

Current use of carbon data by financial analysts and fund managers and how it could be improved

Ivo Knoepfel
Managing Director
onValues Ltd.

Germanwatch Expert Discussion, Frankfurt 14 Feb. 2006

www.onValues.ch

Overview

- Current use by different types of analysts
- Selected examples of research
- Types of carbon data used
- The challenge ahead
- What different actors can do

Different types of analysts

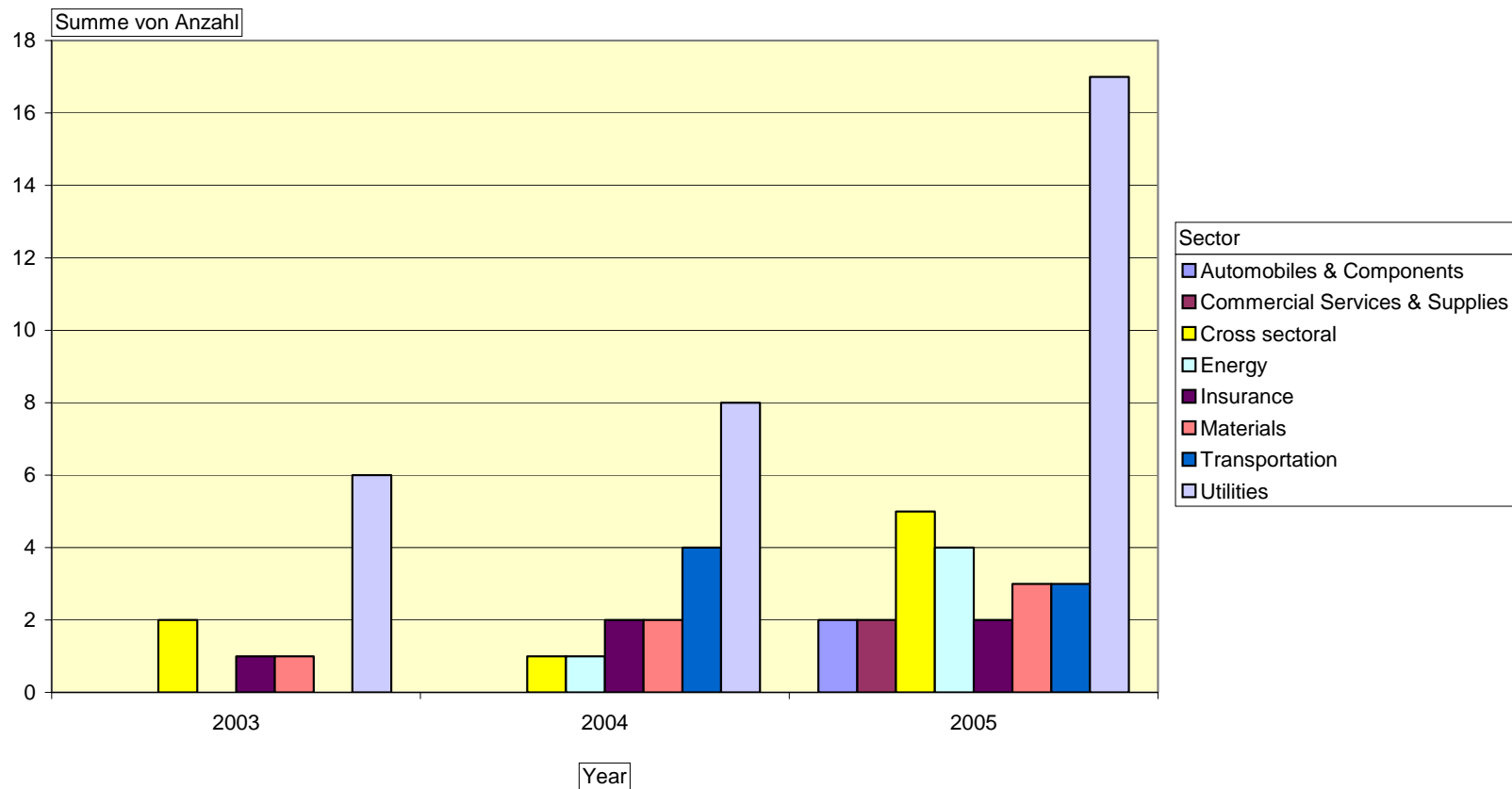
- Specialist SRI research
- Independent investment research
- Brokerage research
- Buy-side research

