

The Crisis

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

April 2008

Euro-Latin Capital
Christian Langaard

Today´s agenda



The crisis

Effect on capital raising

Effect on investment criteria

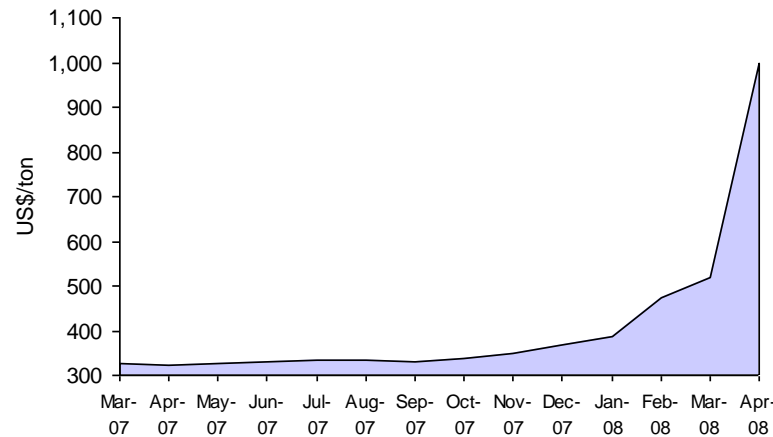
Which CRISIS?

- 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

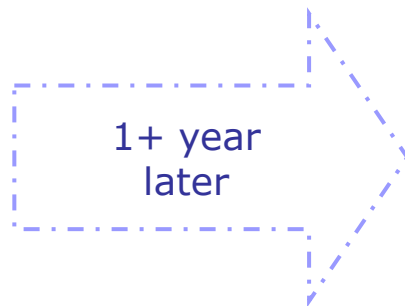


The biofuels image



- **Biofuels – “Saving the planet”**

- reduce CO₂ emissions
- reduce dependence on energy hostile regimes
- providing rural jobs
- huge IRR expectations



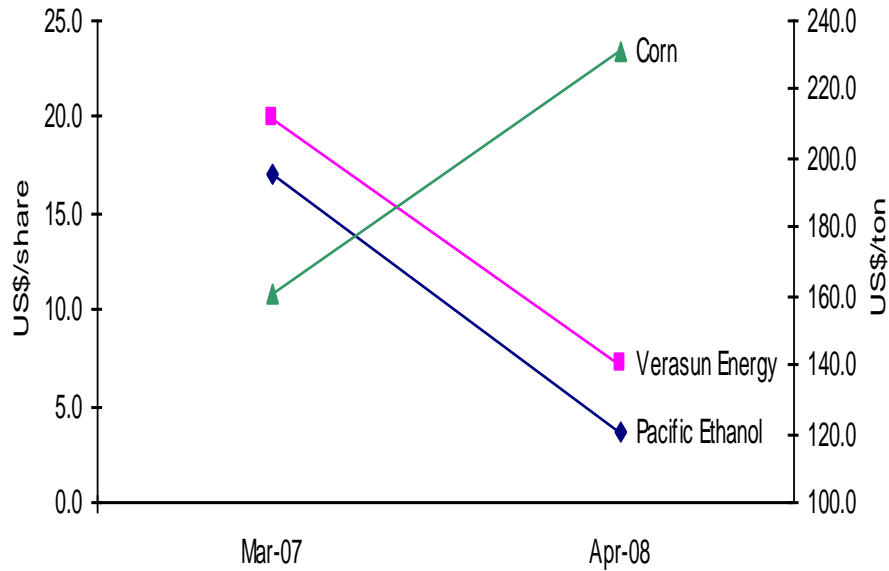
- **Biofuels – “Crimes against humanity”?**

- 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

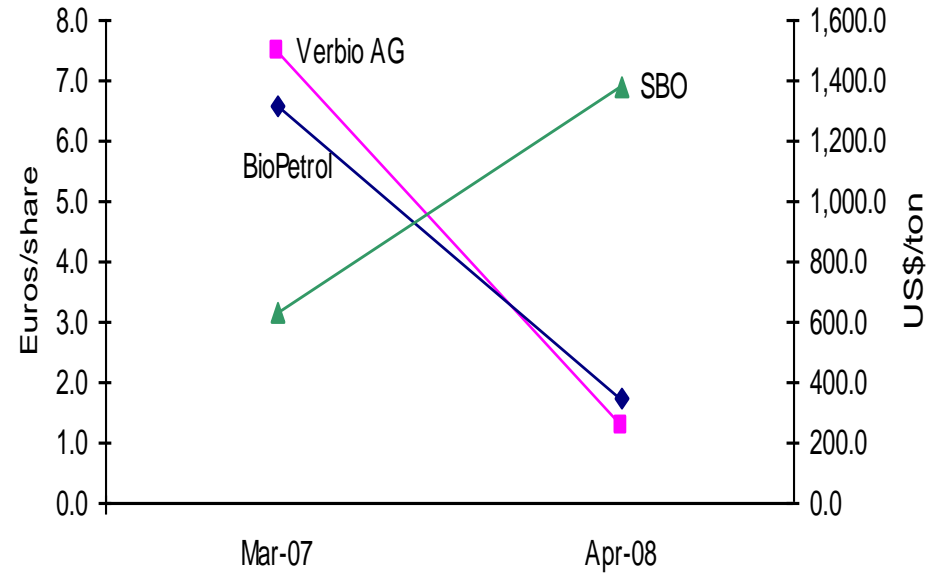
“The wheels came off!”

