Mining

$1.5b in transitional assistance will be provided to the coal sector over five years (increase from $750m). The Government will commit $270m to the Coal Mine Abatement Fund through the Climate Change Action Fund to assist gassy coal mines (i.e. fugitive emissions intensity above 0.1 tCO_2-e/t saleable coal) reduce emissions. In addition, the current COAG Renewable Energy Target (RET) review process will consider whether new waste coal mine gas projects should be eligible.

Emissions Intensive Trade Exposed Industries (EITE)

Permanently incorporating the Global Recession Buffer.

Agriculture

Agricultural emissions will be excluded from the CPRS and offsets for agricultural emissions abatement will be included.

Source: Department of Climate Change

MODEL REVISED TO REFLECT $26 STARTING PRICE

The revised CPRS policy is designed to ensure Australia can meet its unconditional target of 5 per cent, conditional target of up to 15 per cent and top-end target of 25 per cent off 2000 levels by 2020 if a global 450 parts per million outcome is achieved.

To reflect changes in the outlook for the Australian dollar, all government forecasts are now based on a revised starting price of $26 in the first year of trading. We reflect this and use $26 as our base case for modelling and impact attribution.

Scenarios have also been run at $30 (based on a 15% reduction) and $35 (based on a 25% reduction):

Policy Scenario	Period	Australian Carbon Price
Fixed price	2011-12	$10
5% reduction by 2020	2011-20	$26
10% reduction by 2020	2011-20	$30
15% reduction by 2020	2011-20	$35

*Starting price in 2012, price increase of 4% per annum applied across 2012-20

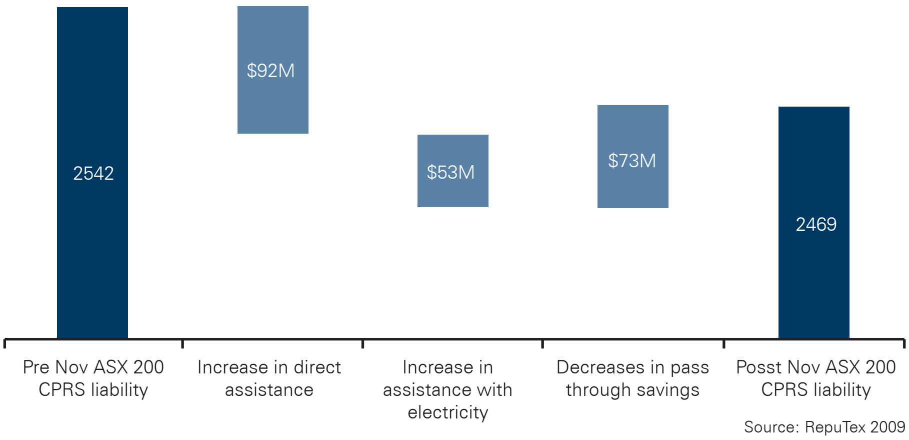
From July 2011 to July 2012, the scheme will essentially be a $10 tax, meaning there will be no CER buying at all from Australia.

In light of recent compensatory amendments and in line with predicted CER prices (which effectively provide the cap price for the Australian market), a starting price of $26 in 2012 is reasonable. The permanency of higher EITE allocations is likely to reduce demand for AEUs, especially in the early years, which will take the pressure off the price. As a result, little price volatility is expected in the case of a 5% target with an expected average price of $31 over the first 10 years (excluding 2011), however if Australia opts for a higher emission reduction target (i.e. 15%), EITEs may come under some pressure in the medium to long term, causing upside pressure on AEU prices. This is reflected in the $35 starting price with the expected average price of $42 across 2012-20.

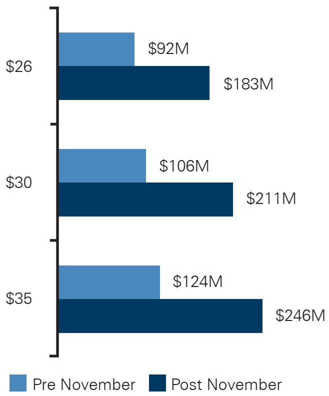
IMPACT OF CPRS REVISIONS

Average annual impact on S&P ASX 200 companies 2011 through 2022, attribution of changes to CPRS in November.

