

Climate and Investment Opportunities: How can you Invest in Climate?

Tomas Otterström, Deputy CEO
GreenStream Network Plc

World Ecological Forum 2010
Climate Strategies and Investments seminar
1 July 2010



The markets have a scientific background ...

Science → Politics → Markets



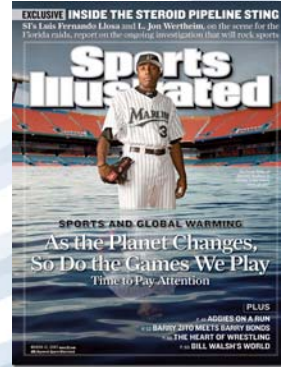
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... and now climate change is mainstream



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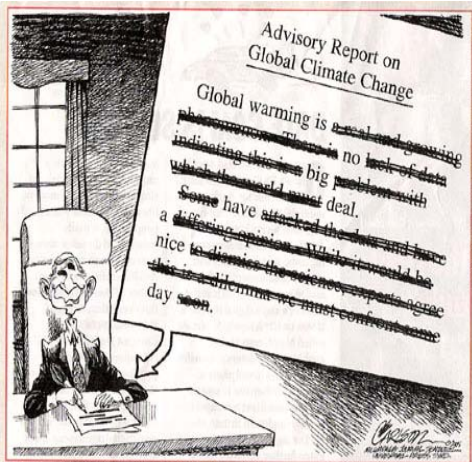
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The climate changes – also in politics

CNN 26 January 2009: "U.S. President Barack Obama set his green plan into action Monday, potentially reversing several Bush-era decisions on global warming and fuel efficiency"



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1. Carbon market developments until end 2012
2. Carbon market outlook post-2012
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GreenStream in Brief

- GreenStream is a leading Northern European company focusing on:
 - Fund management and investments in carbon and renewable energy markets
 - Climate strategy advisory, market analysis, CDM and JI project management, financing
 - Trading of carbon units and renewable energy certificates
- GreenStream is licensed by the Finnish FSA
- GreenStream's clients are energy and industrial companies, financial institutions and governments
- Some 40 professionals working in Helsinki, Oslo, Berlin, Stockholm, Vilnius, Kiev, Moscow, Beijing
- CarbonStream Africa – JV with CEF to develop CDM projects in South Africa.
- Chosen as the Best Broker in green certificate markets in EU excl. UK six years in a row by the readers of Environmental Finance as well as runner-up in the category EU Emissions Trading Scheme – Best Advisory in 2006



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Investment Vehicles managed by GreenStream

Current investment vehicles		€45	<ul style="list-style-type: none"> GreenStream manages carbon investments in Russia, Ukraine, Belarus and Kazakhstan 	
		€20	<ul style="list-style-type: none"> Develops small scale hydro power projects in Norway Investment capacity some €130 million 	
		Capped at €30 million	<ul style="list-style-type: none"> Carbon credits primarily from CDM projects in Asia and Latin America Investors include 2 listed industry companies and 6 energy companies. The State of Finland has entered into a co-purchasing agreement with the FCF 	







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Investment Vehicles managed by GreenStream

Current investment vehicles		Capped at €40 million	<ul style="list-style-type: none"> Carbon credits primarily from CDM projects in Asia and Africa Investors include Ilmarinen Mutual Pension Insurance Company, 4 compliance investors and GreenStream 	
		Growing, 2 nd tranche open	<ul style="list-style-type: none"> Provides access to post-2012 carbon credits, for compliance or capital gain Wide investor base, includes private industry 	
		€18 million	<ul style="list-style-type: none"> Provides access to post-2012 carbon credits, for compliance or capital gain, to those investors within FCF and NCF wanting to establish a separate vehicle for this purpose 	


