



INSURANCE ASPECTS OF THE EUROPEAN  
UNION EMISSIONS TRADING SYSTEM

**KATHARINA WILSON**  
ACMA, CGMA | MANAGER

**LEE SWAIN**  
ACMA, CGMA | PARTNER

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# Agenda



Overview  
History and  
Current Program



Trading  
EEX



Accounting for  
EU ETS



Insurance  
Considerations



Questions





# Overview

# European Union Emissions Trading Scheme (EU ETS)



- Worldwide largest multi-country, multi sector greenhouse gas emissions trading system – cap and trade
- Tackle climate change by introducing a price for CO2 emissions (economic value)
- EU's statutory enactment of its Kyoto Protocol obligations: reduce emissions by 8% on 1990 levels by 2012
- Regulation of carbon dioxide emission in energy intensive industries:
  - > Power generation industry
  - > Oil refineries
  - > Steel works
  - > Commercial aviation (from 2012)
- More than 11,000 power stations and industrial plants across the EU

# Phase 1 –2005 to 2007



## Approved National Allocation Plan 2005 – 2007 based on:

- > Total quantity of allowance that the Member State intends to issue during the Phase
- > How it proposes to distribute those allowances among the installations subject to the scheme

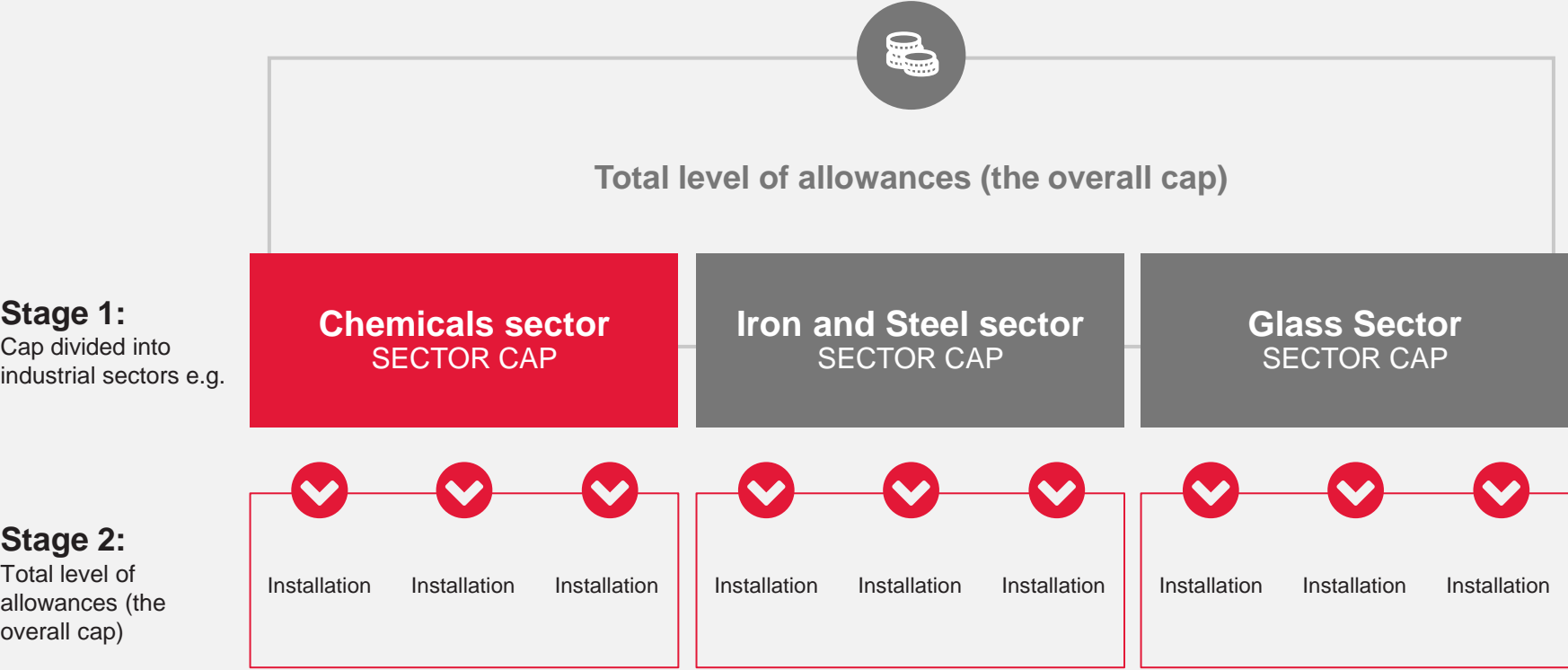
**In 2003, total UK CO<sub>2</sub> emissions estimated at 559 MtCO<sub>2</sub> and around 48% (272 MtCO<sub>2</sub>) of the installations emitting CO<sub>2</sub> were included in the EU ETS:**

- > Energy supply sector – Electricity generation, oil production and refining, gas production and transmission business
- > Transport
- > Domestic
- > Agriculture
- > Forestry and land use
- > Public sector