The feedstock crisis

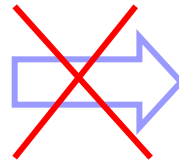
Comparison between Corn and corn-based Ethanol stocks prices



Comparison between SBO and Biodiesel stocks prices



To blame for food price inflation ?



Food inflation

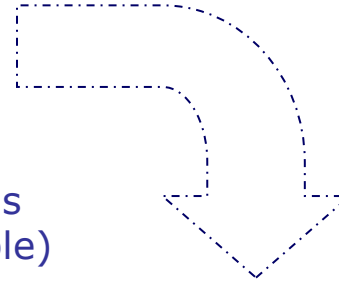
“The tail wagging the dog?” The reality is:

- 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 CO₂ reductions
- 4) Transport efficiency in feedstock sourcing and product delivery

Today's agenda

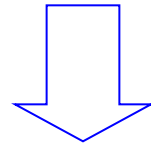
The biofuels crisis

▶ Effect on capital raising

Effect on investment criteria

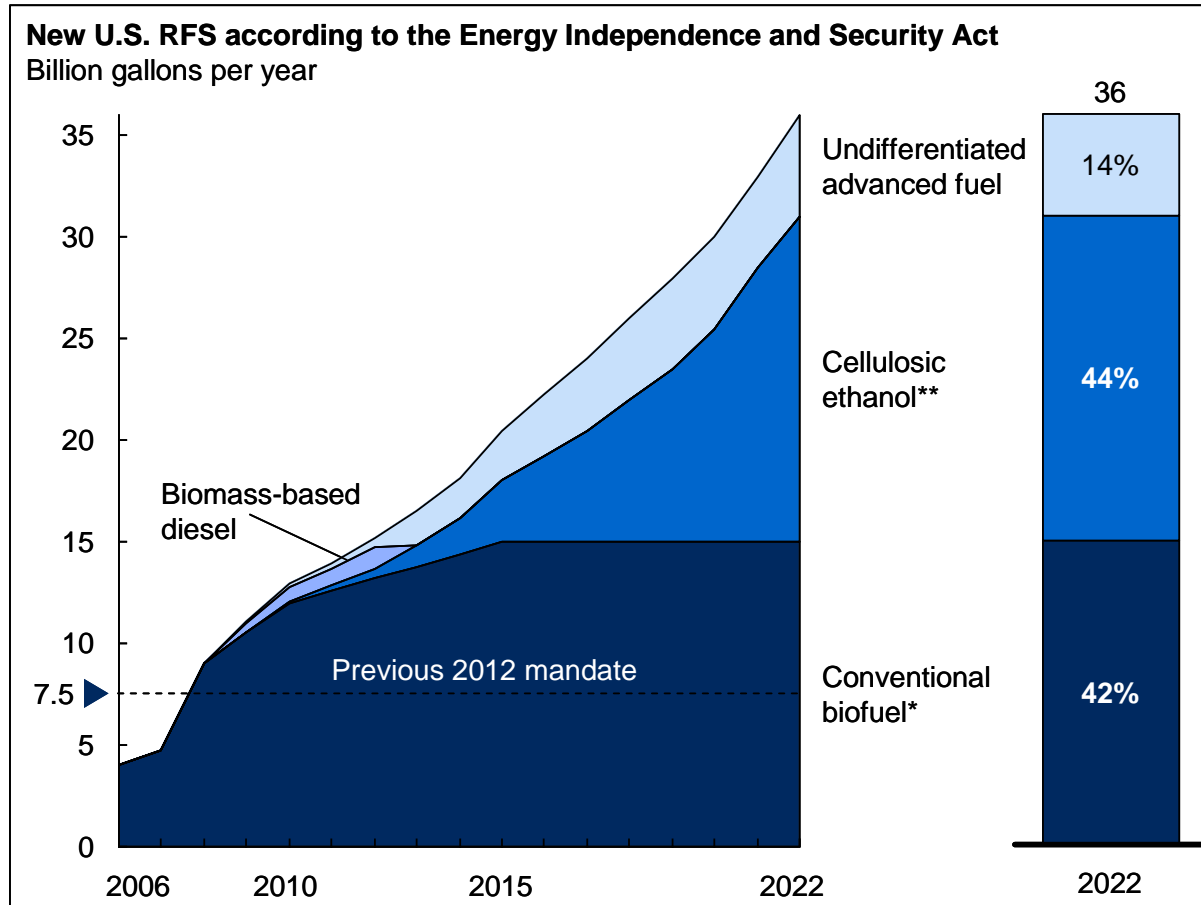
The future and growth prospects are excellent