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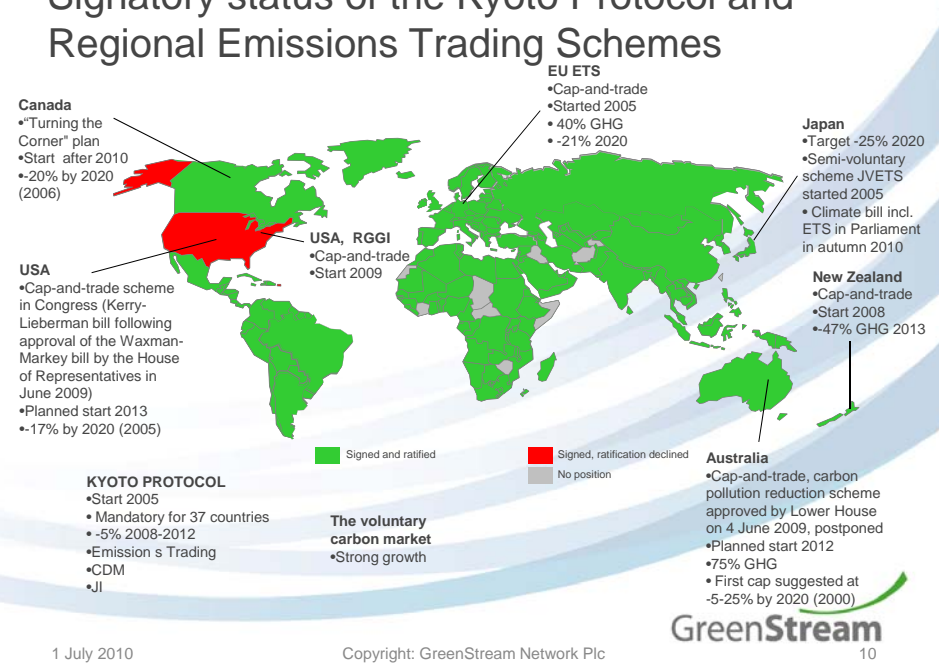
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Carbon market developments until end 2012



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Signatory status of the Kyoto Protocol and Regional Emissions Trading Schemes



Canada

- "Turning the Corner" plan
- Start after 2010
- -20% by 2020 (2006)

USA

- Cap-and-trade scheme in Congress (Kerry-Lieberman bill following approval of the Waxman-Markey bill by the House of Representatives in June 2009)
- Planned start 2013
- -17% by 2020 (2005)

USA, RGGI

- Cap-and-trade
- Start 2009

EU ETS

- Cap-and-trade
- Started 2005
- 40% GHG
- -21% 2020

Japan

- Target -25% 2020
- Semi-voluntary scheme J-VETS started 2005
- Climate bill incl. ETS in Parliament in autumn 2010

New Zealand

- Cap-and-trade
- Start 2008
- -47% GHG 2013

Australia

- Cap-and-trade, carbon pollution reduction scheme approved by Lower House on 4 June 2009, postponed
- Planned start 2012
- 75% GHG
- First cap suggested at -5-25% by 2020 (2000)

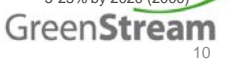
KYOTO PROTOCOL

- Start 2005
- Mandatory for 37 countries
- -5% 2008-2012
- Emissions Trading
- CDM
- JI

The voluntary carbon market

- Strong growth

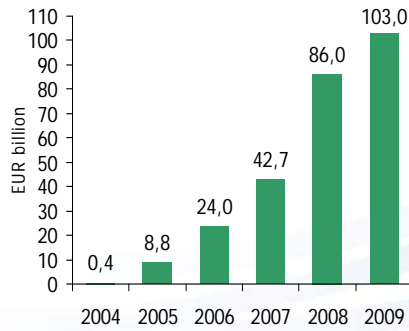
Legend: ■ Signed and ratified, ■ Signed, ratification declined, ■ No position



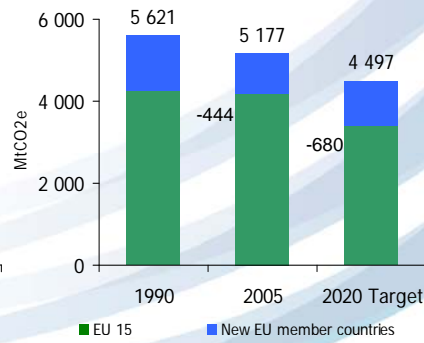
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The rise of the global carbon market

Global carbon market value ¹⁾



Announced EU reduction targets ²⁾



¹⁾ Source: State and Trends of the Carbon Market 2006, 2007, 2008 and 2009, The World Bank