(base case of $26 per tonne starting price in 2012)



Source: RepuTex 2009

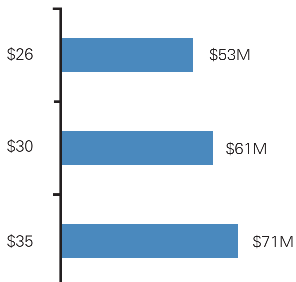


Source: RepuTex 2009

Direct assistance

Leaving aside assistance to EITEs, which have seen subsidies made permanent rather than extended, the main additional measures announced in November are the Electricity Sector Adjustment Scheme (ESAS) and additional transitional assistance for coal mines.

On these measures, we see an effective doubling of subsidies to S&P ASX 200 companies to $183m pa at $26 per tonnes, or approximately $1,800m over the period 2011 - 2022.



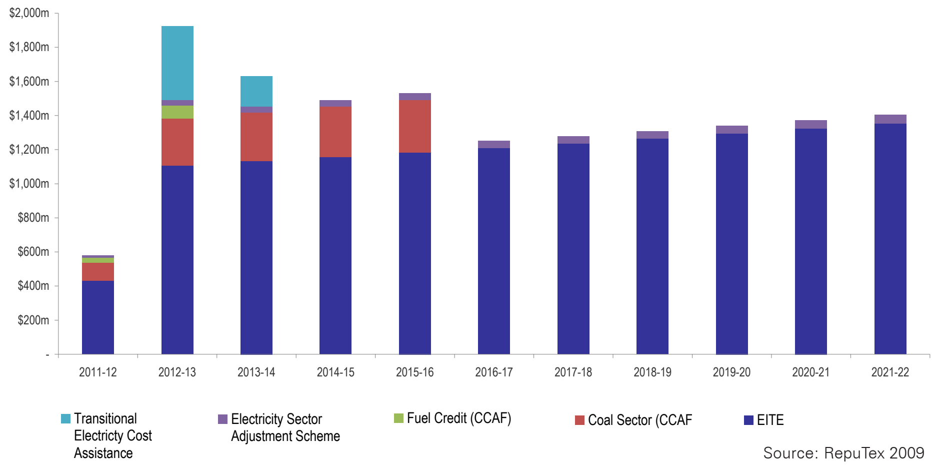
Source: RepuTex 2009

Electricity price impact

Transitional Electricity Cost Assistance Program (TECAP) will see an annualised increase in rates of assistance of $53m or $61m over the period. The total value of the scheme is $1.1b

Annual CPRS assistance to S&P ASX 200 Companies

Impact over the 2011-22 period at $10 per tonne starting in 2011, increasing to $26 per tonne in 2012



Source: RepuTex 2009

In addition to the EITE and ESAS measures, we see that the coal sector, TECAP and fuel credit schemes are all transitory over the period and largely front loaded to facilitate industry adjustment.

The announcement on the exclusion of agriculture has no impact on RepuTex modelling as its exclusion had been deferred until 2015.

New changes to the CPRS provide great scope and opportunity for Agricultural companies to generate offset credits by implementing abatement measures from emission sources that are counted towards Australia's greenhouse gas emissions under its Kyoto protocol commitments. These include, manure management, emissions from closed landfill facilities, fertiliser usage and burning of agricultural residue. Though agricultural operators and farmers will face some higher costs for fuel, fertilizer, and electricity under CPRS, the potential extra income from selling offsets could outpace those costs.

Further, the inclusion of voluntary offsets, although possibly creating interesting business opportunities, is unlikely to have a material impact on risk or opportunity for S&P ASX 200 companies in the near term.

When the above is netted out, the outcome for S&P ASX 200 companies is clearly a good one - annualised subsidies increase by $146 million annually or a total of $1.606 billion over the period of the scheme.

