DEAD OR ALIVE

What is the future of European fuel production?

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MOL Group Refining & Marketing Senior Vice President

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MOL GROUP REFINING & MARKETING

A solid basis with outstanding organic growth opportunities

Refining

MOL Group
Capacity: 23.5 Mtpa (470 thbpd)

Danube Refinery
Capacity: 8.1 Mtpa (161 thbpd)
NCI: 10.6

Bratislava Refinery
Capacity: 6.1 Mtpa (122 thbpd)
NCI: 11.5

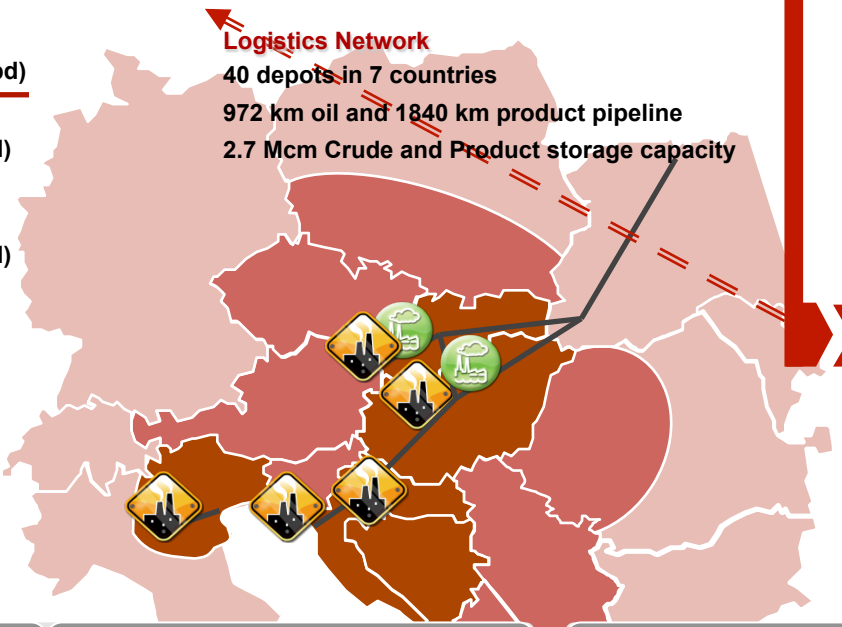
Rijeka Refinery
Capacity: 4.5 Mtpa (90 thbpd)
NCI: 9.1

Mantova Refinery
Capacity: 2.6 Mtpa (52 thbpd)
NCI: 8.4

Sisak Refinery
Capacity: 2.2 Mtpa (44 thbpd)
NCI: 6.1

Logistics

Logistics Network
40 depots in 7 countries
972 km oil and 1840 km product pipeline
2.7 Mcm Crude and Product storage capacity



Marketing

Wholesale
21.6 Mt sales volume
20% regional market share
Presence in 12 countries, market leader in 4 countries
27 % end-user sales

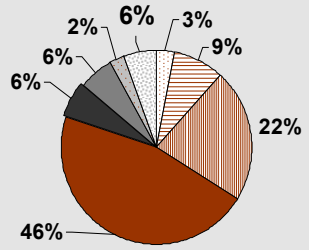
Retail Network
1,600+ FS
7 brands in 11 countries
3.5 Mt total fuel sales
Avr. throughput: 2.7 Mlpa
16 % captive market for Ref.

Petrochemicals

Capacity (ktpa)	TVK	SPC
Ethylene	660	220
Polymer	765	435

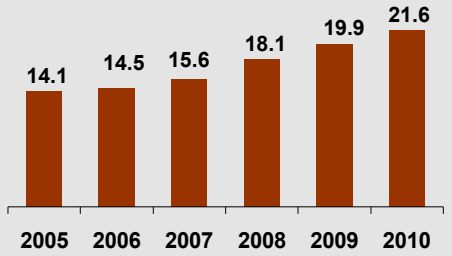
1.4 Mt external sales volume
12 % captive market for Refining

Group refinery yield (2011E)



- LPG
- Motor Gasoline
- Fuel oil
- Other
- Naphtha
- Middle Distillates
- Bitumen
- Other chemical prds.