²⁾ Sources: Communication "Limiting Global Climate Change to 2° Celsius: The way ahead for 2020 and beyond, EU and Annual European Community greenhouse gas inventory 1990-2005 and inventory report 2007, EEA

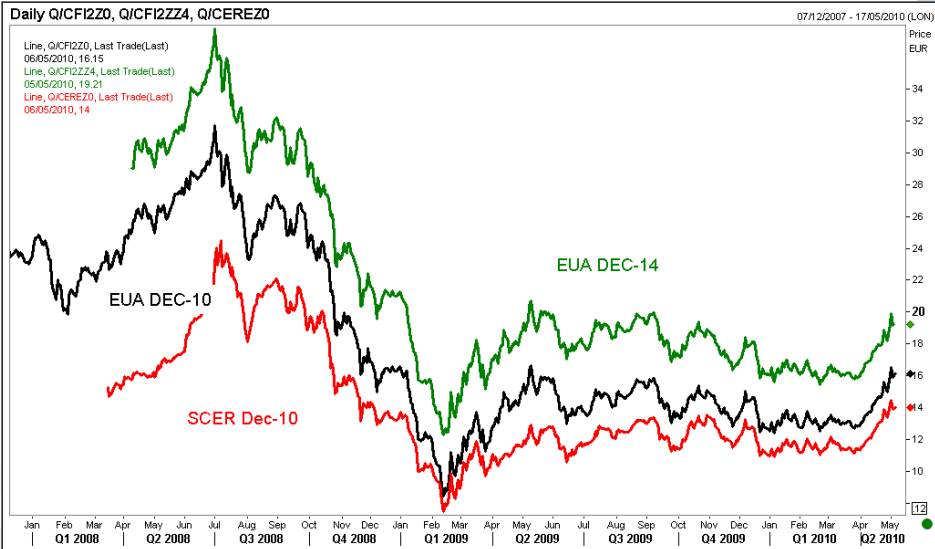


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What happens to the price of carbon?

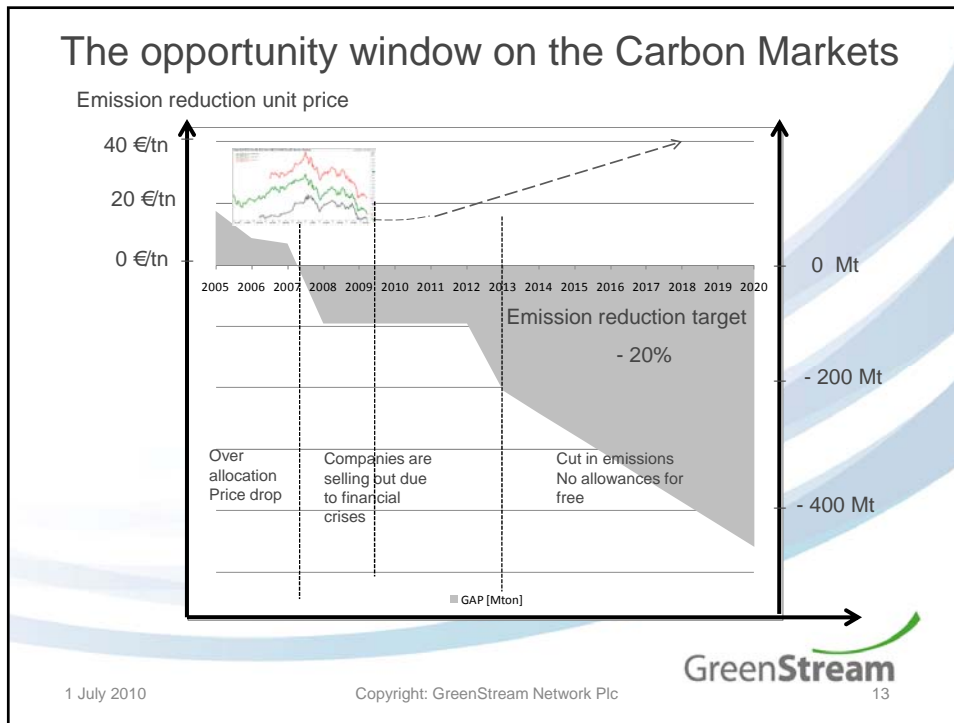


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EUA and CER price expectations May 2010