# Phase 1 – Allocation of Allowances to Installations

## Allocation methodology approach for Phase I



[https://webarchive.nationalarchives.gov.uk/ukgwa/20121024190733mp\\_/http://www.decc.gov.uk/assets/decc/what%20we%20do/global%20climate%20change%20and%20energy/tackling%20climate%20change/emissions%20trading/eu\\_ets/publications/ria-allocation-methodology.pdf](https://webarchive.nationalarchives.gov.uk/ukgwa/20121024190733mp_/http://www.decc.gov.uk/assets/decc/what%20we%20do/global%20climate%20change%20and%20energy/tackling%20climate%20change/emissions%20trading/eu_ets/publications/ria-allocation-methodology.pdf)

# Phase 1 – Allocation of Allowances to Installations (UK)

Phase I Sector	Average Annual Emissions (1998-2003)	Annual Emissions 2003	Annual Allocation Before Subtracting NER	New Entrants Reserve	Annual Allocation Existing Installations
	MtCO2	MtCO2	MtCO2	MtCO2	MtCO2
<b>Approved NAP:</b>					
Power Stations	155.0	174.4	136.9	6.3	130.6
Refineries	17.7	18.0	19.8	0.4	19.4
Offshore	16.6	17.5	19.1	1.6	17.5
Iron & Steel	18.3	19.9	23.7	3.7	20.0
Cement	8.8	9.7	11.2	1.6	9.6
Chemicals	9.0	9.4	10.4	1.0	9.4
Pulp and Paper	3.7	4.5	5.1	0.2	4.9
Food, Drink & Tobacco	3.1	3.9	3.9	0.1	3.8
Non-Ferrous	2.7	2.8	3.1	0.1	3.0
Lime	2.3	2.2	2.7	0.1	2.6
Glass	1.7	1.9	2.2	0.2	2.0
Services	1.8	2.0	2.1	0.1	2.0
Other Oil & Gas	1.4	1.9	1.9	0.3	1.6
Ceramics	1.7	1.8	1.8	0.0	1.8
Engineering & Vehicles	1.1	1.2	1.3	0.0	1.3
Other	0.3	0.4	0.4	0.0	0.4
<b>Total Allowances</b>	<b>245.4</b>	<b>271.5</b>	<b>245.4</b>	<b>15.3</b>	<b>229.9</b>



- > **Total Phase 1 Cap : 245.4 MtCo2/Yr**
- > **New Entrants Reserve: 15.3 MtCo2/Yr**
- > **Incumbent Installations: 229.8 MtCO2/Yr**
- > **2006: 24 MtCO2 were cancelled for opted-out installations leaving 205.8 MtCO2 for 674 incumbent installations and 12.4 MtCO2 for new entrants.**
- > **Total 2006 allowance was 217.7 MtCO2**
- > **Total 2006 emissions were 251 MtCO2 (increase in coal fired electricity generation)**

[https://webarchive.nationalarchives.gov.uk/ukgwa/20090731202116mp\\_/http://www.defra.gov.uk/environment/climatechange/trading/eu/pdf/0505nap.pdf](https://webarchive.nationalarchives.gov.uk/ukgwa/20090731202116mp_/http://www.defra.gov.uk/environment/climatechange/trading/eu/pdf/0505nap.pdf)

# Phase 1 – Carbon Prices



EU wide emissions in 2006 were 2,027 MtCo2 which was 51.7 MtCO2 below the allowance → 2005 and 2006 allowance surplus decreased the price of CO2



19 member states experienced a surplus (Poland, France, Germany, the Czech Republic and the Netherlands)

[https://webarchive.nationalarchives.gov.uk/ukgwa/20090731202116mp\\_/http://www.defra.gov.uk/environment/climatechange/trading/eu/pdf/0505nap.pdf](https://webarchive.nationalarchives.gov.uk/ukgwa/20090731202116mp_/http://www.defra.gov.uk/environment/climatechange/trading/eu/pdf/0505nap.pdf)



# Phase 2 –2008 to 2012

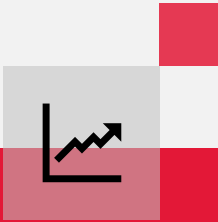
Phase II Sector	Annual Allocation (MtCO2)	% Contribution to NER	Allocation to existing installations
Large Electricity Producer	107.42	7.3%	99.53
Combined Heat and Power	24.75	13.3%	21.46
Iron & Steel	24.38	2.7%	23.73
Offshore	20.20	11.4%	17.89
Refineries	15.42	2.1%	15.10
Cement	11.25	2.7%	10.95
Chemicals	5.59	3.9%	5.37
Aluminium	2.85	2.1%	2.79
Lime	2.76	2.1%	2.70
Glass	2.29	2.7%	2.23
Downstream	2.16	35.2%	1.40
Ceramics	1.90	2.9%	1.84
Food and Drink	1.73	3.0%	1.68
Services	1.55	8.1%	1.42
Other Elec Producers	1.32	2.1%	1.29
Other B	1.09	2.7%	1.06
Pulp & Paper	1.05	2.1%	1.03
Other A	0.95	10.1%	0.85
Other C	0.29	2.1%	0.28
<b>Total Allowances</b>	<b>228.94</b>	<b>7.1%</b>	<b>212.62</b>



