

# The Crisis

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**- The impact on capital raising  
and investment criteria for biofuels**

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**April 2008**

Euro-Latin Capital  
Christian Langaard

# Today´s agenda

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The crisis

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Effect on capital raising

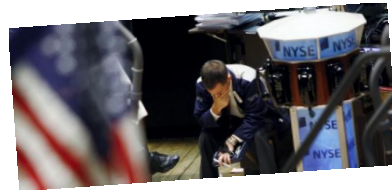
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Effect on investment criteria

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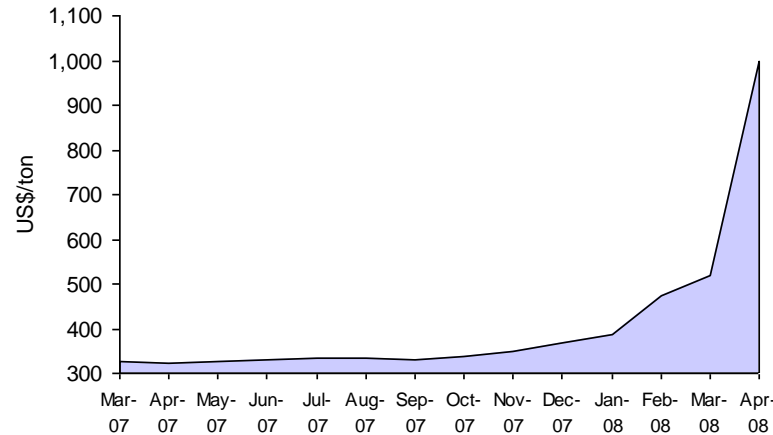
# Which CRISIS?

- Today's newspapers: Financial, Economic, Mortgage and Housing crisis



- What about FOOD CRISIS? E.g. Rice price has DOUBLED in few months?

Rice Export Prices

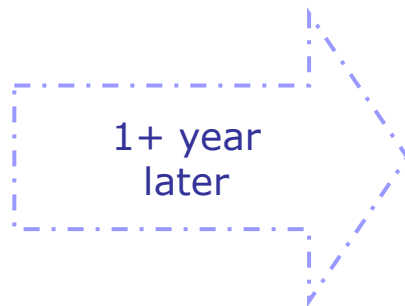


## The biofuels image



- **Biofuels – “Saving the planet”**

- reduce CO<sub>2</sub> emissions
- reduce dependence on energy hostile regimes
- providing rural jobs
- huge IRR expectations



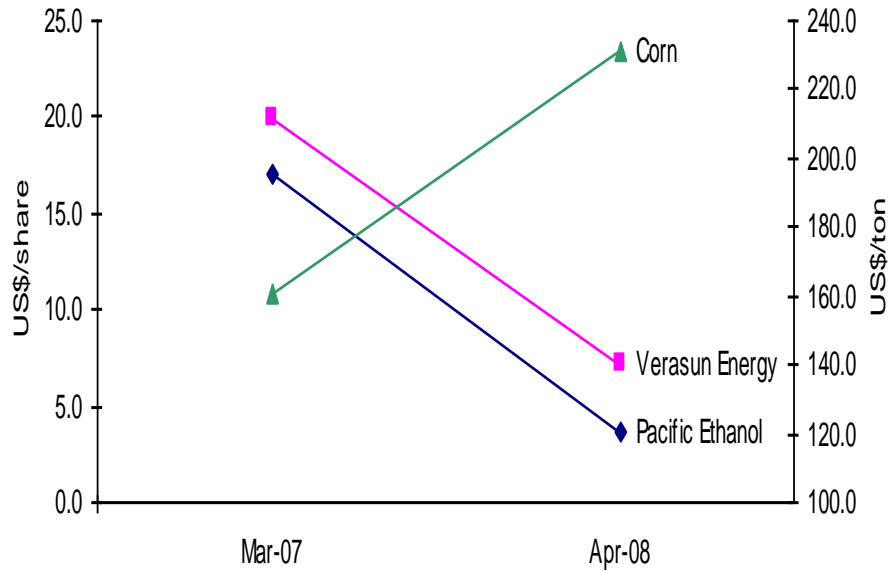
- **Biofuels – “Crimes against humanity”?**