	EU ETS EUA					SCER	
	2010	2011	2012	Phase2	Phase3	Phase2	Phase3
Barclays Capital	14.3	18.0	24.0	18	35.0	10-17	30
COER2 Commodities	18.5	24.0	30-32	22.0	N/A	N/A	N/A
Daiwa	13.3	13.9	14.4	16.0	20.0	N/A	N/A
Deutsche Bank	17.0	+CC*	+CC*	20.0	40-42	N/A	N/A
Nomisma Energia	14.8	17.5	18.8	17.0	23	N/A	N/A
Point Carbon	17.0	21.0	26.0	20.0	30.0 (2016)	N/A	19.0 (2016)
Sagacarbon	12.9	18.0	23.0	18.0	N/A	N/A	N/A
Societe Generale	16.1	19.0	23.0	18.0	30.1	13.7-18	23-38
UniCredit	14.6	18.0	21.0	18.0	N/A	N/A	N/A
AVERAGE	15.4	18.7	22.7	19.0	29.9		

Source: Reuters
 *+CC: BD estimates an average Phase2 price of around €20 based on the market's current dynamics, but said EUAs have a fundamental value of €30 this year, rising at cost of carry rate (+CC) of 4 percent annually to €48 in 2020.

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Climate change and the carbon market affect all companies

AKTIESLAG	VALUTA	SENAST BETALD	ÄNDRAD I VECKA %	ÄNDRAD I ÅR %	KURS-REKORD	KURS-REKORD DATUM	P/E-TAL	VINST PER AKTIE	KURS /JEK %	BETA-VÄRDE	UTDELN /AKTIE PROG 09	DIREKT-AVKAST %
STORA BOLAG Börsvärde över en miljard euro												
ENERGI												
ACERGY	NOK	74,3									1,46	2
AKER	NOK	220,0										
AKER SOLUTIONS	NOK	108,5									3,8	3,5
AWILCO OFFSHORE	NOK	84,3	0	+39	84,5	080828	62	1,4				
BONHEUR	NOK	225,0	-4	-8	310	070709						
D/S TORM	DKK	151,5	-12	-15	240	071011	9	3,1	100		9,36	6,2
DNO INTERNATIONAL	NOK	7,3	-13	-27	21,2	050621	6	1,3				
ELECTROMAG GEO	NOK	15,0	-25	-71	145,5	070330					34,5	12,9
FRED O. SEN ENER	NOK	267,0	-8	-10	363	080522	6	44,2			17,79	6,4
FRONTLINE	NOK	276,5	-15	+6	370	080623	8	6,3				
LUNDIN PE*	SEK	58,3										
NESTE OIL	EUR	15,1										
AMER SPORTS	EUR	4,2										
AUTOLIV INC	SEK	253,0										
ELECTROLUX A	SEK	88,0	+6	-19	202	070404			169	0,33		
ELECTROLUX B	SEK	81,3	7	-25	190	070423	-13	6,1	156	1,21	3,00	4,0
FINANS												
CASTELLUM	SEK	63,8										
DANSKE BANK	DKK	136,3	-3	-32	274	070219	7	20,8	91		7,77	5,7
DNB NOR	NOK	56,6	-10	-32	94,7	070209	6	9,1			4,51	8
FABEGE(L)	SEK	45,2	-2	-32	97,6	070220	5	8,7		1,18		
DAGLIGVAROR												
AXFOOD	SEK	104,5										
CARLSBERG A	DKK	457,0	+1	-11	840	071017	13	34,5	279		6,18	1,4
CARLSBERG B	DKK	451,5	+0	-34	53,2	070502						
KESKO A	EUR	25,0										
IT												
ERICSSON A	SEK	66,1	-6	-15	87,2	000307			158	1,17		
ERICSSON B	SEK	66,6	-9	-12	826	000306	11	5,8	159	1,18	2,28	3,4
NOKIA	EUR	14,2										
IKT												
FORTUM	EUR	24,5										
HAFSLUND A	NOK	100,0	-7	-36	167,5	071109						
HAFSLUND B	NOK	96,8	-5	-38	170,5	071109						

Are there utilised emission reductions?