## Phase 2 objectives:

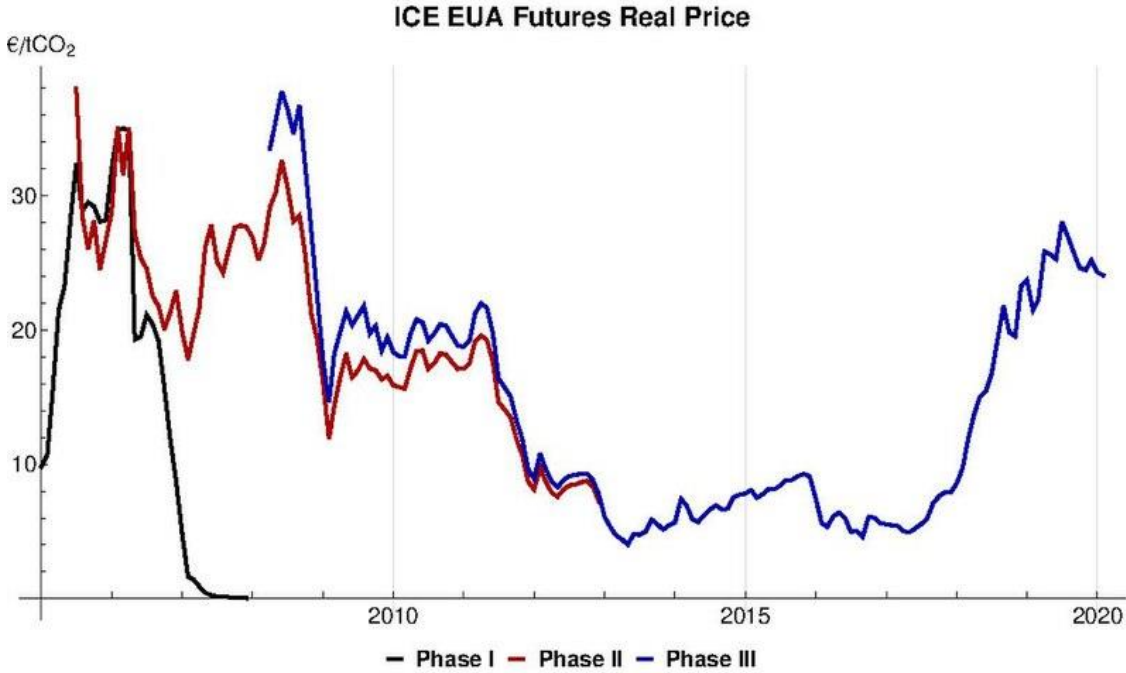
- > Address anomalies and distortions
- > Improved harmonisation with other Member States
- > Simplification of allocations methods
- > Auctioning of 7% of the total allowance was introduced
- > The aviation sector was brought into the EU ETS on 1 January 2012 (but application for flights to and from non-European countries was suspended for 2012)
- > Three new countries: Iceland, Liechtenstein, Norway

