

Carbon Market Trends: Observations



Interactive Workshop on Carbon Credits Market

Mumbai
18/01/2008



Outline of the presentation

- EUAs and CERs
- Market trends of EUAs and CERs (in detail)
- Observations on the market
- MF Global: Helping Project Participants maximizing revenue

EUAs & CERs



EUAs & CERs

- **EUAs**: Under the **European Union Emission Trading Scheme** (EU ETS), one tonne of CO₂e is known as a European Union Allowance (EUA). It represents the right, to emit the equivalent of one metric ton of carbon dioxide.
- **Certified Emission Reductions (CERs)**: are Carbon Credits issued by the Clean Development Mechanism (CDM) Executive Board for emission reductions achieved by CDM projects and verified by a DOE under the rules of the Kyoto Protocol.
- CERs command a lower price than EUAs

Main Drivers for Price Difference

- **Counterparty and country credit ratings**
- **Uncertainty of transferability of CERs within the EU registry system**
- **Uncertainty on CER issuance and delivery timing**
- **Uncertainty on delivery volume**
- **Lack of a liquid options market**

Contd....

- **ITL:**

- International Transaction Log, is the mechanism through which CERs will be transferable to the National Registries of the Annex – 1 Countries.
- Without ITL CERs from the CDM projects can not be transferred to National Registries

- **Linking Directive:**

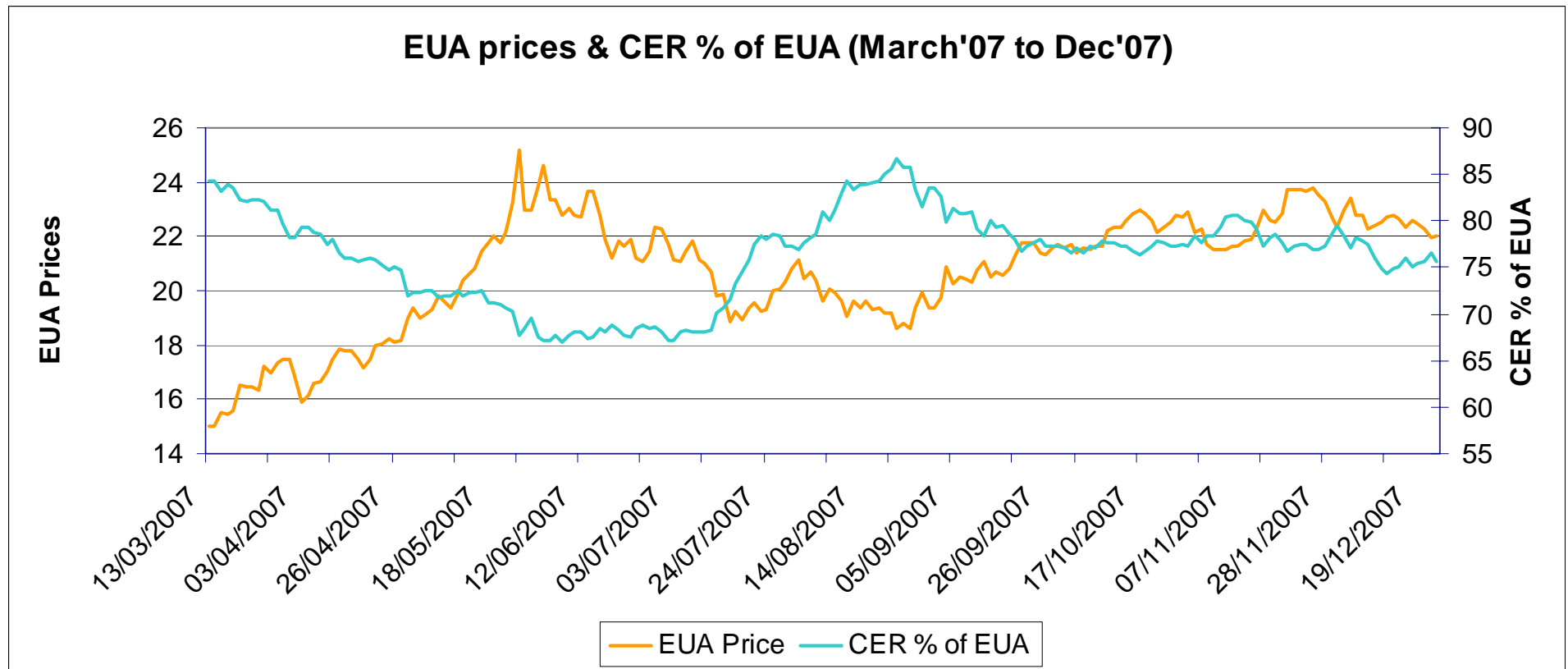
- Adopted by the EU parliament in April 2004, this allows emission reduction units generated by the project-based Kyoto mechanisms to be used for compliance by companies operating under the EU ETS.
- The rationale for this linkage is that cost-effective JI and CDM credits may reduce the costs of compliance for European industry