OVERALL IMPACT ON S&P ASX 200

MODEL CHANGES

Aggregating the revised CPRS impacts on S&P ASX 200 companies, RepuTex's model has been updated to account for:

- Re-modelling of coal miner compensation - re-evaluating the assistance to gassy mines which resulted in less permits to the S&P ASX 200
- Productivity contribution - the lowering of EITE rates by 1.3% per annum, theoretically increasing company liability with time

Further carbon footprint and liabilities have been updated to reflect:

- Updated scope 1,2,3 GHG emissions footprint estimates from RepuTex for all S&P ASX 200 companies.
- Updated S&P ASX 200 constituents
- Refinement of CPRS obligations including reassessment of CPRS liable footprint/ facilities and pass through rates.

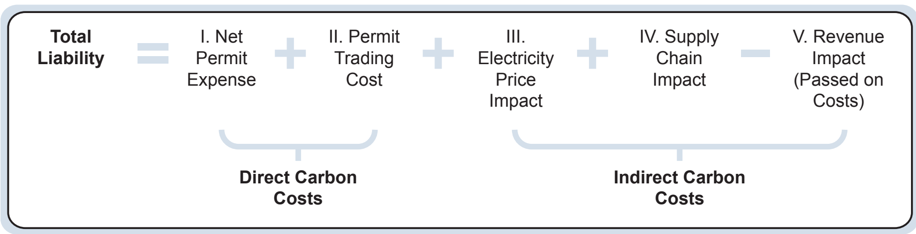
The combined effect of these changes:

- Increase of around 5mil tonnes CO2-e in actual ASX200 Scope 1 footprint
- Increase of approximately 12mil (10%+) tonnes CO2-e in liable emissions

MODEL OVERVIEW

RepuTex's Carbon Liability Model adopts a holistic approach to measuring the key direct (i.e. permit and trading) and indirect (i.e. electricity and supply chain) carbon costs facing each company, in addition to projections of costs passed through to consumers (i.e. post-CPRS revenue impact from increased price of goods). This net position is termed the company's Total Carbon Liability.

Each key carbon impact is modelled using a combination of company research and scope 1,2,3 GHG emissions data compiled by RepuTex.



CARBON RISK

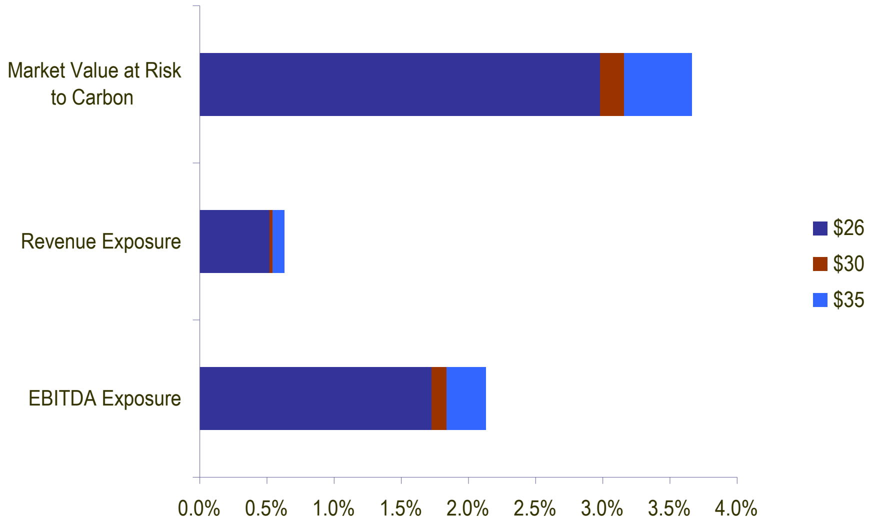
The normalisation of liabilities into comparable financial metrics is essential to benchmarking the real risks a company faces from the CPRS. Carbon is measured using three financial measures to allow flexible and meaningful comparisons:

Revenue exposure: Carbon liabilities as a % of revenue

EBITDA exposure: Carbon liabilities as a % of EBITDA

Value at Carbon Risk: Value at Carbon Risk (VACR):
Valuation impact of carbon liabilities as a % of Market Value

Carbon impact % of financial measure



Source: RepuTex 2009

CARBON RISK REMAINS SIGNIFICANT

In reviewing how market value can be impacted by carbon, there is an interaction between the expected price of carbon, the level of earnings of the company and how these earnings are valued by the market.