Biofuels have the potential to resegment the market

Climate change and snowless winters alter the demand for sports equipment

How will climate change related risks affect the credit-worthiness of clients?

Meat production accounts for about 18% of the world's total ghg emissions

Green IT?

Many EU States are assessing new support schemes for renewable energy

What is the right level of activity?

- **Avert**
- **Recognize**
- **Involve**
- **Serve / Engage**

Investment opportunities and risks

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How to invest in the climate markets?

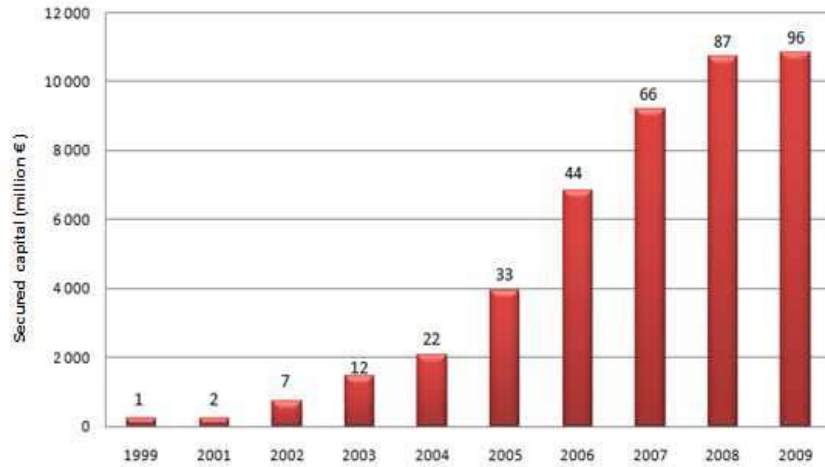
1. Buy shares, either directly or through investment funds, in listed companies that develop clean technology or provide other climate risk exposure
2. Invest venture capital in non-listed companies providing climate risk exposure
3. Provide equity to projects that promote renewable energy, or reduce greenhouse gas emissions by other means
4. Purchase carbon credits from the primary market, either directly or by participating in a purchase pool
5. Invest in carbon market commodities and derivatives on the secondary market

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Evolution of investment capital in carbon vehicles



Source: Caisse des Dépôts

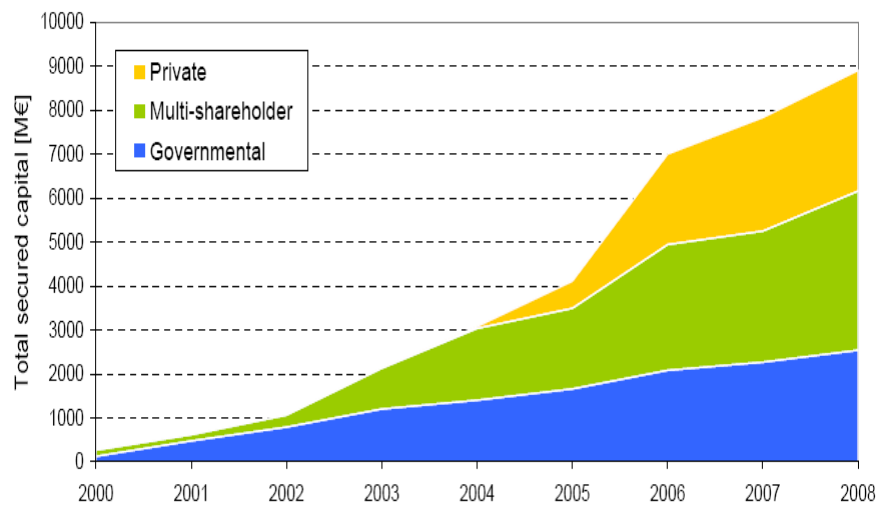
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Evolution of investment capital by investor type