MARKET TRENDS & ANALYSIS

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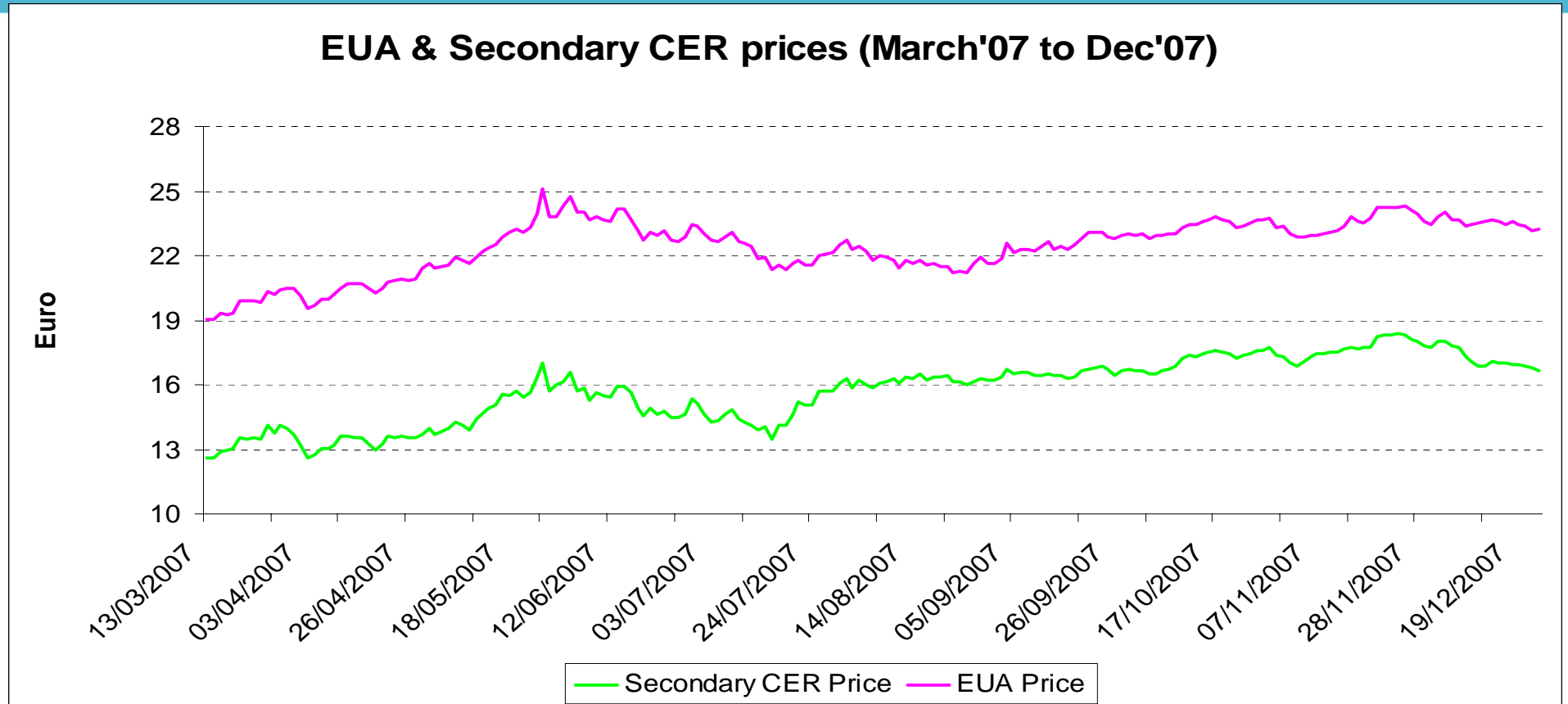
EUA Prices and CER Prices* as a % of EUA