- people die of hunger (even UN blames biofuel)
- pay more taxes (biofuel subsidies)
- plants close down
- accused of polluting more than the oil we replace

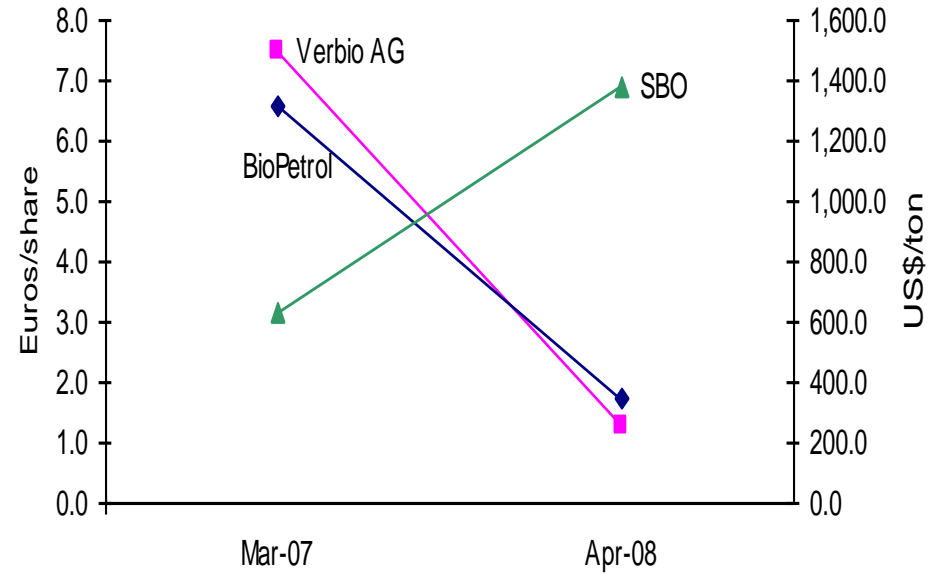
**“The wheels came off!”**

# The feedstock crisis

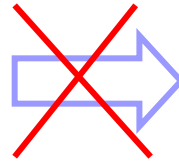
Comparison between Corn and corn-based Ethanol stocks prices



Comparison between SBO and Biodiesel stocks prices



## To blame for food price inflation ?



**Food inflation**

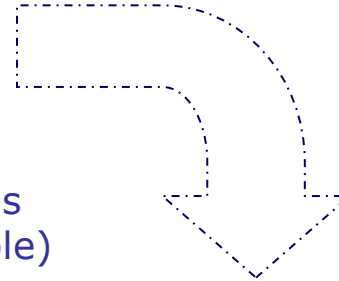
### “The tail wagging the dog?” The reality is:

- Biofuels represent <1% of the global available arable land
- Very small % of biomass used for biofuels
  - APP. 18% OF SOYBEAN BIOMASS GIVES SOYBEAN OIL
  - IF BIOFUELS SHARE OF SBO INCREASES TO 5%;
  - <1 % OF SOYBEAN BIOMASS USED FOR BIODIESEL
- Reality for corn and rape somewhat worse, but grossly exaggerated
- Real reasons for food price inflation;
  - STRONG INCREASE IN FOOD DEMAND, ESP. CHINA AND INDIA
  - HIGH OIL PRICE IMPACT FOOD PRODUCTION COSTS (ENERGY, FERTILIZERS)
  - WEATHER/CROP-FAILURES, US DOLLAR, ETC.