Source: ICF International

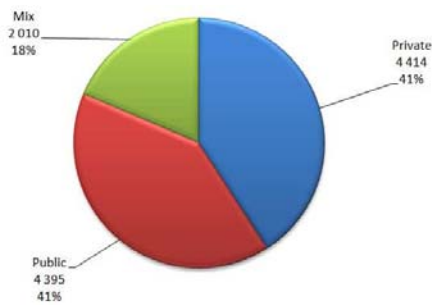
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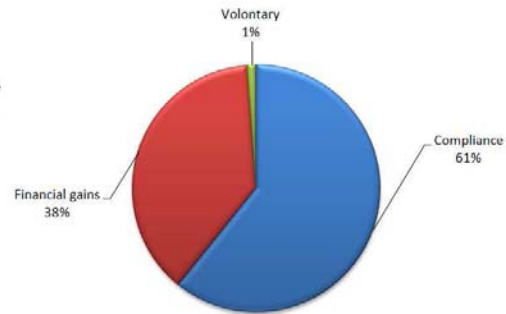


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Investors in carbon funds in 2009 (by secured capital)



Breakdown of funds by investment purpose in 2009 (by secured capital)



Source: Caisse des Dépôts

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Pros and Cons of Investing in the Climate Markets

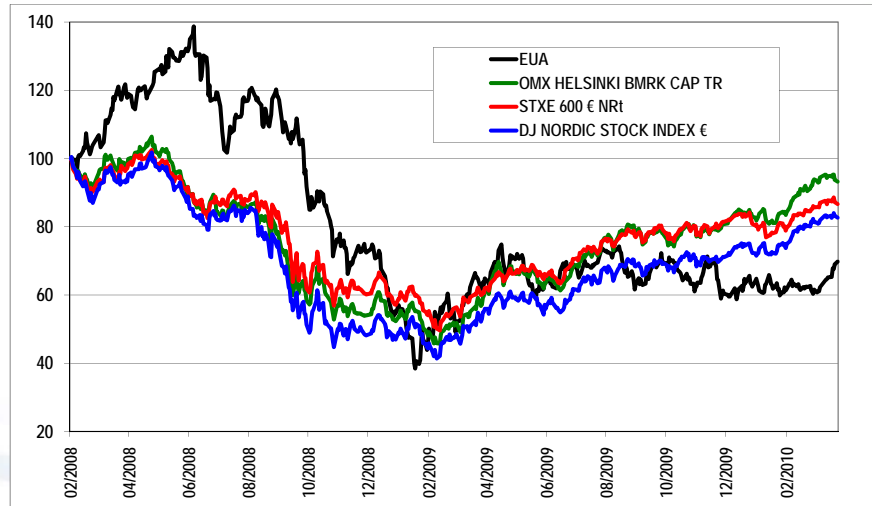
Pros	Cons
1. Current financial situation has created new opportunities	1. The market is based on political decisions; political risk
2. The potential for long-term and even stronger growth exists, as current measures to combat climate change are not sufficient	2. So far markets have been quite volatile
3. The increasing climate-awareness among consumers has created a voluntary market which is small but growing even faster than the compliance market	3. The market is complex: multiple markets and multiple commodities that are partly, but not entirely, overlapping
4. Still opportunities for arbitrage	4. Knowledge-intensive, which creates barriers for entry
5. Not very strong correlation with the stock market, creates opportunities for risk diversification	
6. Ethically sustainable	

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Correlations EUA, OMX, STXE 600 and DJ NORDIC



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The Post-2012 Climate Opportunity Fund
Capturing Carbon Market Opportunities
Now is the Time to Invest

GreenStream
Your partner for carbon value.

Finally

- The carbon markets are here to stay
- Carbon units are commodities among others
- The role of the USA is increasing
 - Possible links between trading schemes
- A long-term climate strategy is an essential part of every company's risk management

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Your Partner for Carbon and Renewable Value

GreenStream Network is a forerunner in the carbon and renewable energy markets. GreenStream currently manages several investment vehicles in the renewable energy and carbon field. Greenstream is also your partner when it comes to trading carbon credits or renewable energy certificates – or when you need business advice from our carbon and renewable energy experts.