Sales volume increases (Mt)

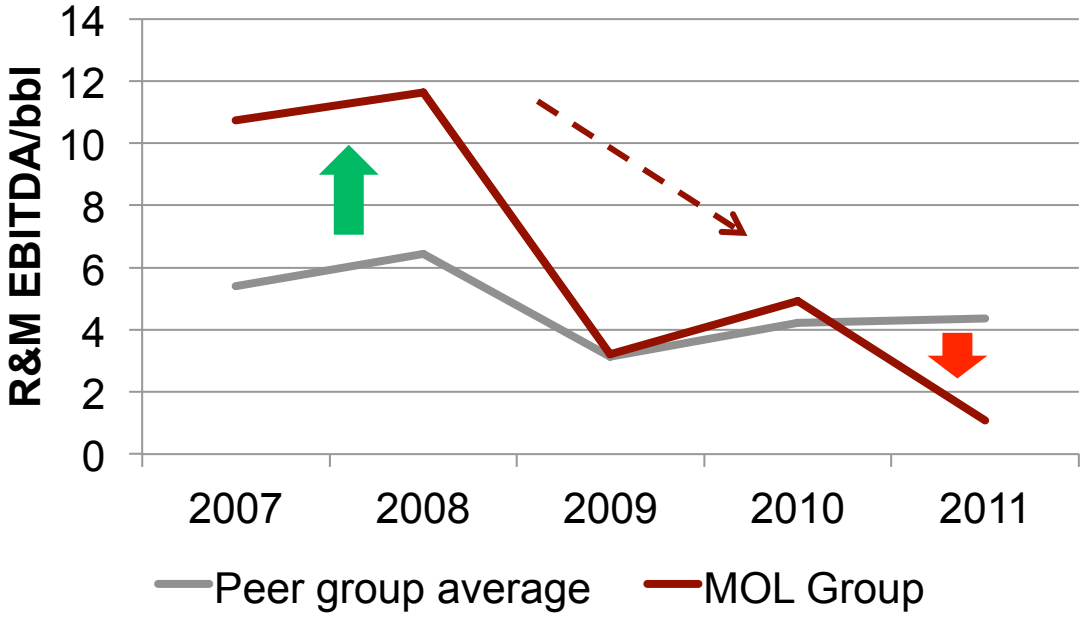


Strong asset base operated in adjacent markets

- **The key Downstream player** in the region with 2 best-in-class refineries
- **Integration of 5 plus 2 units** ensure outstanding synergy **potential**
- **Region-wide Logistics, Wholesale and Retail network** serve the market and provide above 55% end-user share