## Why?

### Until now;

- Self-inflicted and bad PR
- Short-term strategies and unsustainable business models
- Value chain exposure (the biofuels value chain remains very profitable)



### We need to focus on the basic principles;

- 1) If you compete with food – you will lose
- 2) Secure supply of low-cost feedstock from sustainable sources
- 3) Maximize life-cycle CO<sub>2</sub> reductions
- 4) Transport efficiency in feedstock sourcing and product delivery

# Today's agenda

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The biofuels crisis

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▶ Effect on capital raising

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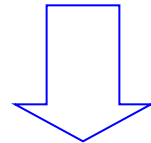
Effect on investment criteria

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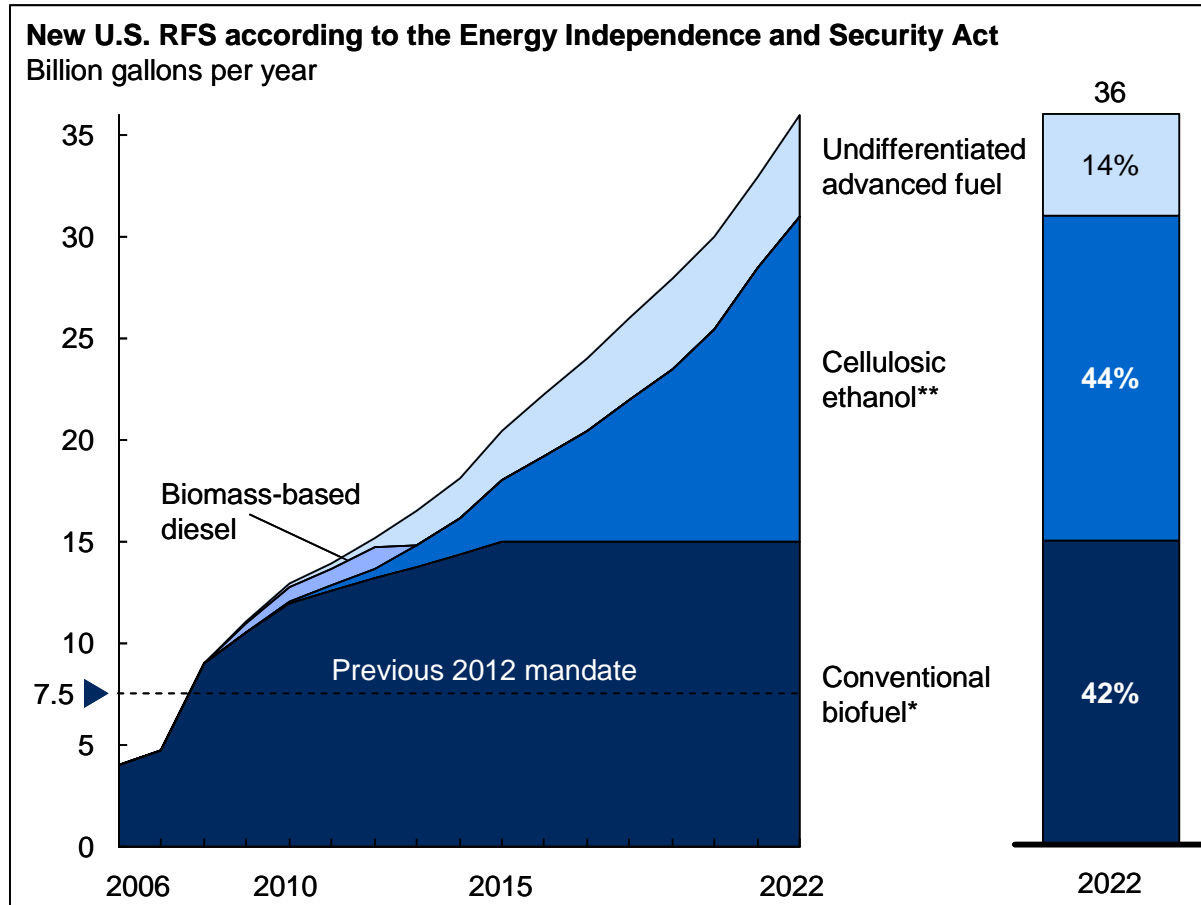
## The future and growth prospects are excellent