## Phase 3 –2013 to 2020

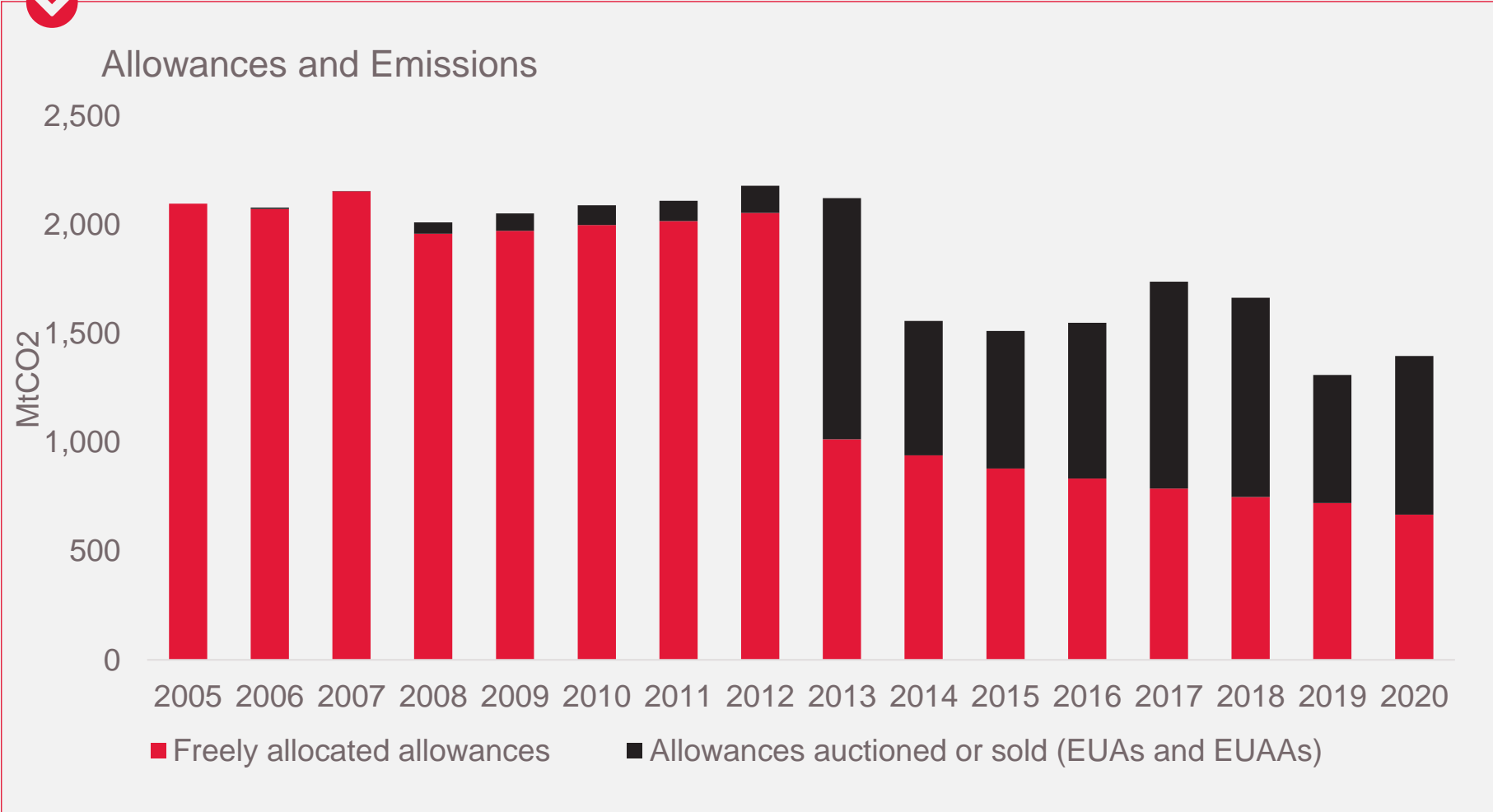


- Centralised EU-wide cap on emissions in place of the previous system of national caps
- Auctioning increased to 50% of European Union Allowances (EUAs) and 15% of European Union Aviation Allowances (EUAAAs), compared to a maximum of 10% during Phase 2
- No free allowances for electricity generators including CHP (except for Bulgaria, Hungary and Romania)