The future and growth prospects remain excellent



- Transportation represents close to 30% of CO₂ 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

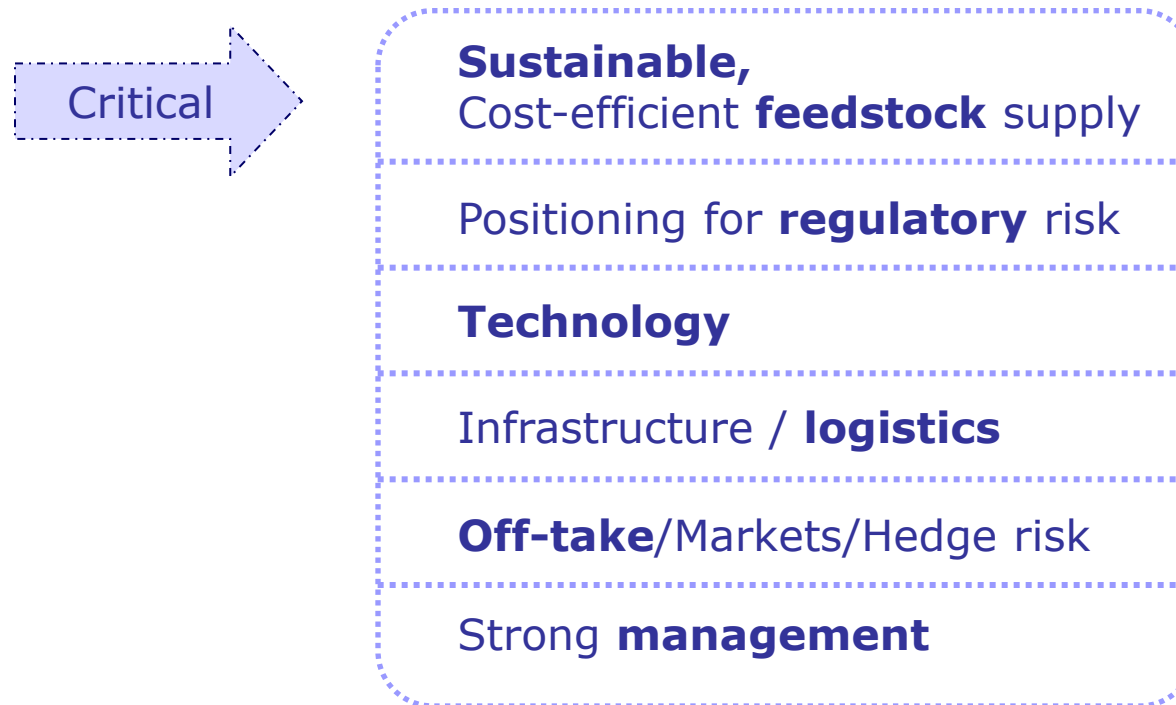
The biofuels crisis

Effect on capital raising

▶ Effect on investment criteria

Need to refocus on key investment criteria

- Key investment criteria

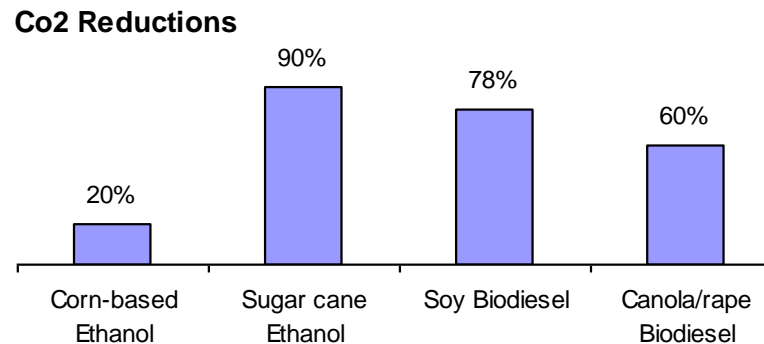


Sustainable feedstock supply

- 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 **CO₂ reductions**

CO₂ reductions

- Biofuels have very different life cycle CO₂ benefits



- Second Generation Biofuels, much better CO₂ 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 1st & 2nd 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



Christian Langaard
Managing Partner

Phone London: +44 207 993 5545
Phone BsAs: +54 11 4393 6007
Mob: +44 7970 817770
E-mail: clangaard@euro-latin.com
WEB: www.euro-latin.com