Share from total R&M sales

FROM THE BEST TO BELOW AVERAGE

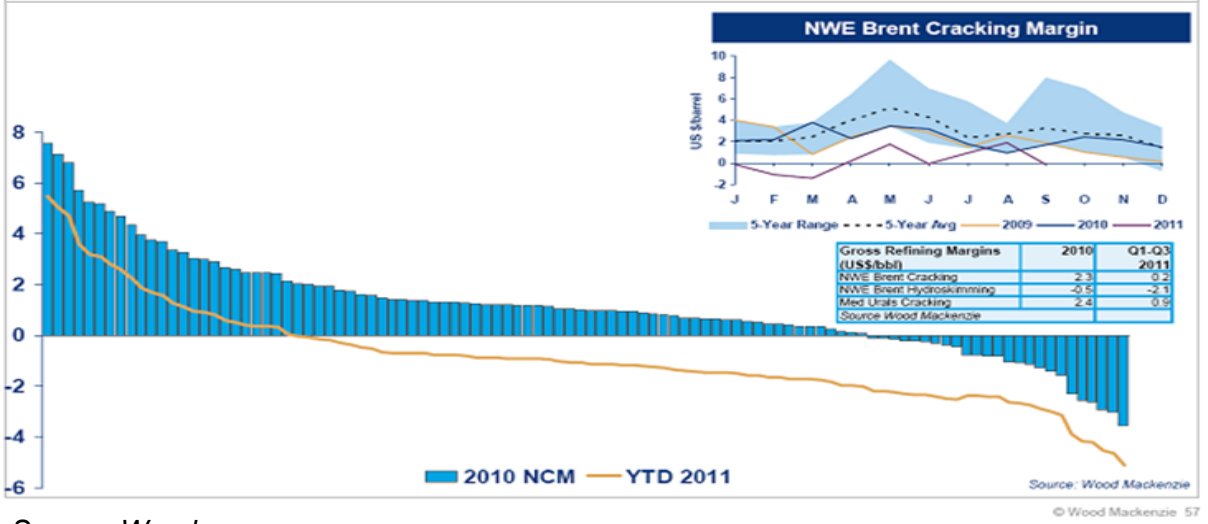


Source: MOL Group

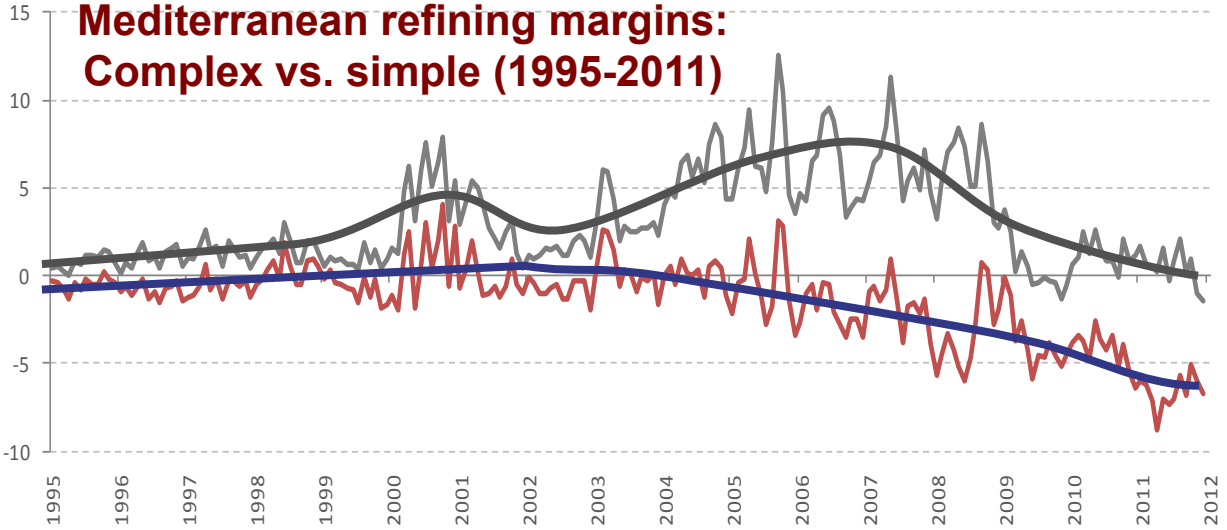
- **After being clear leader** in EBITDA/bbl compared to its regional peer group, MOL Group posted **below average results in 2011**
- We did not realize that we were getting worse, and **now it is a bit late to wake up.**

2011 WAS A DISASTROUS YEAR FOR (EUROPEAN) REFINING…

On a NCM basis, approx. 75% of European refining was cash negative in QI-III 2011, which put the industry under severe pressure.