# Carbon Price Development 2005 to 2020



# Allowances Auction Volumes



# Phase 4 –2021 to 2030

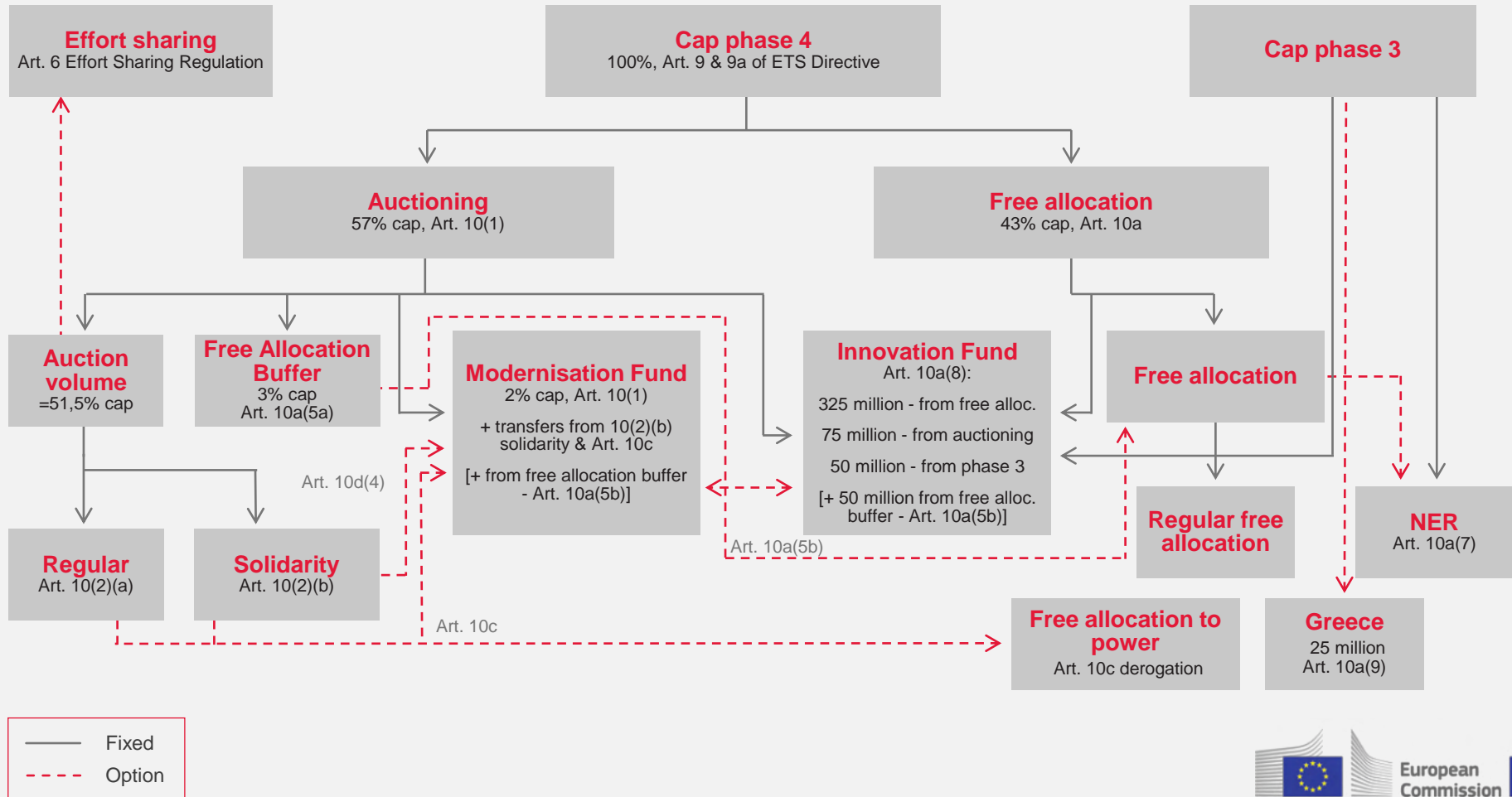


- Linear annual reduction factor increased from 1.74% to 2.2%
- Auctioning considered the most transparent method for allocating emission allowances
- European Energy Exchange (EEX) appointed as EU ETS common auction platform from 2021
- Alignment of free allocation with actual production levels
- From 2021, the UK is no longer part of the EU ETS which was replaced by UK ETS
- From 2023, the number of allowances will be capped to the auction volume of the previous year and excess allowances will be cancelled (Market Stability Reserve)