- > Specialist SRI researchers have led the way
- > Increasingly brokers are stepping in
- > Buy-side in need to catch up

Increase in carbon research by brokers

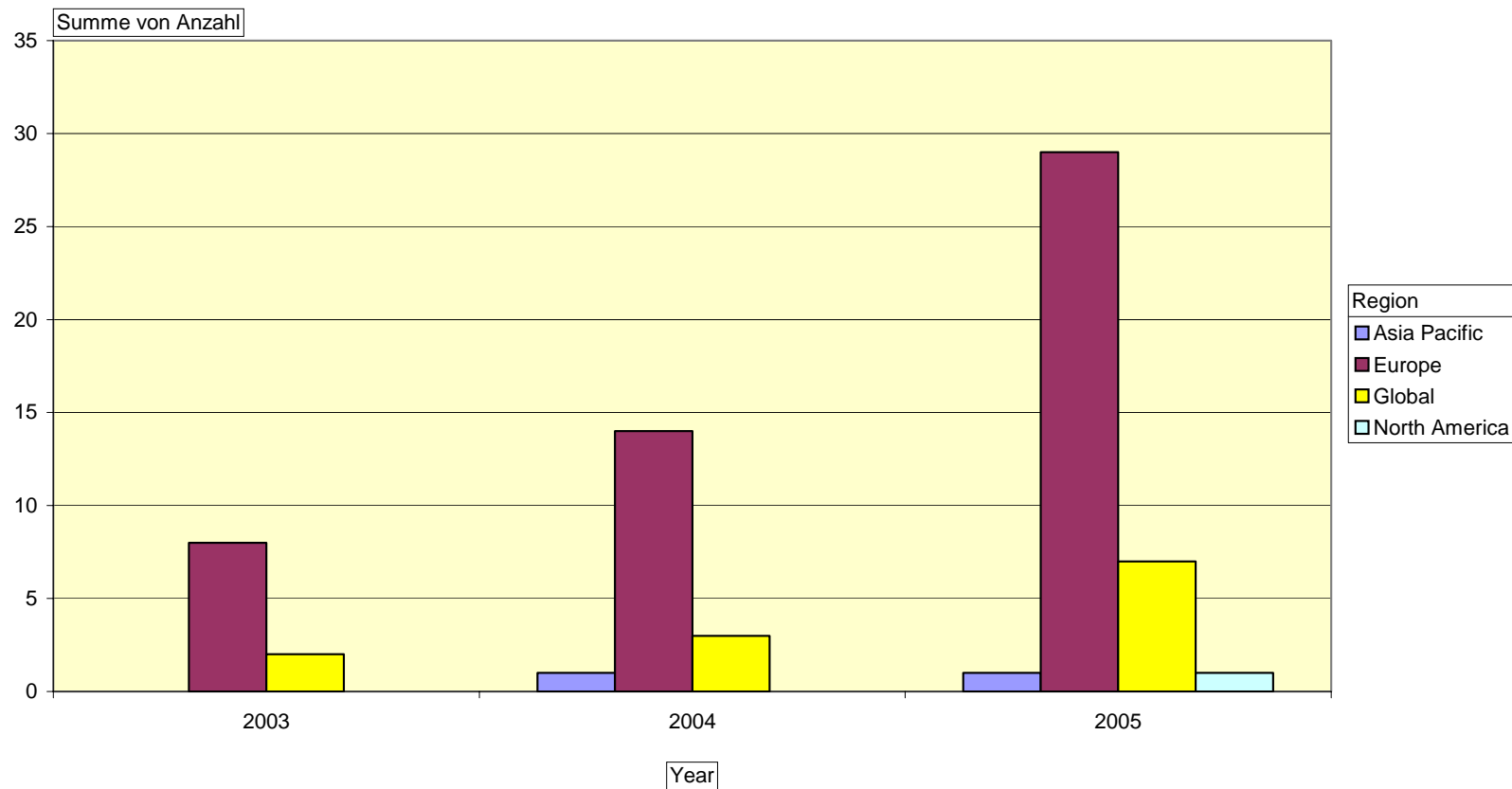
(by sector, source: Enhanced Analytics Initiative)

Number of reports by sector



Increase in carbon research by brokers (by region, source: Enhanced Analytics Initiative)