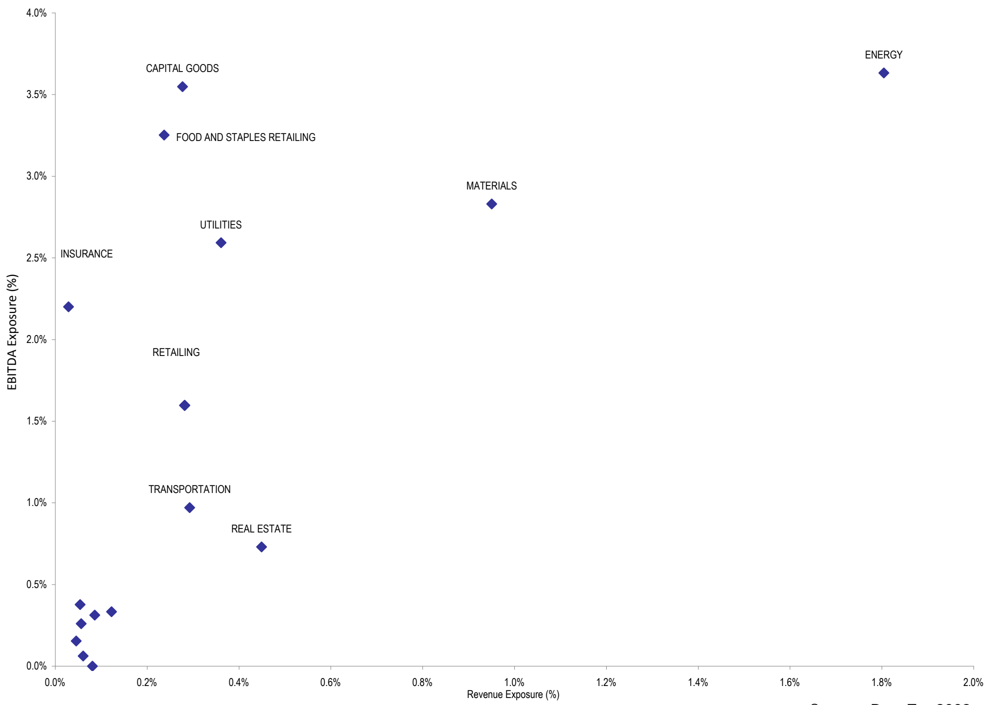
Bringing this together, analysis suggests there is significant exposure given current information - between 3% and 3.5% of market value is at risk to carbon at a carbon price of between $26 and $35 starting in 2012.

This makes no assumption on underlying company ability to abate their carbon exposure (beyond cost pass through) however provides a reliable means of assessing the risk potential.

IMPACT ON COMPETITIVE INDUSTRY DYNAMICS

INDUSTRY COST STRUCTURES WILL CHANGE

By altering the incentives and cost structures for industries, the CPRS will have a material impact on industry revenue and EBITDA. The greater the impact, the greater the incentive to shift away from carbon intensive activities.



Source: RepuTex 2009

CARBON HOTSPOTS ACROSS THE VALUE CHAIN

The complex flow of allowances and revenue, differing internal cost structures and the competitive positioning of each firm within an industry all contribute to varying revenue and EBITDA risk exposures.

As we break down these industry costs across the value chain, a clearer picture emerges of specific industry risk profiles and the likelihood of new cost structures and competitive dynamics.

The CPRS will directly impact around 1000 entities, meaning that the significant majority of Australia's 7.6 million registered businesses will not be directly liable under the proposed scheme. However, the CPRS is likely to cover around 60% of Australia's emissions (excluding Agriculture), leading to a change in business landscape and company cost structures as emissions intensive and CPRS liable parties look to pass on the cost impost. As a result, carbon cost implications of the CPRS will propagate along supply chains throughout the Australian economy.

As well as increases in the price of energy, particularly electricity, many businesses will face higher supply chain costs.