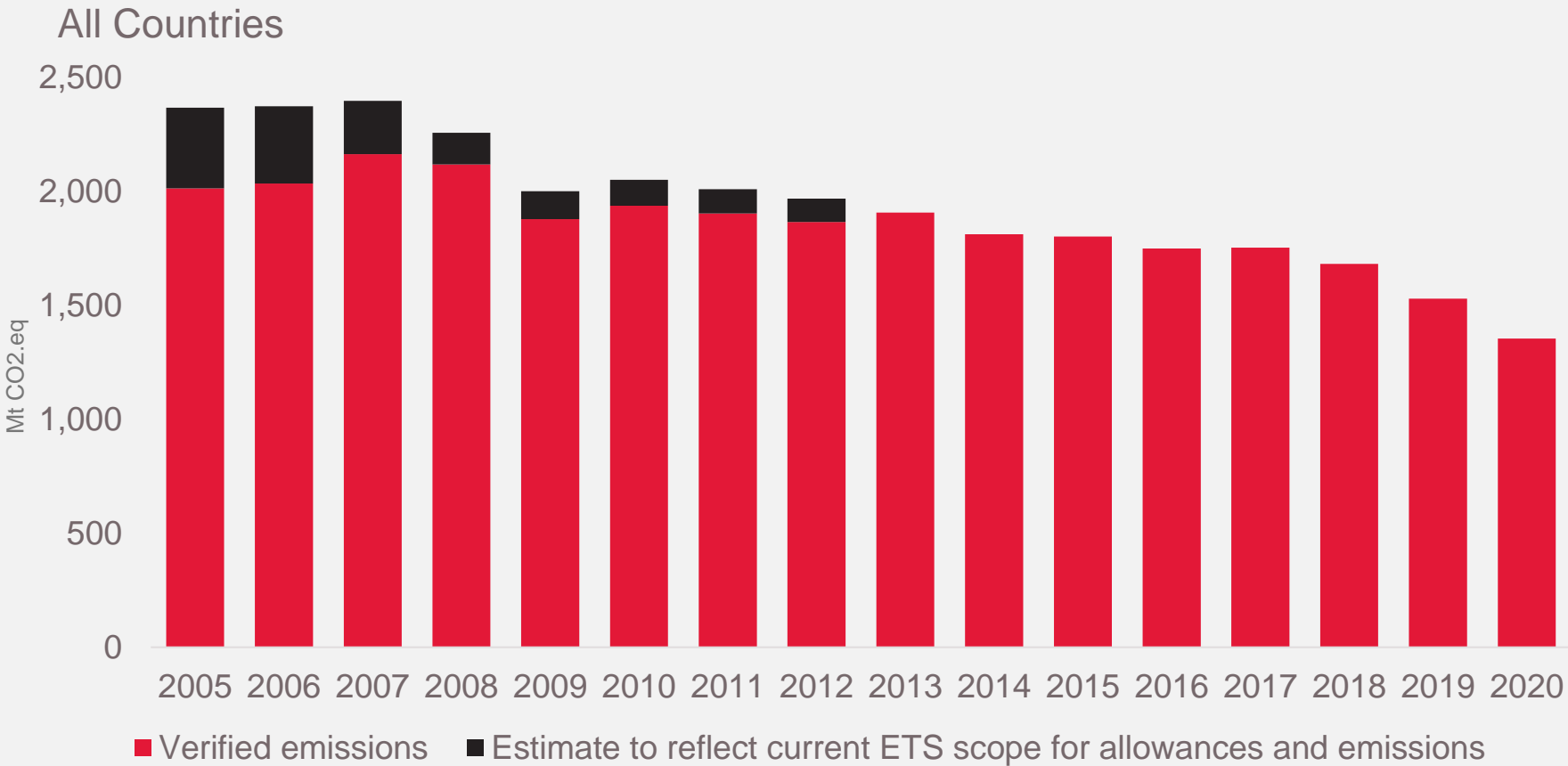


# Phase 4 Allowance Allocation

## Phase 4 EU ETS cap for general allowances



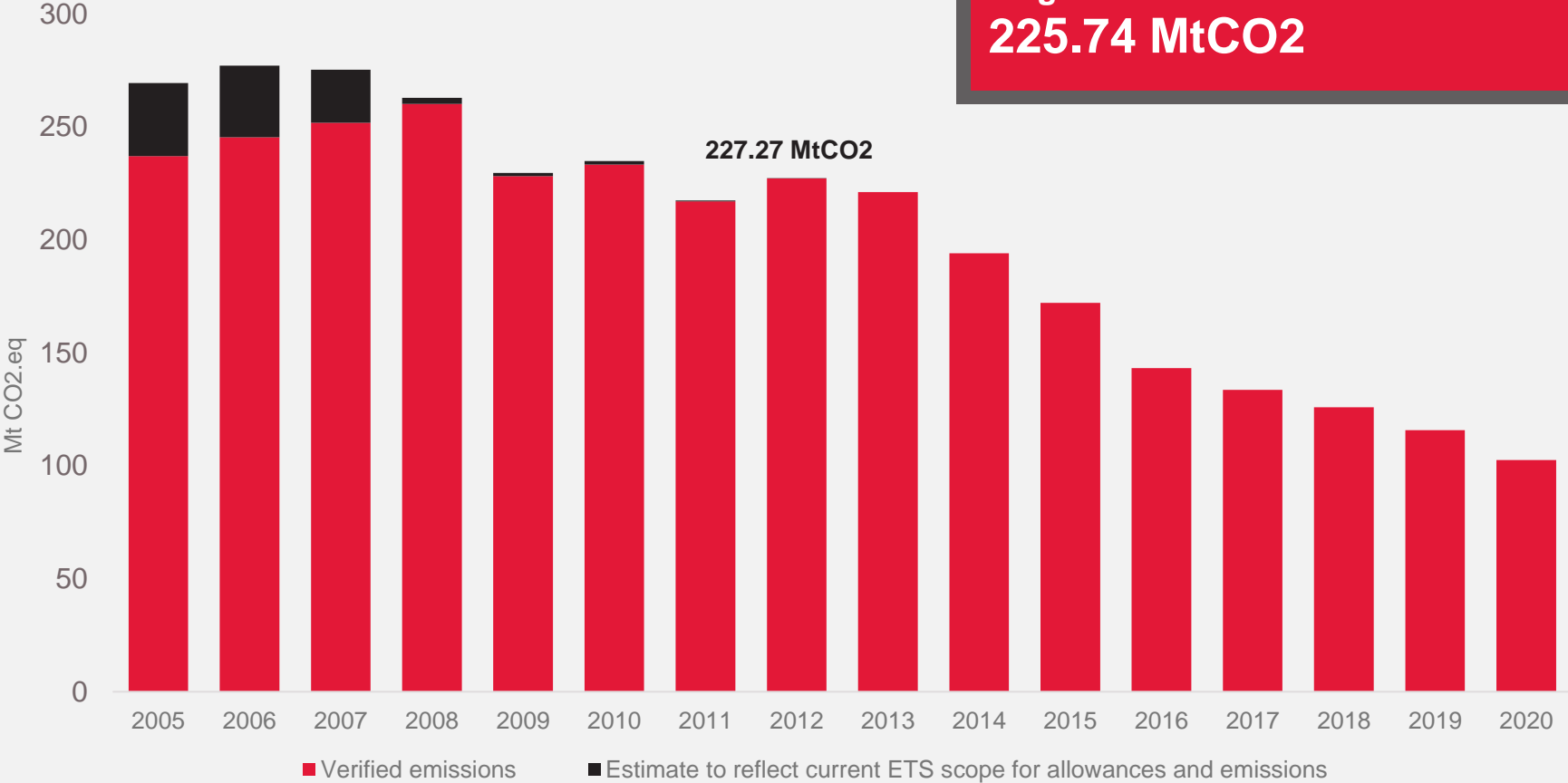
# Historical Emissions All Countries



# Historical Emissions UK



Target 92% of 1990 Emissions in 2012:  
**225.74 MtCO<sub>2</sub>**







# Trading

# Trading in 2021



EU wide cap fixed at 1,571,583,007 allowances



57% of the cap is auctioned and the rest is provided for free



**Cap and Trade:** The rationale behind emissions trading is that it enables emission reductions to take place where the cost of the reduction is lowest, lessening the overall cost of tackling climate change.