Number of reports by region



Selected research examples – WestLB, Garz et al., „Carbonomics“, July 2003

EQUITY MARKETS



July 2003

Carbonomics

Value at Risk through climate change



Pan European Equity
Strategy
SRI

Analysts
Dr Hendrik Garz
Claudia Volk

Input data

- GDP and GHG emission scenarios (stabilisation at 550 or 450 ppm)
- Company ratings (carbon exposure, management quality)

Selected research examples – DrKW, Rowland et al., « Emission trading Carbon Derby part II», Oct. 2003

Europe / Equity
Utilities

20 October 2003

Emission trading Carbon Derby Part II: And they're off



Revised impact of CO₂ trading

Implementation of CO₂ trading is sufficiently well advanced for us to raise our estimate for the price of CO₂ allowances, and to narrow the range of financial impacts. In particular, enough details are emerging about national allocations for us to add RWE to our list of sizeable and likely winners (with E.ON and Scottish & Southern).

- ▶ **Uncertainties falling away as trading scheme takes shape:** In March, we set out conceptually why CO₂ trading should be a value-creation opportunity for German and UK utilities, albeit within a broad range, E.ON +1% to +24% on its share price or Scottish & Southern +2% to +15%. Now the range of uncertainties can be narrowed.
- ▶ **Homing in at top end of range:** Our original study set out that CO₂ allowances could trade at €7.5-20/tonne, which might add 15% to 55% to wholesale electricity prices in Germany and the UK. Decisions over the allocation process mean the bottom end of this range has become increasingly unlikely, leading us to raise estimates for CO₂ allowances to €15/tonne in 2006 and €25/tonne in 2010. Against early 2003 levels, wholesale power prices in Germany and the UK are seen rising 65-70%.
- ▶ **RWE added to list of E.ON and Scottish & Southern as significant beneficiaries:** In March, we highlighted that regardless of the details in the National Allocation Plans, E.ON and Scottish & Southern stood to benefit. Sufficient details are now emerging about National Allocation Plans for us to conclude that RWE should see a valuation gain of around 20% on its share price and the risk has passed that allowance costs might be greater than revenue gains. Electrabel too may have a bigger gain than we originally perceived.
- ▶ **Risk to estimated price of CO₂ allowances is on upside:** Economic recovery or fuel price swings could see the price of CO₂ allowances reach €25-30/tonne during 2005-07 – initially exaggerating the value-creation opportunities – but before long there could be political fallout.

Chris Rowland

+44 20 7475 7489
chris.rowland@drkw.com

Geraint Anderson

+44 20 7475 2535
geraint.anderson@drkw.com

Martin Brough

+44 20 7475 2362
martin.brough@drkw.com

Julian Cepeda

+34 91 745 8213
julian.cepeda@drkw.com

Ignacio Font

+44 20 7475 2514
ignacio.font@drkw.com

Javier Garrido

+34 91 745 8247
javier.garrido@drkw.com

Ajay Patel

+44 20 7475 1889
ajay.patel@drkw.com

Lueder Schumacher

+44 20 7475 2491
lueder.schumacher@drkw.com

Input data

- Carbon factors of generation portfolio
- Flexibility to switch to cleaner mix
- Stringency of country policies and likelihood of “pass-through”

Selected research examples – UBS, Schneider, “Cement industry and sustainable development”, June 2004



UBS Investment Research

Cement Industry and Sustainable Development

Global Equity Research

Europe Including UK

Building Materials

Sector Comment



Cement sector: CO2 emission challenge

- **Cement producers: Major emitters of CO2**
The cement sector represents 5% of global anthropogenic (man-made) CO2 emissions. Black-sky scenarios suggest that these emissions could almost double over the next 20 years. Rapid growth of cement production as well as high energy consumption and carbon emissions make the sector important from an energy and environmental point of view.
- **Awareness of global warming is rising - notably in the EU**
In order to fight global warming, the EU-15 has accepted the UN's Kyoto Protocol to cut emissions by 8% before 2012. Over 2005-07, emission allowances will be allocated to over 12,000 EU industrial plants, including cement manufacturers. From 1 January 2005, EU companies will be able to trade allowance in the EU Emission Trading Scheme (ETS).
- **EU cement sector should meet 2005-07 targets**
The EU has set regional targets for the cement industry in 2005-07. These look in line with achievements so far. However, the sector appears to have little leeway to meet more stringent future targets by reducing emissions within the EU.
- **Generating credits via cuts outside the EU**
In the longer term, meeting more stringent targets may require developing clean projects outside the EU, which also generate ETS credits. In this respect, we believe that the global cement groups have advantages over the smaller producers.