CPRS IMPACT ON S&P ASX 200: PRICE SENSITIVITY BY INDUSTRY GROUP

	Financial Impact			Direct Cost Breakdown				Indirect Cost Breakdown			Total Cost	Pass Through Cost	Final Liability
	Market Value (VaCR)	Revenue	EBITDA	Permit Obligation	EITE Assistance	Other Assistance	I. Net Permit Expense	II. Permit Trading Cost	III. Electricity Price Impact	IV. Supply Chain Impact	Direct + Indirect Costs	V. Revenue (Passed on Cost)	Total Annual CPRS Liability
AUTOMOBILES AND COMPONENTS	2.9%	0.3%	1.6%	-	-	-	-	-	$0.2m	$1.6m	$1.8m	-$0.8m	$1.0m
CONSUMER DURABLES AND APPAREL	2.6%	0.3%	1.6%	-	-	-	-	-	$0.8m	$9.7m	$10.5m	-$4.8m	$5.7m
CONSUMER SERVICES	2.0%	0.3%	1.6%	-	-	-	-	-	$22.8m	$26.2m	$49.0m	-$20.2m	$28.8m
MEDIA	2.3%	0.3%	1.6%	-	-	-	-	-	$18.7m	$70.2m	$88.9m	-$35.1m	$53.8m
RETAILING	2.7%	0.3%	1.6%	-	-	-	-	-	$11.6m	$19.7m	$31.3m	-$16.0m	$15.4m
FOOD AND STAPLES RETAILING	6.3%	0.2%	3.3%	$51.3m	$11.5m	-	$39.7m	$1.0m	$136.3m	$241.9m	$418.9m	-$143.6m	$275.3m
FOOD, BEVERAGE AND TOBACCO	1.5%	0.2%	0.8%	$2.5m	-	-	$2.5m	$0.1m	$13.7m	$72.6m	$88.9m	-$62.1m	$26.8m
ENERGY	6.5%	1.7%	3.5%	$720.7m	$148.2m	$117.7m	$454.7m	$11.4m	$21.1m	$196.3m	$683.5m	-$321.4m	$362.1m
BANKS	0.2%	0.1%	0.0%	-	-	-	-	-	$14.7m	$53.3m	$68.0m	-$26.6m	$41.3m
DIVERSIFIED FINANCIALS	0.2%	0.1%	0.1%	-	-	-	-	-	$1.4m	$9.8m	$11.2m	-$6.9m	$4.3m
INSURANCE	0.3%	0.0%	2.2%	-	-	-	-	-	$4.0m	$24.0m	$28.0m	-$15.0m	$13.0m
REAL ESTATE	0.9%	0.4%	0.7%	-	-	-	-	-	$52.8m	$111.6m	$164.3m	-$104.5m	$59.8m
PHARMACEUTICALS, BIOTECHNOLOGY AND LIFE SCIENCES	0.2%	0.0%	0.2%	-	-	-	-	-	$0.7m	$2.8m	$3.5m	-$1.4m	$2.1m
HEALTHCARE EQUIPMENT AND SERVICES	0.5%	0.1%	0.3%	-	-	-	-	-	$10.5m	$32.3m	$42.8m	-$36.1m	$6.7m
CAPITAL GOODS	6.0%	0.3%	3.5%	$175.6m	$53.7m	-	$122.0m	$3.0m	$28.7m	$132.3m	$286.0m	-$196.0m	$90.0m
COMMERCIAL AND PROFESSIONAL SERVICES	0.7%	0.1%	0.4%	-	-	-	-	-	$3.8m	$23.6m	$27.5m	-$18.5m	$8.9m
TRANSPORTATION	5.2%	0.3%	1.0%	$439.7m	-	$9.1m	$430.6m	$10.8m	$17.8m	$98.8m	$557.9m	-$471.1m	$86.8m
INFORMATION TECHNOLOGY	0.4%	0.1%	0.3%	-	-	-	-	-	$0.6m	$2.1m	$2.7m	-$1.0m	$1.6m
MATERIALS	4.7%	3.9%	2.8%	$1,737.1m	$1,005.0m	$13.8m	$718.3m	$19.3m	$708.7m	$775.8m	$2,222.0m	-$932.3m	$1,289.7m
TELECOMMUNICATION SERVICES	0.7%	0.1%	0.3%	-	-	-	-	-	$43.9m	$42.1m	$86.0m	-$29.1m	$57.0m
UTILITIES	4.2%	0.4%	2.6%	$297.8m	-	$42.2m	$255.6m	$6.4m	$1.1m	$64.0m	$327.1m	-$288.5m	$38.6m
ASX 200 @ $26 per t CO2-e Start Price	**3.0%**	**0.5%**	**1.7%**	**$3,425m**	**-$1,218m**	**-$183m**	**$2,023m**	**$52m**	**$1,114m**	**$2,011m**	**$5,200m**	**-$2,731m**	**$2,469m**