The future and growth prospects remain excellent



- Transportation represents close to 30% of CO<sub>2</sub> emissions
  - Biofuels only viable option next decade
- Plenty available feedstock – and land - for domestic supply
  - US: 740m tons add'l biomass in 2020 (acc. to McKinsey)
  - Brazil: 475m acres degraded pasture + savannah can be converted
  - yield improvements
  - new technologies
- Sourced domestically or from “friendly” nations
- Regulatory environment favorable

# Regulatory Dynamics



- The new RFS will bring a five fold increase in renewable fuels, of which 80% could come from ethanol
- Over 50% of ethanol supply in 2022 is required to be produced from “advanced” biofuels

Source: Tecnon, McKinsey analysis

## Concerns in a Crisis

In Economic and  
Financial Crisis

- ➔ Banks become more demanding
- ➔ Venture capital investments down

Feedstock  
Crisis

- ➔ Less demand for biofuels investments
- ➔ More supply as distressed sellers and producers need capital

***In a crisis, short-term concerns prevail over long-term and people worry less about common concerns like climate change.***

***FT 19/4: "The credit crisis claims another victim: THE ENVIRONMENT"***

**Result: CAPITAL MORE SELECTIVE**

## Banks and Investors will look for

Financially prudent models

- **Better capitalized companies**
- **Containable and committed leverage**
- **Working capital management**
- **Margin protection/hedging strategies**
- **Well-managed value chain exposure**

## Value chain considerations

- **CONSIDERABLE MARGIN IN BIOFUELS INDUSTRY VALUE CHAIN**
  - Feedstock production cost vs. price of petroleum product
  
- **Upstream integration** (much more attractive today)
  - Agricultural expertise required
  - Longer investment horizon
  - Larger investments
  - Lower IRRs but less risk
  
- **Downstream value added** (the next wave?)
  - Petroleum distribution expertise
  - Risk management expertise
  - Branding, value-added product strategy
  
- **New industry players**
  - Competitive threats

## Today's agenda

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The biofuels crisis

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Effect on capital raising

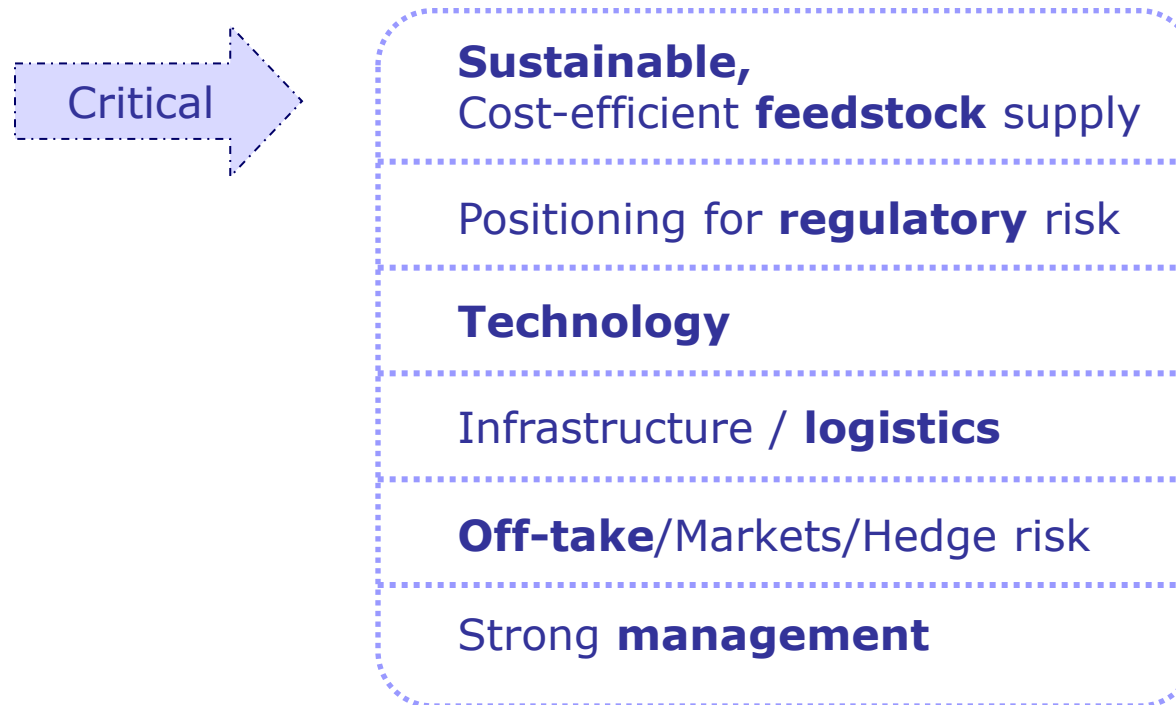
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▶ Effect on investment criteria