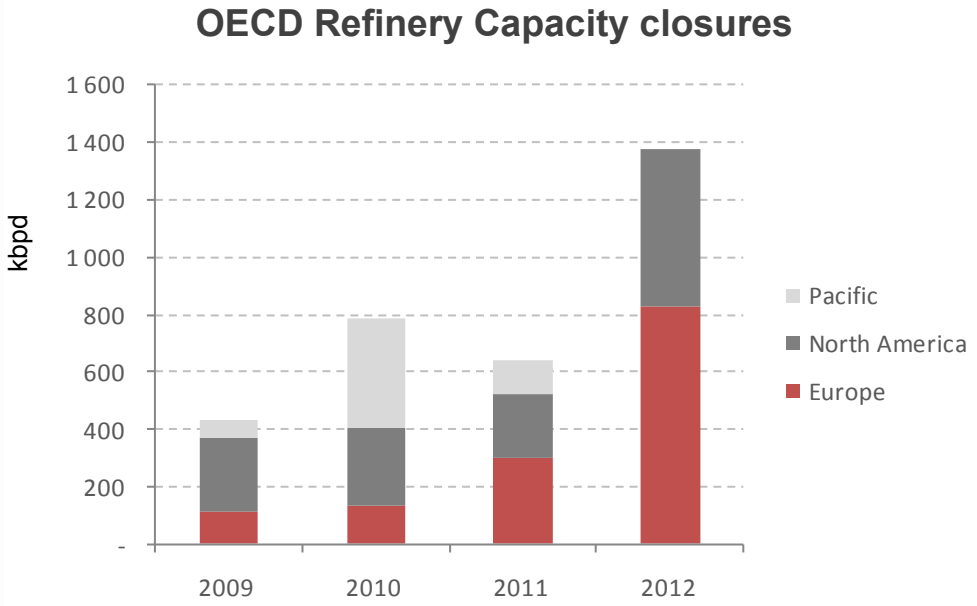
Source: Woodmac

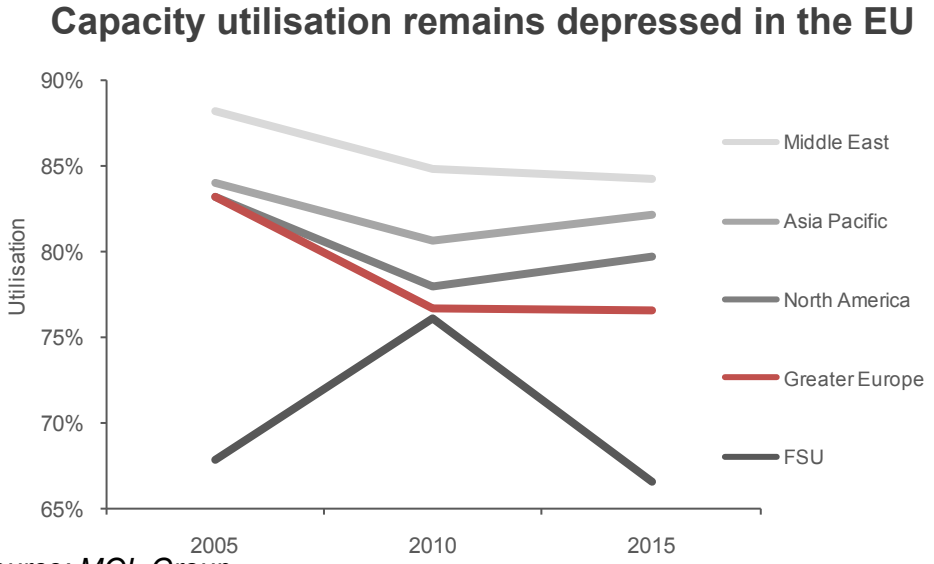


Source: MOL Group

- 2011 was a **horror year** for European refining – **75% had negative net cash margins**
- Considerable global overcapacity
- Product demand mix increasingly out of synch with refinery output mix
- **Refinery margins were squeezed**, well below previous 5-year averages
- Utilization fell (shrinking export markets with import pressures)

…AND THE FUTURE IS NOT MUCH BRIGHTER EITHER

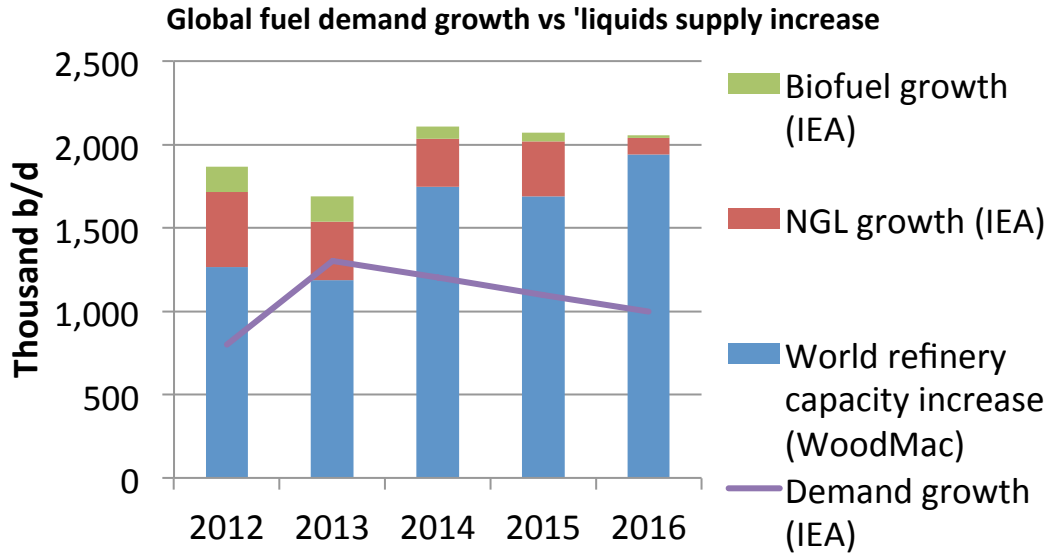




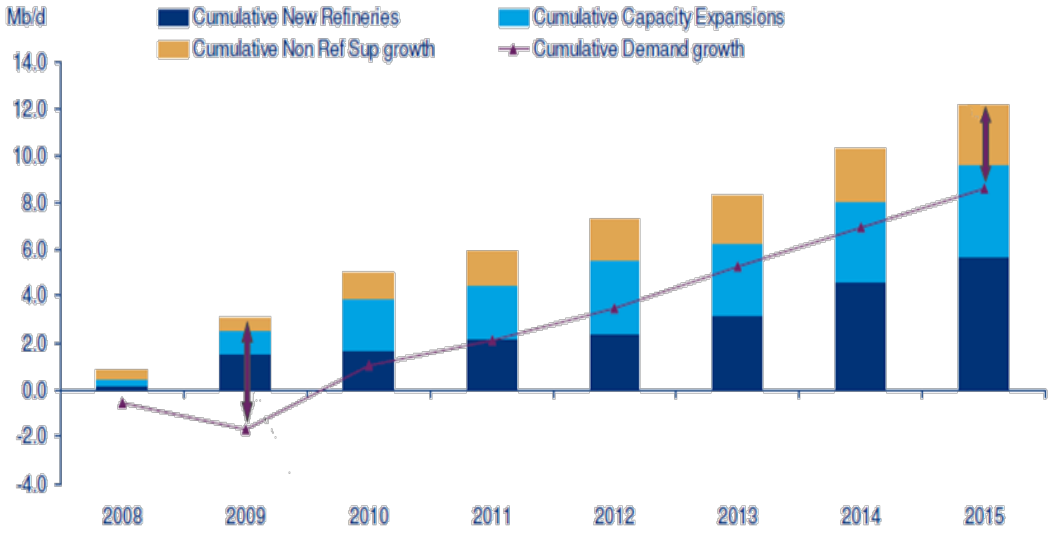
Source: MOL Group

- ~10Mbbl/d **new distillation capacity** ~ 8Mbbl/d **new conversion capacity** start up over 2011-15E = **significant number of closures/shutdowns**, especially in Europe
- Within this, world becomes relatively longer in gasoline and shorter in middle distillates
- **Europe looks vulnerable**
- **US** likely to continue to export diesel to Europe
- Middle East capacity start-ups from 2014 onwards suggest significant hike in region's diesel surplus, much of which may come to Europe.
- In wake of Petroplus credit freeze, **focus on balance sheet strength**.