Source: RepuTex 2009

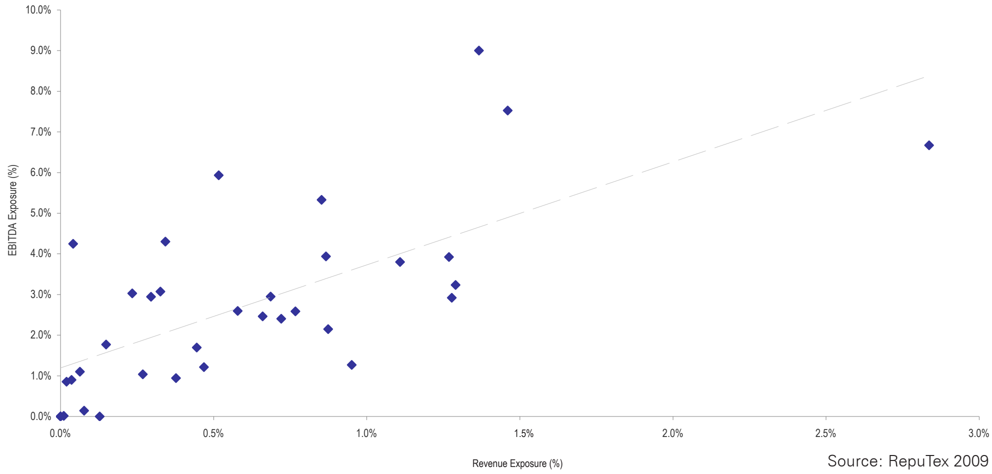
The above table illustrates the competitive dynamics at play - Revenue and EBITDA impacts vary significantly, as does the relationship between revenue and EBITDA within each industry.

Capital Goods, Energy and the Material industries demonstrate the lowest pass through abilities amongst the various industries. Distinct cost structures and cost pass through abilities are the predominant reasons for the differences.

The ultimate impact on a given industry will be determined by the market dynamics (strength of competition, suppliers etc), government subsidies and costs structures. At the company level, carbon exposure further depends on the specific expected costs of carbon and the potential revenue flows associated with carbon regulation and competition.

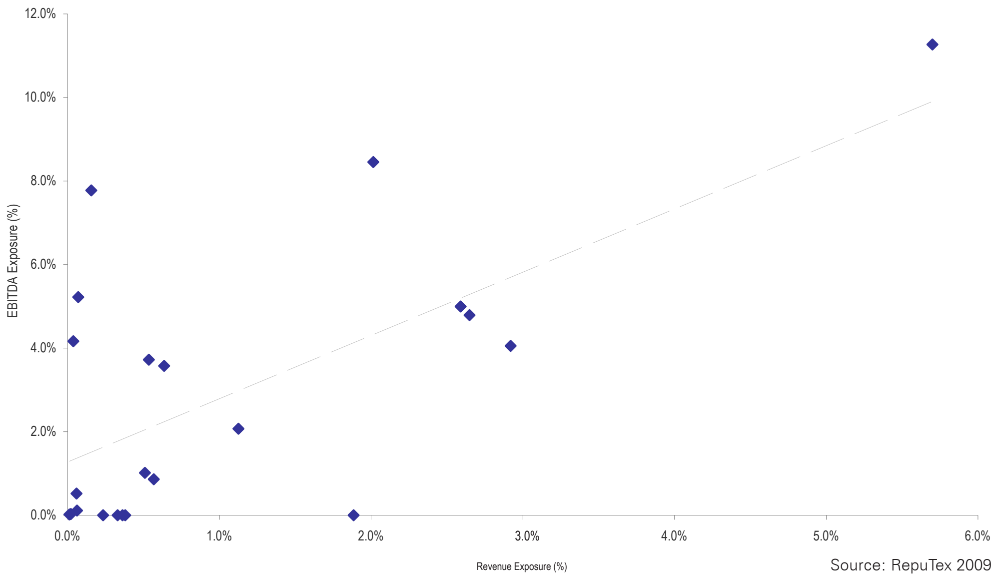
The following chart shows the degree of variation that can occur within a given industry - at a company level.