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## Need to refocus on key investment criteria

- Key investment criteria



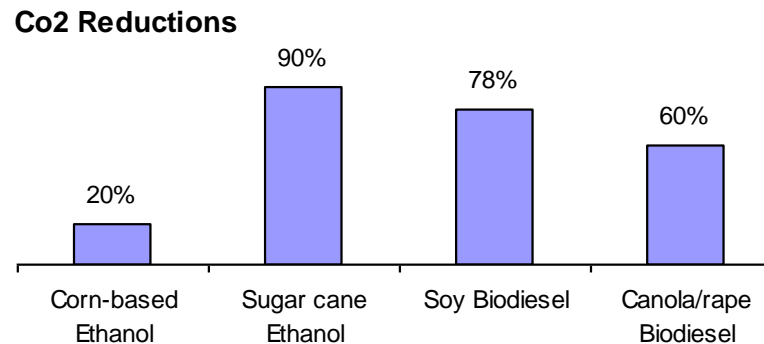
## Sustainable feedstock supply

- Integrated projects (land, plant, crush)
- Supply contract risk, hedging strategies, back-up plans
- **Next generation technologies** that can deal with waste- or non-food feedstock
- **Non-food feedstock** procurement
  - Jatropha-, Algae-, Castor oils
  - Animal Fats, yellow – and brown grease
  - Inedible parts of biomass
- Optimal use of land and biomass
- Other sustainability criteria (harmony with eco-system, local communities, labor and economies)
- Life-cycle **CO<sub>2</sub> reductions**



## CO<sub>2</sub> reductions

- Biofuels have very different life cycle CO<sub>2</sub> benefits



- Second Generation Biofuels, much better CO<sub>2</sub> reductions if
  - ethanol made from cellulosic material
  - fuels moved by pipeline
  - gasify entire biomass into methanol & then convert to Biomass to Liquid
- Opportunities to blend 1<sup>st</sup> & 2<sup>nd</sup> generation fuels (BioGTL, BioBTL)

# Conclusions

- The biofuels “crisis” **self-inflicted** but **outstanding prospects**
- **Money will flow to good projects** - but requires **focus on key criteria** !
- Bio-feedstock availability is **not** a limiting factor – sustainability critical
- **New technologies** will create substantial value
- In the end, it is the **CO2 reductions** that stimulated subsidies/mandates
- Be ahead of policy-makers! Eventually they catch up

**PLENTY OF CAPITAL AND OUTSTANDING RETURNS FOR  
SUSTAINABLE, INTEGRATED BUSINESS MODELS**

# Euro-Latin Capital's Biofuels Commitment

- Strong focus on the biofuels industry
- **Investment manager for biofuels projects, incl;**
  - **Alterra Bioenergy Resources Corp.**
    - Current production; 50'000 tons p.a.
    - Expected 400'000 tons of capacity by the end of 2009
    - IPO expected 2008/9.
  - **Patagonia Bioenergy**
    - Unique project at port site for exports from Argentina with 5 year feedstock supply contracts and seamless logistics
    - 500'000 tons capacity in 2008
    - Jatropha plantations
    - IPO expected during 2009
- Acted as **financial advisor** and **led due diligence** on major biofuels projects in US, Brazil and Argentina
- Managed a \$200m Pledge Fund for private equity investors
- Co-Founder of Carbon Opportunities Fund



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