More ambitious climate change targets



Prices based on a complex interplay of near-term and long-term supply and demand balance, fuel prices, macro economic trends and regulations

# EU ETS Trading



## Trading:

- > Most Trading is done via exchange
- > Physically settled
- > December products have the most liquidity
- > Spot, monthly and quarterly products are available
- > Derivatives are also available – futures and options etc

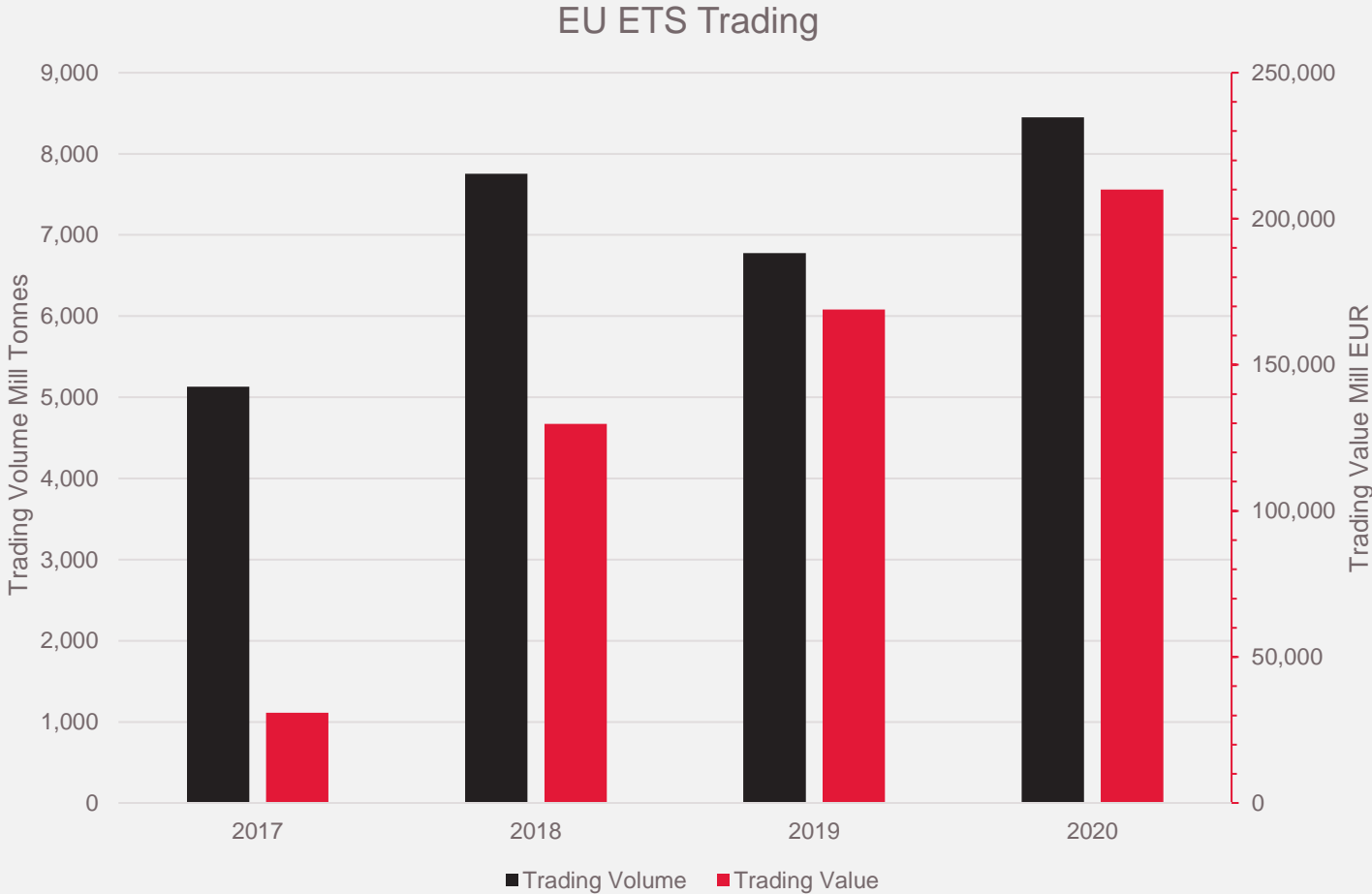
## Exchanges:

- > ICE
- > CME
- > Nasdaq
- > EEX

## OTC



# Trading Volumes and Values



# Accounting for EU ETS

# Accounting for EU ETS – Rules



**It's complicated!**

- December 2004 - International Accounting Standards Board issued its interpretation of how to account for the EU ETS (IFRIC 3)
- IFRIC 3 was controversial – introduced volatility:
  - > Created a mismatch between the movements in the asset and liability
  - > Revaluation of allowance balances at prevailing market prices
- June 2005 – IFRIC was withdrawn
  - > No authoritative guidance
  - > Small number of companies have continued to adopt IFRIC 3
  - > Other companies have adopted alternative approaches
- Alternative approaches require the consideration of other rules