• CER prices in % to EUAs had moved from 84.25% to 75.68% at the end of the year. This shows that the range has come down. It also dropped to 67% in June and again went up to 86.62%, however, it came down to 75.68% in the end.

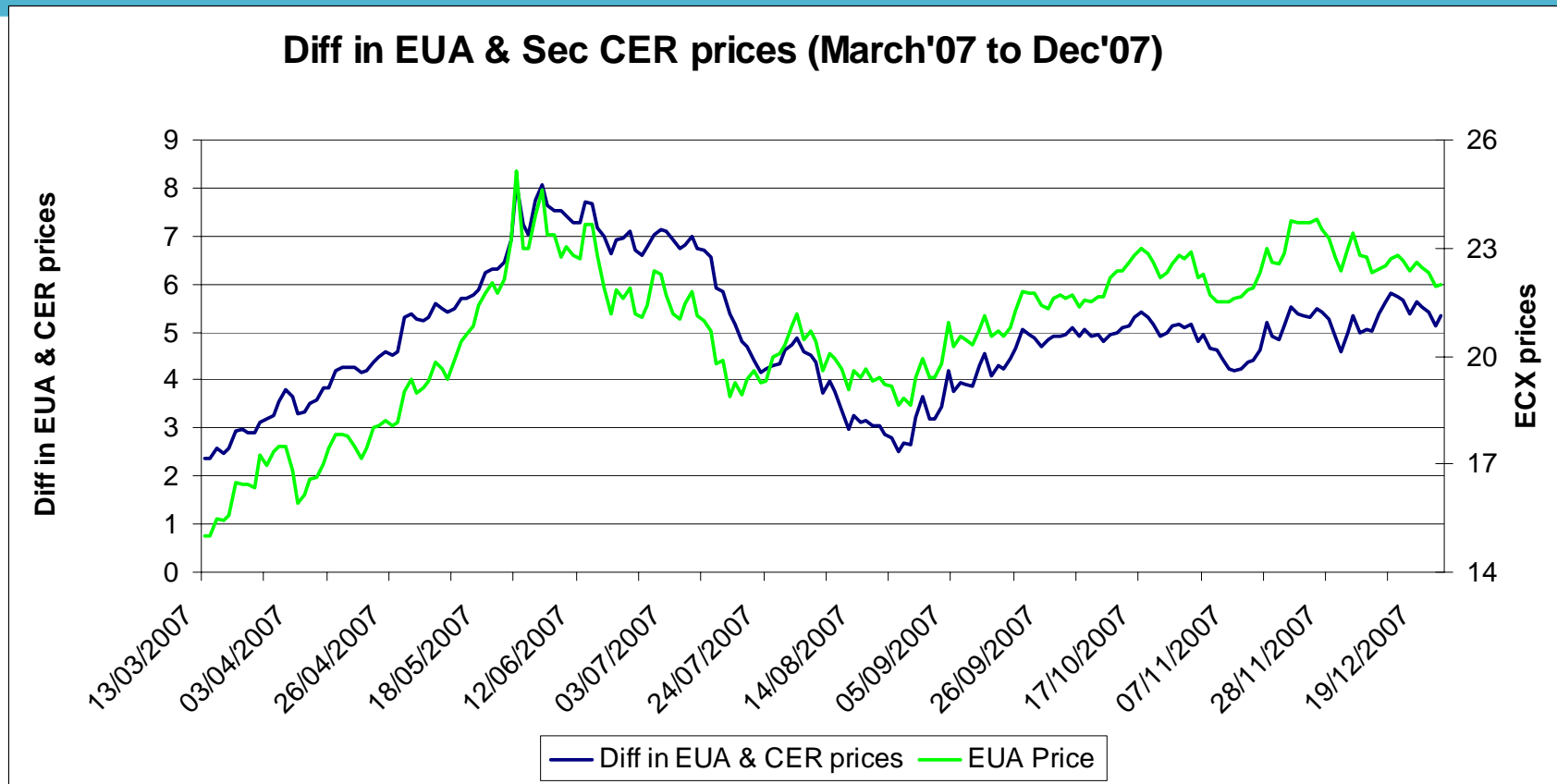
*Issued Secondary CERS

EUA & Secondary CER prices



- As can be seen in the above graph, the price gain for the EUAs is EUR 7, where as for CERs it is EUR 4.01. Which indicates that sec CER prices have not gain as much as EUAs