June 2004

www.ubs.com/investmentsresearch

Eric Schneider
eric.schneider@ubs.com
+33 1 48 88 3091
Mark Stockdale
mark.stockdale@ubs.com
+44 20 7568 4394
Saul Windiate
saul.windiate@ubs.com
+44 20 7568 4030

Input data

- Likely long-term reduction of GHG emission factors needed to achieve Kyoto goal
- Emission factors of different cement technologies, BAT
- Expected emission allowances

Selected research examples – Goldman Sachs, Ling at al., “Sustainable investing in the energy sector”, Feb. 2004 / Aug. 2005



Global Energy

Sustainable investing in the energy sector

The Goldman Sachs Group, Inc.

August 24, 2005

[Click here to access full report](#)

Related research:

[Global Energy: Environmental and social issues count, February 25, 2005](#)

[Global Energy: 100 projects to change the world, January 13, 2005](#)

Anthony Ling

Goldman Sachs International
anthony.ling@gs.com
London: 44-20-7774-6776

Sarah Forrest

Goldman Sachs International
sarah.forrest@gs.com
London: 44-20-7552-9368

Andrew Baird

Goldman Sachs International
andrew.baird@gs.com

Integrating ESG. We launched our GSEES Index, to measure performance, in February 2004. Index leaders have outperformed. Our new, expanded ESG Index measures overall management into a framework for sustainable investing in the energy sector. The highest exposure to new legacy assets, which drive long

Economic returns drive valuation and performance

We find that correlations of valuation with economic returns are much higher than those for the energy sector and the market in general. Portfolios constructed by this method have outperformed those we have tested.

Underlying economic returns are largely driven by access to new legacy

In our view, access to new legacy assets is the key driver of sustainable incremental returns. Portfolios directed at our Top 100 projects. Leaders in exposure to these assets have outperformed.

ESG leaders and new legacy asset winners: A potent combination

We find a strong correlation between leaders in our Environment, Social and Governance categories and new legacy asset winners. Companies that are leaders in both categories have outperformed their peers. Petrobras, Statoil and TOTAL are the current leaders in both categories and are best in our opinion. We have expanded our index from 30 to 42 criteria and have included a composite index that quantifies performance with regard to the economy, market, society and the environment.

Input data

- CO2 emissions, current and projected
- Carbon management quality


Selected research examples – CMCIC, Quemer et al., “On the road again”, Auto Industry, Oct. 2005

CMCIC Securities

SRI - EFI Sector Research

On the road again

A Financial and Extra-financial Analysis of the Auto Industry



- Caught in the void → fuel prices, carbon and pollution
- Charting new terrain becomes key → alternative power trains
- Cost is king → it determines the way forward
- Don't forget → governance, BRICs, legacy costs and offshoring
- Toyota is our global champion → other winners could emerge

6, avenue de Provence
75441 Paris Cedex 09
Tel. : +33 1 45 96 77 00
Fax : +33 1 45 96 77 47

TPUCOAT

Pierre-Yves Quémer, Financial Analyst +33 1 45 96 77 63 quemerpi@cmccs.com
Valéry Lucie Leclain, SRI Analyst +33 1 45 96 78 23 lucie@cmccs.com
Serj Nahat, SRI Analyst +33 1 45 96 78 75 nahatse@cmccs.com