Materials
(S&P ASX 200) sector –
company risk variation



Source: RepuTex 2009

Energy sector –
company risk variation



Source: RepuTex 2009

For Energy and Materials sector companies, low revenue and high EBITDA impact can be indicative of a firm which is unable to pass on its carbon costs in the form of increased prices.

Despite substantial government compensation and EITE status of some activities within the Energy sector, some companies in this sector could still face revenue and market value loss in a low carbon economy.

The inclusion of LNG as a moderately emissions-intensive EITE activity and allocation of free permits for the entire LNG production process has reduced the carbon exposure of companies with significant LNG production capacity.

Revenue upside is expected for companies with high exposure to natural gas production as companies switch from coal- fired generation to natural gas (less carbon intensive) in order to reduce GHG emissions.

For Materials sector companies, firms involved in fertilizer and chemical production will face a high cost exposure post 2012. Lime and cement producers are also expected to be directly impacted by a carbon price whilst for pulp and paper companies; the impact of electricity price hikes will be of concern.

Some coal miners which are ineligible for direct assistance and have limited ability to capture fugitive emissions are likely to face high permit costs resulting in considerable revenue loss.

DETERMINING COST PASS-THROUGH

Carbon exposure depends not only on emissions and free allowances, but also on the amount of carbon costs that can be passed through to consumers.

Empirical studies have shown a level of consistency in pass through rates across industries. In particular, there is evidence to suggest that the lower the competitiveness of an industry, the higher the pass through of carbon costs into retail prices. This is because in competitive markets, the value of carbon is more likely to be internalised (or abated) to maintain market share, whereas, in monopolistic or oligopolistic markets, price setting is more flexible.

RepuTex estimates pass through rates by reviewing the competitiveness of an industry and the given firm within that industry. Pre-carbon profit margin relative to that of its industry group is an important metric, it is also essential to conduct sensitivity analysis as estimates are established.

COPENHAGEN AND BEYOND

SCHEME DESIGN POST THE EU EXPERIENCE

Much has been made of the EU system design and process, which may ultimately be seen as an experiment from which the rest of the world (and the Europeans) have learnt. Major emitting countries see emissions trading as a key means of structural adjustment away from Carbon intensive production.

The growth of global and EU carbon markets is largely underwritten for years to come by existing measures - for example the EU has targeted emissions cuts of up to 30% (20% agreed with potential to go to 30%) on 1990 levels by 2020 and the US is proposing to use emissions trading to deliver a 17% cut on 2005 levels.

Reviewing where markets have come from there has been significant growth, more than 100% per annum.

Global carbon market size
Source: World Bank

	Units	2006	2007	2008	CAGR
Covered	Million Tonnes	1,745	2,983	4,811	66.0%
Average Price	Per Tonne	$18	$21	$26	21.0%
Value	USD Million	$31,325	$64,035	$126,345	100.8%

EU carbon market size
Source: World Bank

	Units	2006	2007	2008	CAGR
Covered	Million Tonnes	1,104	2,060	3,093	67.4%
Average Price	Per Tonne	$22	$24	$29	15.4%
Value	USD Million	$24,436	$49,065	$91,190	93.2%

WHAT NEXT? DEVELOPMENTS TO WATCH

Clean Development Mechanism (CDM) reform - A draft proposal is being developed to speed up CDM processes leading to faster issuance of Certified Emission Reduction Credits. This will see a greater volume of carbon related projects in developing countries.