GLOBAL SUPPLY/DEMAND IMBALANCES



Source: MOL Group



Source: Woodmac

- Demand growth forecasted
- Supply growth faster
- Refinery capacity increases expected (mainly in Asia)
- Also new, expanding methods of producing transport fuel – bio-fuel and natural gas to liquid (NGL).

MAIN CHALLENGES FOR EUROPEAN REFINING

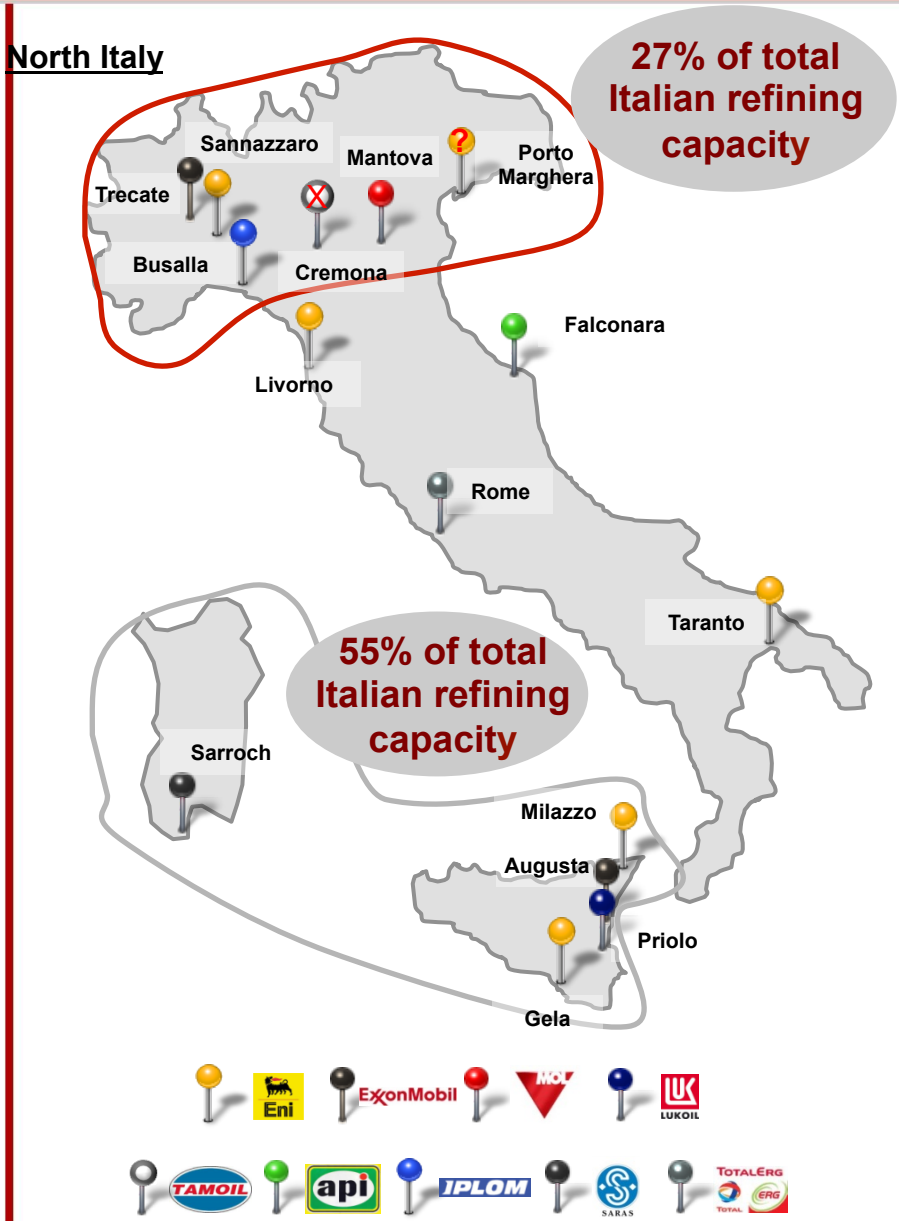
Main trends in European refining

- Very long in gasoline, crack fully determined by the US
- Very short in diesel, volume pull but price is determined somewhere else
- Crude supply problems, shrinking Brent-Urals spread, missing sour crudes (Iran, etc.),extreme crude price for processing
- Mostly loss-making refineries, assets for sale and/or considering shutdown