October 2005

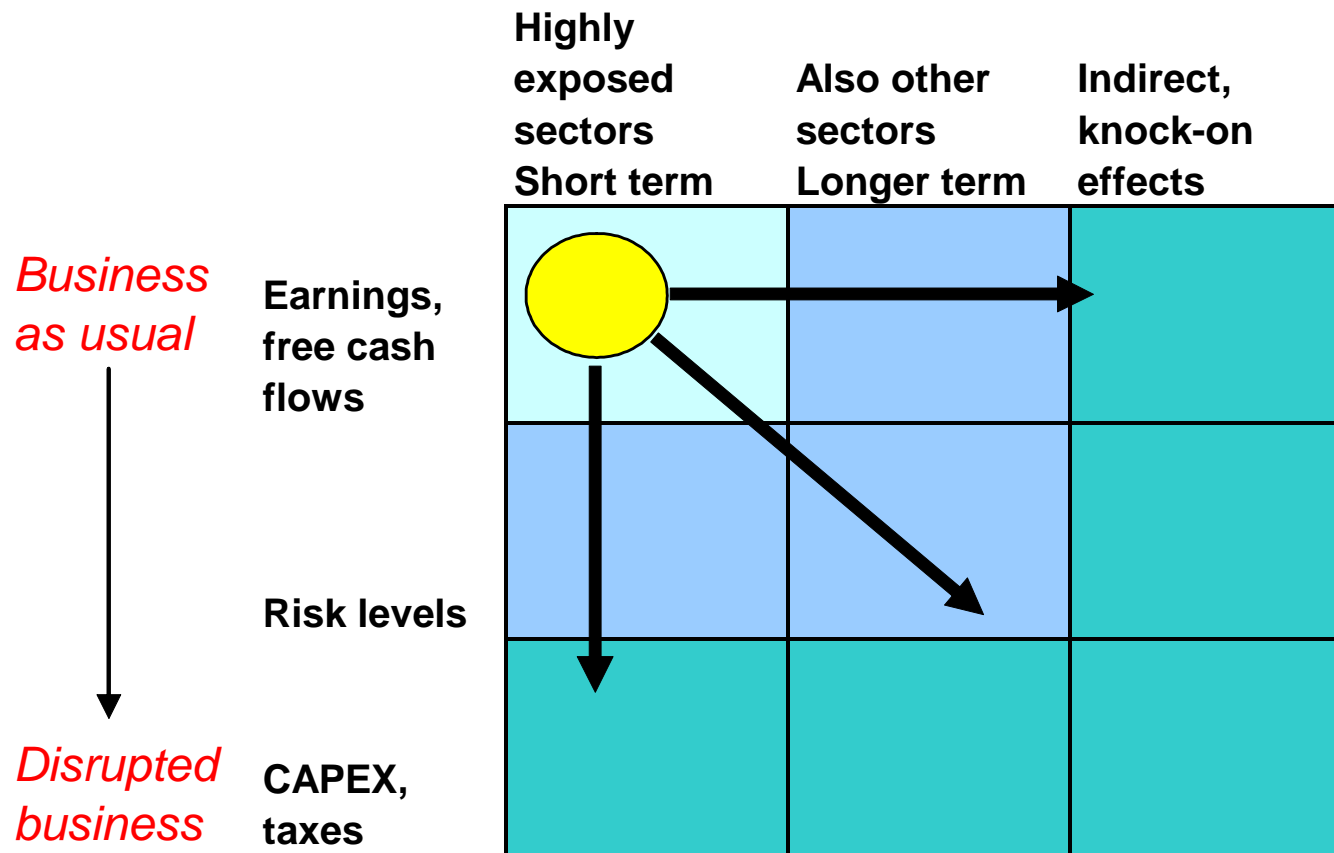
Input data

- CO2 emissions, current and projected
- CO2 emission factors of different auto technologies
- Carbon management quality

Types of carbon data used

- GHG emissions (companies, sectors, countries)
- GHG emission scenarios
- Contextual information for emissions (emission factors of different technologies, BAT, sector averages, national quotas/allowances etc.)
- Quality of carbon exposure management (companies, sectors)
- ETS: current and expected price developments
- Regulatory policies: current state and expected future development
- Macroeconomic data (external costs, GDP impacts of carbon policies etc.)

Where we stand, where we need to get to



The challenge of more sophisticated financial analysis of carbon and climate change trends

- Impact on risk levels and credit ratings
- „advanced“ risk: liability, litigation, reputation
- Better understanding of technology and infrastructure trends, impact on capital expenditure
- Do not forget climate change!
(property loss, risk of business interruption)

What different actors can do

Companies to better report forward-looking information

- Expected development of carbon exposure (own emissions, allowances/changing regulatory framework)
- Strategies to manage exposure (internal/external)
- Residual exposure and what it means for company-wide earnings and risks levels

Governments to better communicate regulatory “pathways”

- Long-term commitment to market-based mechanisms
- Long-term expected sector-level allocations

What different actors can do

Research providers to expand scope of analysis:

- Expand sector scope and time-horizon
- Also include indirect, knock-on effects
- Focus more on risk measures, credit ratings!
- Explore macro-impacts on whole economy

...and investors to require that the research is used in asset management

And the CDP?

- Continue to play key role in improving company disclosure of primary data, not additional interpretation
- Provide industry- and sector-level benchmarking information
- Continue to improve comparability of data, especially within sectors