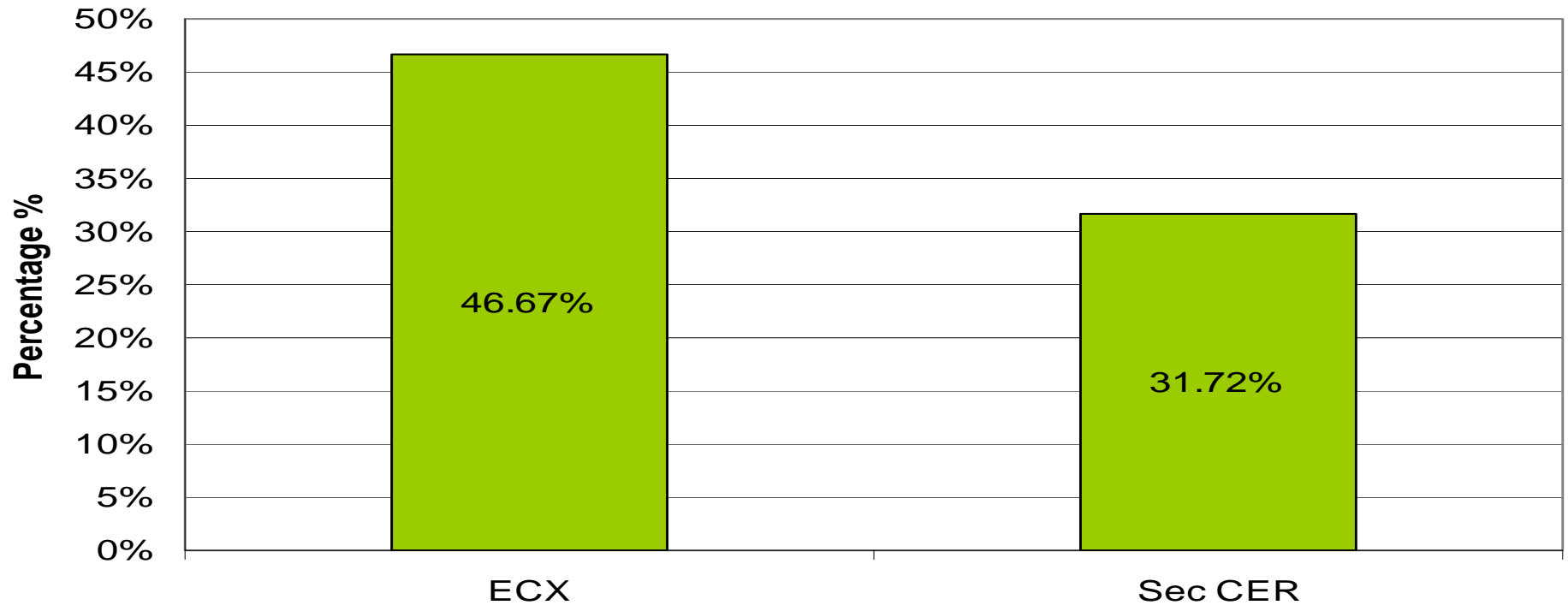
Diff in EUA & Sec CER prices



- The difference between the EUA and sec CER price has moved EUR 2.99 upwards. It was EUR 2.36 and now EUR 5.35. This shows that the gap has widened.

Price Movement

Price movement in % (March'07 to Dec'07)



- The movement in the prices for the EUAs has been more than that of Sec CERs. As we can see in the chart above, ECX prices moved 46.67% upward where as sec CERs only 31.72% only. This got reflected in the CER % of EUA graph as well.

To Summarize...

- There has been a gap between the EUAs and CERs prices and the CER prices have traded lower than the EUAs
- There is an increase in the prices of both EUAs and CERs in past 10 months
- However, in the last three months the CER prices came down and EUA prices have gone up.
- The CERs have been traded in the range of 65% to 85% of EUAs Prices in the past 10 months. However the average is about 75%
- The absolute difference between the Price of EUAs and Sec CERs has been bit volatile in the first half of the year. However, in the last three months the difference was steady at around EUR 5

OBSERVATIONS ON THE INDIAN CARBON MARKET

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Positive Points

- One of the most mature markets.
- Very strong government support for CDM.
- Good climate for Investments.
- Sophisticated and Innovative financial structuring

Positive Cont.....

- Project Developers are very well aware of the CDM market
- There is a still a Huge opportunity in many sectors
- Indian already has more than 1/3 of the share in the registered projects with UNFCCC

Negative Points

- Consultancy dominated market, not transactions.
- Transactions are very less as compared to other Non-Annex 1 countries.
- The sellers of Carbon Credits, have unrealistic expectations of the price.
- Lack of awareness among the project developers regarding the prices and the technicality of the CDM process.

Negative Points Cont.....

- The Sellers are not cashing in on the CDM revenues, in the hope of appreciation of CER prices.
- Sellers confuse EUA prices with CER prices.
- There is a lot of Mis-information in the market.

MF Global:

Helping Carbon Credits Project
maximizing the revenue

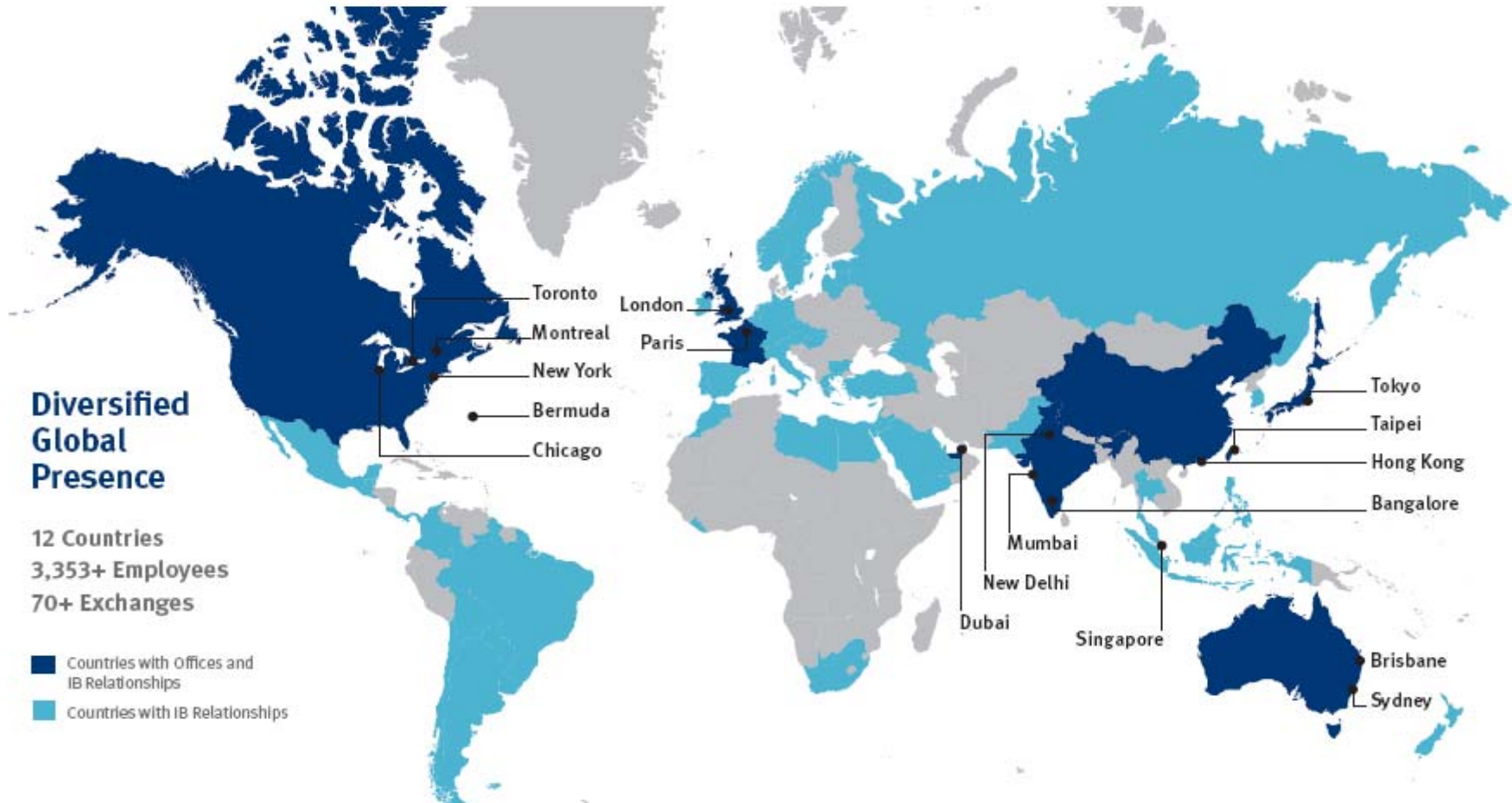
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Introduction

- World's Leading broker of Exchange listed Futures and Options.
- Operating in 12 countries and more than 70 exchanges.
- Client base of 130,000 worldwide.
- Serves as a value-added intermediary across a broad range of trading markets, including interest rates, equities, currencies, **energy**, metals, and agricultural and other commodities.
- Client base ranges from financial institutions, industrial groups, hedge funds and other asset managers to professional traders and private/retail clients.

Diversified Global Presence



MF Global & Carbon Credits

- A Significant Player in the Energy Sector
- Biggest Utility companies in Europe are our existing clients and trade Energy, Power etc. through us
- As most of the EUA and CER trading happens Over-the-Counter (OTC) and Buyer and Seller are the counterparty, Our relationships have enabled us to develop significant presence in this market
- We can do the following activities for you:
 - 1) Facilitate CERs transactions
 - 2) Facilitate VERs transactions
 - 3) Facilitate any 'hedging' deal for risk management.

MF Global & Carbon Credits cont.....