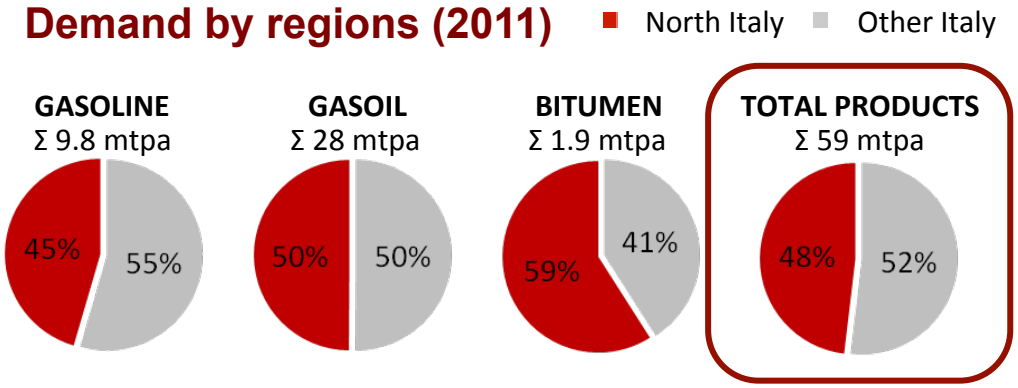
European refining acted **like the cricket and not like the ant** during prosperity, but **failed to learn how to survive without growth**

Who will **survive**?
Can we imagine **Europe without refining**?
Or do you only need to be **faster than your peers and not the lion**?