Joint Implementation (JI) reform - These are credits made available by developed countries investing in carbon related projects across borders (one developed country to another). Supply of credits from JI has been modest, around 2.1 million compared with over 350 million under the clean development mechanism, amid bottlenecks at key stages of the process. The future of JI is likely to be determined at Copenhagen.

Reducing Emissions from Deforestation and Degradation (REDD) - Inclusion of REDD as an abatement option post 2012. Debate is likely to focus on methodological issues such as fund or market-based funding, use of baselines, and additionality. This is a key area of development due to the significant contribution deforestation continues to make to global emissions - predominantly in developing countries.

Agriculture - This sector is responsible for around 15% of global GHG emissions. With the right policy framework, farmers will be important partners in efforts to reduce GHG emissions while reaping multiple co-benefits. For example the proposed US Cap & Trade Bill (Boxer-Kerry) allows for agricultural offsets to be used for compliance.

CONCLUSION AND CONSIDERATIONS

CARBON - A MATERIAL RISK AND OPPORTUNITY

The implications of this report and the data within demonstrates that, carbon represents a risk that is material to returns and has potential to be “unseen” from a measurement point of view. As carbon ultimately becomes scarcer, fund managers, superannuation funds and investment professionals must carefully consider how this exposure is aggregating across their portfolio and what it means for strategy and asset allocation.

THE MARKET

For the wider investment and corporate communities, consideration must be paid to analysis of both direct and indirect carbon costs, as well as a deeper understanding of competitive implications of these carbon risks and liabilities. In the context of poor global disclosure of GHG emissions, accessing rigorous and consistent direct and indirect GHG data and risk modelling is key to truly understanding any risks and opportunities.

INTERPRETING FIDUCIARY DUTY

Carbon footprinting of investment portfolios has become a fashionable way of understanding levels of carbon exposure. However theoretical carbon exposure, while an interesting metric, does not relate the issue of carbon exposure to real world risk and return considerations. RepuTex and Arbor see clear value in considering carbon exposure in this context - we see carbon as a consideration in returns - the potential for developing strategies that capture opportunities from carbon and minimising risk is significant.

FUND MANAGERS

The right approach to any analysis is a core consideration - just as uncertainty is a function of credit risk, interest rate risk and liquidity - carbon is a risk that can be viewed within a context of uncertainty.

A macro top down and bottom up framework will be important for fund managers to:

- Inform stock selection
- Identity opportunities to reduce carbon risk
- Develop sustainable funds
- Assist in communicating carbon and sustainability concerns to asset owners

SUPERANNUATION FUNDS

As the average fund member will not be retiring before the key target date of 2020 for large carbon cuts, it can be argued that superannuation funds have a clear and present duty to consider carbon seriously from both a strategic and tactical point of view.

Immediate benefits can be gained by understanding:

- Fund level exposure
- Sector exposures
- Sub-sector exposures
- Stock exposures
- Potential CPRS liability
- Detailed information for fund management selection and engagement

ABOUT REPUTEX

RepuTex is the foremost provider of carbon risk analytics, specialising in the quantification and pricing of risk for companies and financial professionals globally.

Established in 1999, RepuTex has developed proprietary models to measure corporate greenhouse gas (GHG) emissions, and the direct and indirect (supply chain, electricity) costs these represent. The company has research in the market for over 4,500 companies globally, creating the world's largest database of carbon emissions and risk analytics.

For more information on RepuTex research methodologies, please contact RepuTex, or visit www.reputexgroup.com

ABOUT ARBOR

Arbor Partners is an independent advisory firm providing specialist expertise to institutional investors on long term investing with an emphasis on sustainability.

Arbor has extensive experience developing and applying sustainability practices as they relate to investing – including pension funds, funds management, investment banking and insurance. The Arbor Partners team brings together expertise across equity research, capital markets, funds management, carbon finance, insurance and investment banking and has a strong track record working with a range of small and large institutional investors from Australia, New Zealand, Europe, and the US.

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