# Accounting for EU ETS – Considerations



**Initial  
recognition  
of granted  
allowances**



**Initial  
recognition  
of purchased  
allowances**



**Subsequent  
treatment of  
allowances**



**Treatment  
of deferred  
income**



**Recognition  
of liability**



**Measurement  
of liability**

# Accounting for EU ETS - Scenario

To illustrate the impact on the financial statements of these three accounting approaches consider the following scenario:

- Companies A, B and C all have financial year ends of 31 December 2006
  - Each receives 150 granted allowances at the start of the year
  - The market price at grant date was £20 per allowance
  - Each company requires 200 allowances to cover its obligation for the 2006 compliance year to be settled in February 2007
  - The market price at 31 December 2006 was £25 per allowance
- Accounting policies adopted:
- Company A has adopted the Alternative Approach 1
  - Company B has adopted the Alternative Approach 2
  - Company C has adopted the 'full market value' approach (IFRIC 3)



# Financials Example

Table 1: The companies' financial results and balance sheet for the 2006 year-end

Description	Alternative approach 1	Alternative approach 2	IFRIC 3
	Company A	Company B	Company C
	GBP	GBP	GBP
<b>Income Statement</b>			
Release of deferred income	3,000 (a)	-	3,000 (a)
Emissions cost	(4,250) (b)	(1,250) (c)	(5,000) (d)
Net result	(1,250)	(1,250)	(2,000)
<b>Balance Sheet</b>			
Intangible assets	3,000 (a)	-	3,000 (a)
Liability	(4,250) (b)	(1,250) (c)	(5,000) (d)
Net assets	(1,250)	(1,250)	(2,000)
Current year results	(1,250)	(1,250)	(2,000)
Revaluation reserve	-	-	-
Shareholders funds	(1,250)	(1,250)	(2,000)

## Notes:

- > (a) 150 allowances received measured at market value at grant date £20 per allowance (150 \* £20 = £3,000)
- > (b) liability based on allowances held measured at carrying amount, and liability related to excess emission market value at period end (150 \* £20) + (50 \* £25) = £4,250
- > (c) 50 shortfall in obligation measured at market value at period end £25 per allowance
- > (d) 200 obligation measured at market value at period end £25 per allowance

# Accounting for EU ETS – Conclusion



- > Important to understand the rules adopted and their impact on the financial statements
- > However, substance over form!





# Insurance Considerations

# Insurance Considerations:



## Underwriting:

- > Geographical considerations
- > Industry considerations
- > Treatment of EUAs in sum insured calculations and consequent payment of premium



## Claims:

- > Typically taken as a saving
- > What about the alignment of subsequent granted allowances with actual production levels?
- > ICOW
- > AICOW
- > MIP



# Presenters

# Lee Swain ACMA, CGMA

## Practice Areas

- Advanced Loss of Profits
- Business Interruption
- Litigation
- Loss of Profits
- Pre Loss BI Value Reviews & Determination
- Subrogation

## Industry Experience

- Power Generation
- Oil & Petrochemical
- National Railway
- Telecommunications
- Mining
- Steel & Aluminium

## Professional

Engaged in practice development and client services for the UK, London market, and Europe. Serves as an integral member of the firm's Energy team. Is a member of the LBIA and OPERA.

## Experience

Insurance: Expert within energy industry, hired on complex losses involving power generation (fossil fuels and renewables), oil and gas, petrochemical and mining. Other areas of focus include steel and aluminium, the national railway and telecommunications. The value of claims has varied from a few hundred thousand pounds to losses in excess of £500 million.

Litigation: Provided litigation support services to many of his clients.

## Seminars

Presented numerous seminars on forensic accounting subjects related to power generation, oil and gas and petrochemicals.

## Contact

**E:** [lswain@mdd.com](mailto:lswain@mdd.com)

**M:** +44 7714 262 850



1998

Graduated from  
University of Liverpool

1998

Matson, Driscoll &  
Damico - London

2015

Became Partner

# Katharina Wilson ACMA, CGMA

## Practice Areas

- Business Interruption
- Contingent Business Interruption
- Extra Expenses & Economic Limits
- Fraud Investigation
- Litigation
- Stock Losses
- Subrogation

## Industry Experience

- Automotive & Electronics Manufacturing
- Entertainment & Hotels
- Mining
- National Railway
- Oil & Petrochemical
- Power Generation
- Retail
- Steel & Aluminium
- Telecommunications

## Professional

Engaged in client services for the UK, London market and Europe. Fluent in German and Polish, Kat has handled many claims in these languages.

## Experience

Insurance: Heavily involved in business interruption, power generation, stocks and contents, transportation and catastrophe services, having spent over a year in Thailand handling flood-related claims with values of up to \$200 million.

Litigation: Prepared expert witness reports.

## Seminars

Presented on matters relating to power generation and business interruption principles.

## Languages

German, Polish, French

## Contact

**E:** [kwilson@mdd.com](mailto:kwilson@mdd.com)

**M:** +44 7711 558 456



**2006**

Graduated from University of Applied Sciences

**2009**

Matson, Driscoll & Damico - London

**2017**

Became Manager

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