NORTHERN ITALY IS A PERFECT EXAMPLE

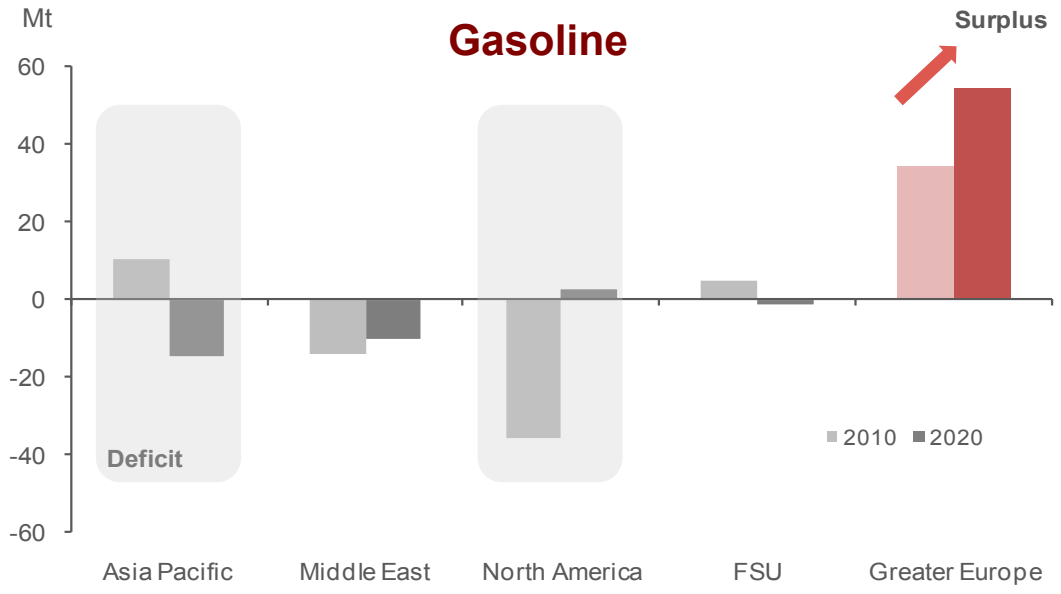


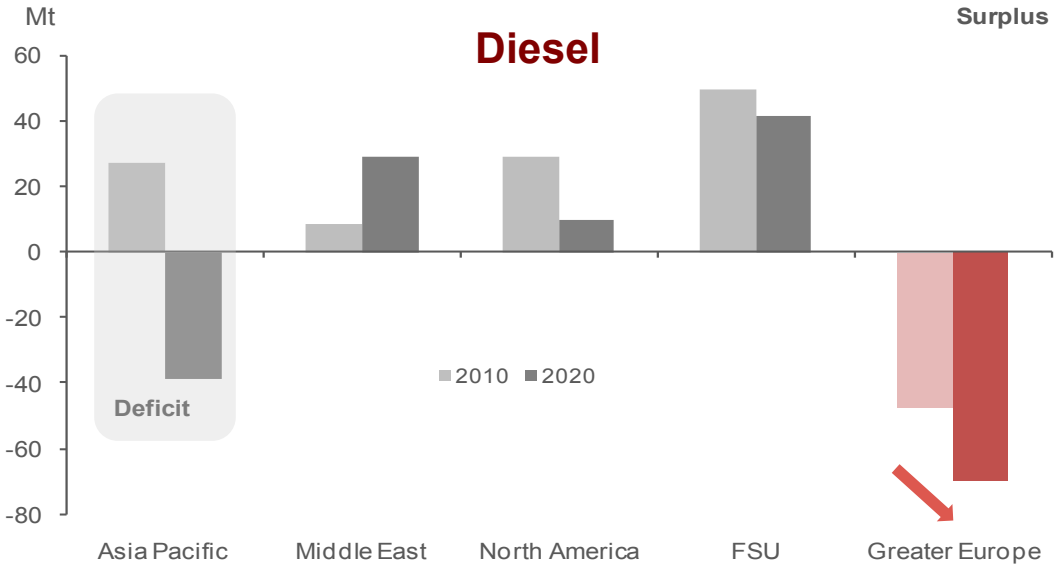
Demand by regions (2011)



- Refinery capacities and consumption not proportionally located
- Mostly small not complex Northern refineries and competitive Southern ones
- Strong gasoline oversupply and diesel overdemand
- Result: **suffering Northern refineries**, huge losses, closures (Tamoil, Cremona), shutdowns (ENI, Porto M.), rumours about future closures (basically every player)
- **Who can stay alive?**

GLOBAL SUPPLY/DEMAND IMBALANCES





- Global supply-demand imbalances, Europe even longer in gasoline and even shorter in diesel
- How to produce more diesel?
- How to decrease consumption?
- How to improve efficiency?
- How to find a solution for Europe's imbalanced position?

Source: MOL Group

HOW TO PRODUCE MORE DIESEL?

Market Demand*	1998	2010	2015	2020
Gasoline	130 Mt	90 Mt	85 Mt	80 Mt
Diesel	130 Mt	195 Mt	240 Mt	280 Mt
	G : 1 D : 1	G : 1 D : 2.1	G : 1 D : 2.8	G : 1 D : 3.5

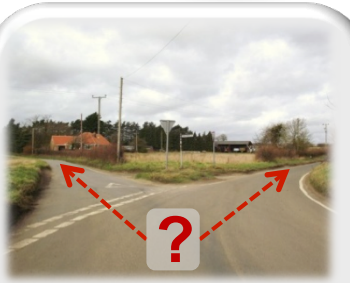
Production

Easy to fulfill

Valuable molecules to diesel

Extremely big challenge

- Gasoline molecules out of the system



No traditional way!

- New way to produce fuel molecules

*Product demand in the EU
Source: MOL estimation based on Wood McKenzie analysis

Paradigm shift

- New way to fulfill future market demand
- New type of assets
- New type of products

HOW TO DECREASE CONSUMPTION?