- We facilitate all kinds transactions in the carbon market, i.e. Spot, Forward, Forward with Fixed or Floating price etc.
- We have already brokered deals for some well-known corporates
- We provide this service through the process we call Independent Price Discovery (IPD)
- IPD gives an advantage to the Sellers in maximizing wealth from the Carbon Credits
- We can also provide strategies on hedging for Carbon Credits, which we feel is very important in today's market (Continue on next slide...)

Hedging the CER price risk

Assume that the seller gets a following bid for CER's to be issued in 2008:

Bid at 75% of Dec'08 ECX price for 100 units

Dec'08 ECX futures contract is quoting at EUR €2;

- In the above example the Bid is a FLOATING bid as the price the seller will get will be a function of the movement of the ECX contract.
- Case I – Unhedged
- Case II – Hedge by short selling 75 units of the ECX Dec 08 contract

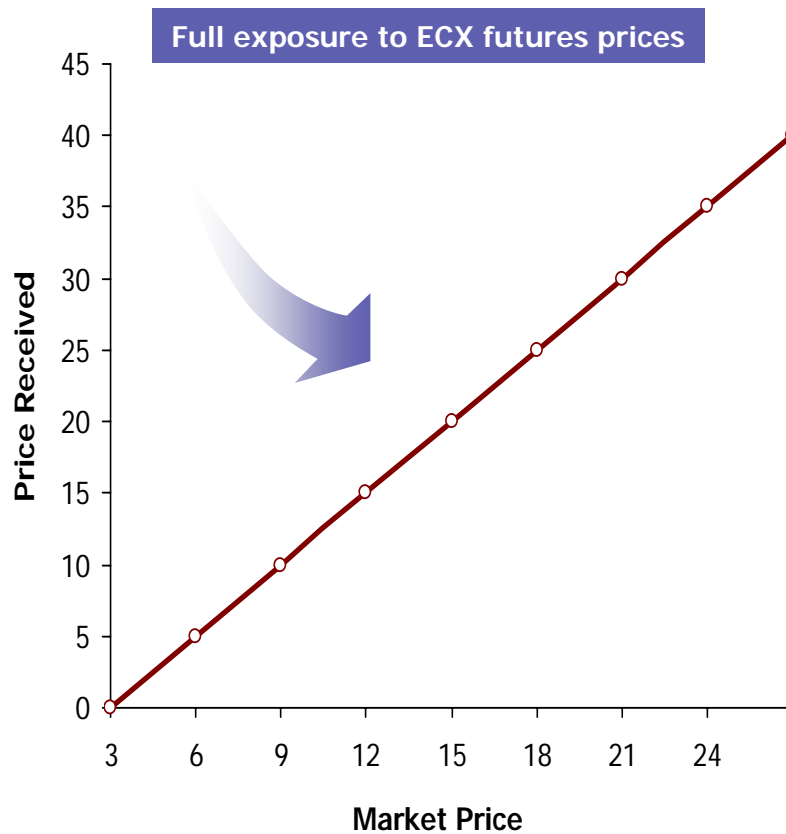
Case 1: Unhedged

1. ECX benchmarked price (Floating price)

Do nothing as of now – wait and watch approach

- Risk of Loss if price goes down
- Profit upside if the price goes up
- Have no view on the price and ‘hope’ that its at the bottom now

Spot Sale and Purchases



- If the bid is based on the ECX benchmark, the sellers are exposed to falling ECX futures
- Ideally the price risk can be hedged with plain vanilla futures.

Case 2: Hedge by short selling the ECX Dec '08 contract

Scenario 1: Dec'08 ECX future in the month of July 2008 when delivery happens is €15

You get

From Buyer of CERs

€11.25 i.e. 75% of €15

Futures Market

75 units * (22-15) = €525. This translates into a appreciation of €5.25 for 100 units.

The net realisation is therefore €11.25 + €5.25 = €16.50

Conti.....