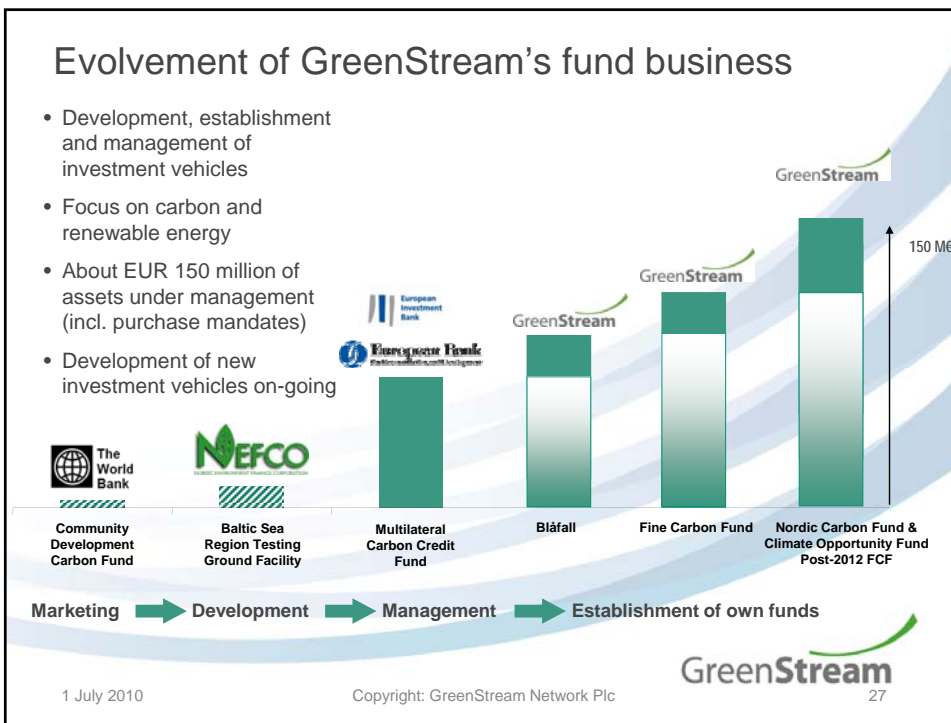
Thank you for your trust – voted Runner-up "Best Advisor, EU Emissions Trading Scheme" in 2006 and 6 times in a row "The best Broker for Renewable Energy Certificates – Europe (excl. UK)" by the readers of Environmental Finance.


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 GreenStream Network www.greenstream.net info@greenstream.net


Evolution of GreenStream's fund business

- Development, establishment and management of investment vehicles
- Focus on carbon and renewable energy
- About EUR 150 million of assets under management (incl. purchase mandates)
- Development of new investment vehicles on-going



Advisory track record

	<ul style="list-style-type: none"> • Advisory and financing assignments for some 200 clients, including a range of well-known international companies • In 2006 GreenStream was nominated runner-up in the category EU Emissions Trading Scheme – Best Advisory by the Environmental Finance magazine • Assignments include for example <ul style="list-style-type: none"> - Carbon and renewable energy business strategies - CDM, JI and GIS project cycle management - Investment opportunities and financing solutions - Market analysis and policy design
	<ul style="list-style-type: none"> • GreenStream has advised governments and public institutions on carbon and renewable energy markets <ul style="list-style-type: none"> - Finnish, Swedish, Estonian and Latvian Ministries of the Environment - Several other ministries and public institutions • GreenStream has assisted several International Financial Institutions, e.g. <ul style="list-style-type: none"> - Fund marketing for the World Bank - Fund preparation and launch for Nefco

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Intermediary track record

Milestones in Intermediary business

2006	FSA license enabling commodity derivative brokerage
2005	Contracted to broker 2.5 million EUAs on behalf of the Danish State
2004	GreenStream brokered the first ever cash-settled forward with EUAs
2003	Brokered the first ever EUA trade between Nordic companies
2001	GreenStream established brokerage activities as one of the pioneers in the environmental markets

Acknowledged expertise

- Intermediary offers services related to:
 - Carbon credit brokerage
 - Renewable energy certificates brokerage
 - Portfolio management
- GreenStream has been voted broker of the year in renewable energy certificates for six consecutive years



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Cooperation within Kyoto Mechanisms

- Technology companies
- Energy companies
- Process industries
- Financial investors
- Public sector organisations
- International Financial Institutions