Well-to-wheel CO_2 emissions

Crude Production

5 %

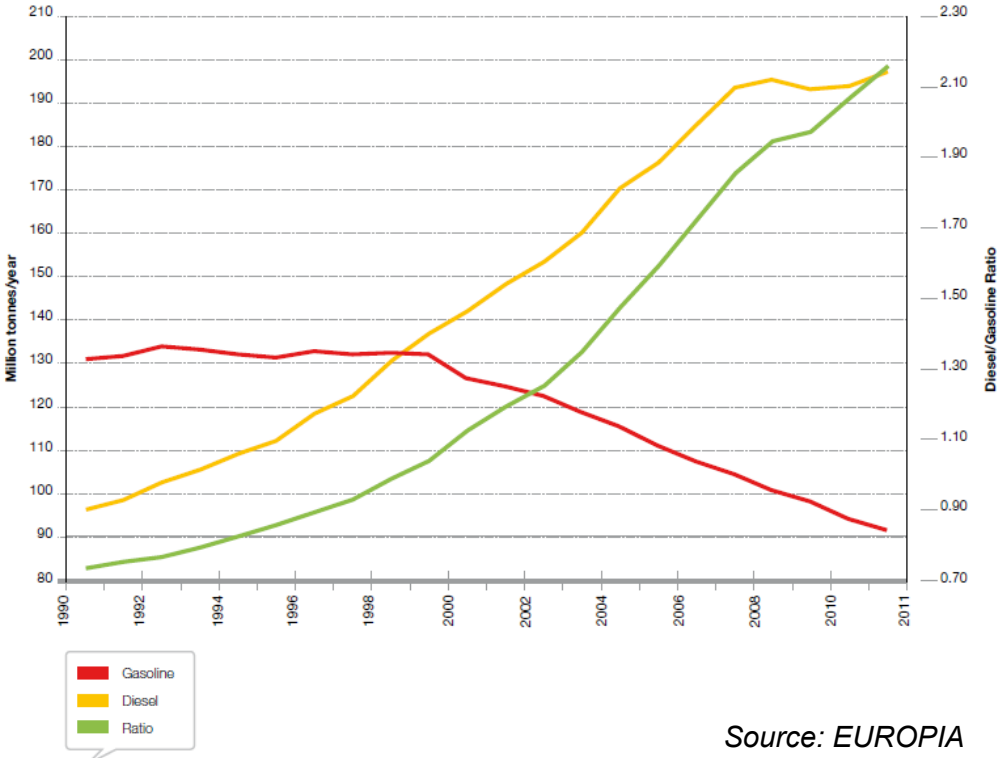
Refining

Distribution

10 %

End use

85 %



Source: EUROPIA

- **Diesel/gasoline consumption ratio changed** end 20th century
- **diesel consumption continued its increasing trend** since then – **steady decrease in gasoline demand**
- While 85% of well-to-wheel emissions occur during fuel end-use, **end-user not punished for CO_2 emissions**

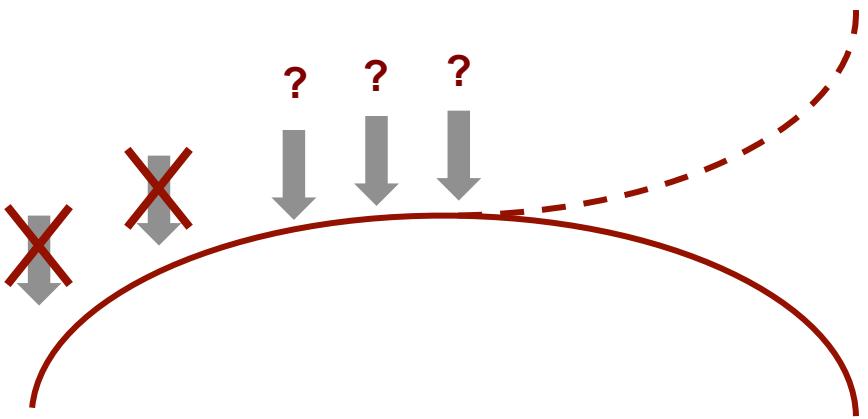
CUSTOMER EFFICIENCY EQUAL TO FALL IN DEMAND

Addressing rolling resistance and aerodynamic drag could produce significant **fuel efficiency increases** supplemented by **drivestrain efficiency improvements**

Source: EUROPIA

INFLECTION POINT FOR EUROPEAN REFINING?

Life cycle of European refining – close to inflection point?



A **strategic inflection point** is when the balance of forces shifts **from the old structure**, the old ways of doing business, the old ways of competing, **to the new**.

Andy S. Groove: Only the Paranoid Survive

The case of Pratt & Whitney

- Founded in 1925, in WW2 was leader in air-cooled radial piston aircraft engines

After turbo jet engine expansion **P&W was the clear world leader in a technology with no future.**

- After completely restructuring the company used existing skills to again become leader in state-of-the art technology

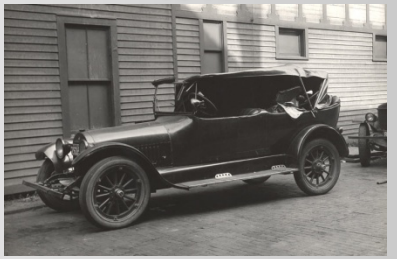
BUSINESS AS USUAL OR A PARADIGM SHIFT?

US Automobile production

1900

4 200 pcs*

1915



> 800 000 pcs

Personal computer

1943

"I think there is a world market for about five computers"
— Thomas J. Watson

1975

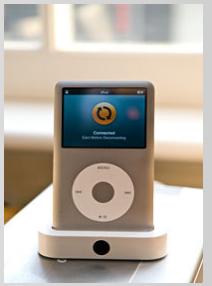
Personal Computer (PC) born

Digital music

1990

Anti-skip portable CD player introduced

2001



iPod**

* Only 25% using the internal combustion engine

** Av. capacity equivalent of 50 CDs

DEAD OR ALIVE – PERSONAL THOUGHTS ON FUTURE OUTLOOK

Refining disappears from Europe, consumption is 100% covered by imports

10%

Traditional economic mechanism
30%-40% of refineries close down

60%

Fossil based transportation fuel disappears. Downstream is converted into transportation fuel supplier using existing skills and competences

30%

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POTENTIAL MESSAGES FOR EUROPEAN PLAYERS

Think **globally**!
Act **locally**!
Panic **internally**!

It's not **what happens** to you that matters, but **how you react**!

No one can predict or control the future. However, **the more you plan** for what you want to happen, **the less anxious you will** be about the present and the more you will know about the future.

It is always wrong to be **right before everyone else**.

When we are in the middle of a paradigm shift, it is **hard to imagine any other paradigm**

THANK YOU FOR YOUR ATTENTION!

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