Scenario 2: Dec'08 ECX future in the month of July 2008 when delivery happens is €29

You get :

From Buyer of CERs

€21.75 i.e. 75% of €29

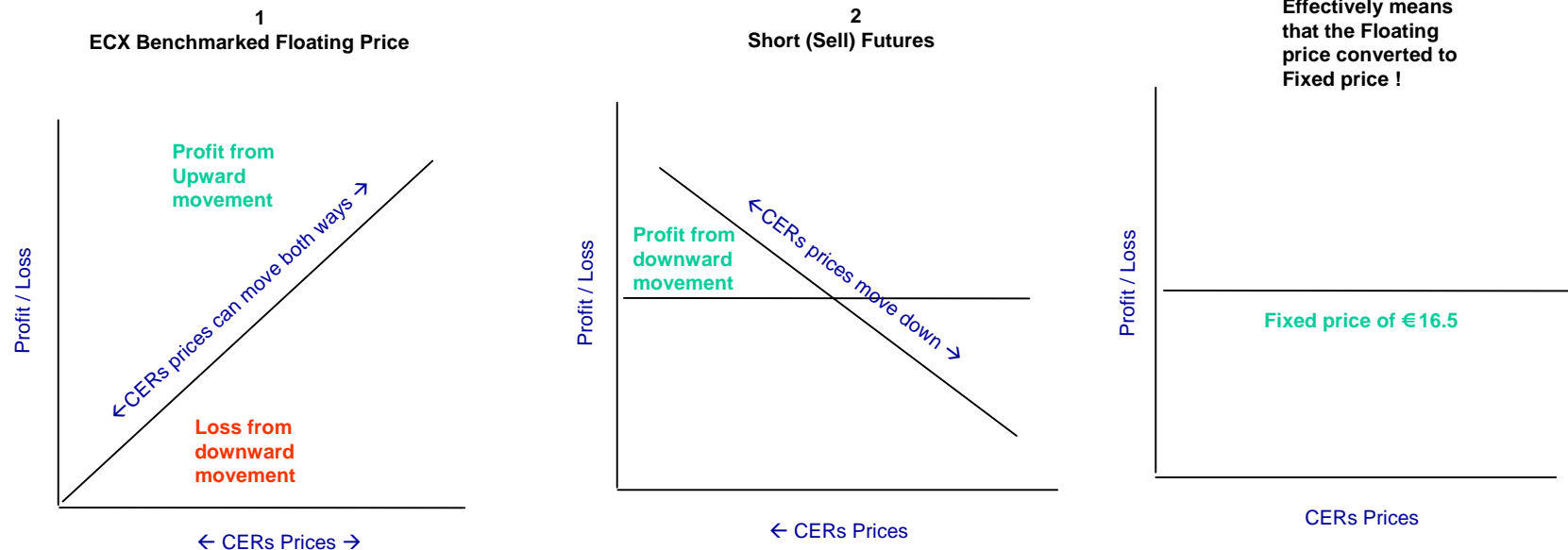
Futures Market

75 units * (22-29) = -€525. This translates into a reduction of €5.25 for 100 units.

The net realisation is therefore €21.75 - €5.25 = €16.50

Using Futures to “lock in” Selling price

- As seen in the example, the seller gets EUR €16.5 irrespective of the movement of the ECX contract.
- So effectively, by shorting (Selling) the Dec'08 futures you have converted the FLOATING price into FIXED price of € 16.5!



For more Information...

Akshat Jaswal CFA

Assistant Vice President

Dir: +91 22 6667 9914

Mob: +91 98196 09890

Email: akshat.jaswal@mfglobal.in

Digvijay Chauhan

Manager - Emissions

Dir: +91 22 6667 9908

Mob: +91 99674 33770

Email: digvijay.chauhan@mfglobal.in

MF Global Commodities India Pvt. Ltd.

No.1, 2nd Floor, C-Block

Modern Centre

101, K. Khadye Marg, Jacob Circle

Mahalakshmi,

Mumbai – 400011

Ph: +91 22 2300 2999

Fax: +91 22 6667 9977

www.mfglobal.in