Actual Issues and Risks of Global Energy Transition for Oil & Gas Sector

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Oil&Gas Majors are out of the top companies by market capitalization today…

10 largest global companies by market capitalization, bln USD

2Q **2012**		Position	2Q **2022**	
Company	Capitalization		Company	Capitalization
Exxon Mobil	417,166.7	1	Apple	2 431,86
PetroChina	326,199.2	2	Microsoft	1 920,71
Apple Inc.	321,072.1	3	**Saudi Aramco**	**1 870,67**
ICBC	251,078.1	4	Alphabet Inc.	1 479,75
Petrobras	247,417.6	5	Amazon Inc.	1 155,16
BHP Billiton	247,079.5	6	Tesla	746,98
China Construction Bank	232,608.6	7	Berkshire Hathaway Inc.	615,17
Royal Dutch Shell	226,128.7	8	Johnson & Johnson	469,12
Chevron Corporation	215,780.6	9	Meta Platforms Inc. (Facebook)	445,23
Microsoft	213,336.4	10	Visa Inc.	437,73

- In 2012 6 of 10 leading companies by market capitalization represented the Oil&Gas sector, in 2022 only Saudi Aramco entered the Top 10
- Saudi Aramco's market capitalization in 2022 ($1.8 trillion) exceeded the total capitalization of all oil&gas companies in the Top 10 in 2012 ($1.4 trillion)
- However, the share of oil and gas companies in the Top 10 by market capitalization decreased from 53% in 2012 to 16% in 2022

Source: FIEF based on Financial Times, Value Today

Decarbonization VS Oil&Gas field's development:
the strategic choice has been already made?

How fast will decarbonization go?
How much will it change the oil market?

- Climate neutrality for energy production chain
- Decarbonization' technologies
- Energy efficiency projects
- Carbon offsets

CO_2

Regulators' Policy

Investment behavior

- Investment outflow to other energy sectors
- Investment requirements for new FIDs in the Oil&Gas Sector is more and more severe and 'green'

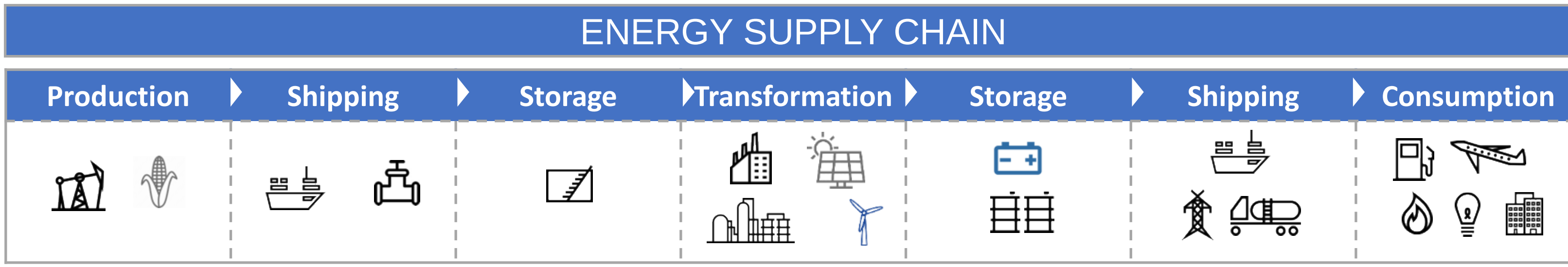
System lack of investments in the Oil&Gas sector

National energy policies are becoming more and more 'green'

- Carbon neutrality up to 2050-2060
- Carbon Taxes (incl.CBAM)
- Internal combustion engines ban after 2035
- Promoting 'green' investments and supporting 'green' energy projects

Source: FIEF

DECARBONIZATION offers a wide pool of tools to ensure Global Energy Transition



The main decarbonization' tools

Renewables
- Agriculture (Biofuels, Biogas)
- Wind, Solar, Geothermal Power Plants

Electrification
- Electricity storages
- Green Hydrogen and Ammonia production

Circular Economy
- Energy Efficiency
- Energy reuse of waste

Transport
- E-cars, hybrids, fuel-cell cars
- Low-carbon fuels for air and maritime transport

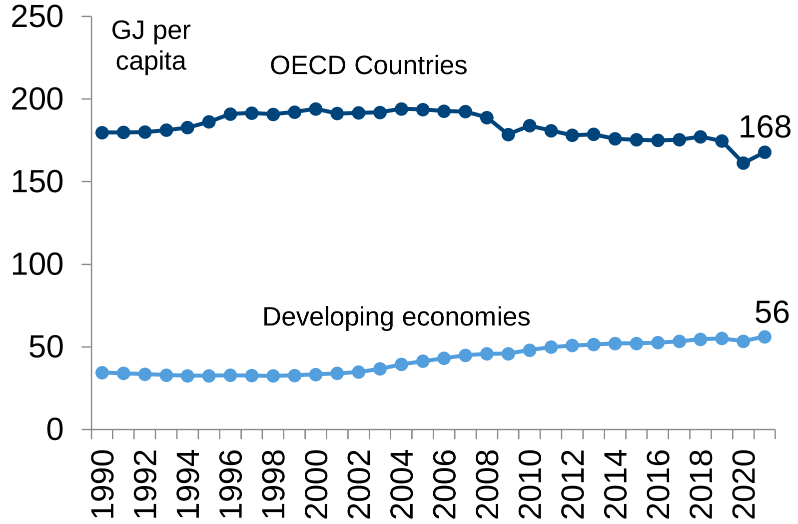
Carbon Management
- ETS, carbon offsets, green certificates
- CCS & CCUS technologies

'Green' Metals
- Wind, Solar and Electricity Storage as new consumers of 'green' metals

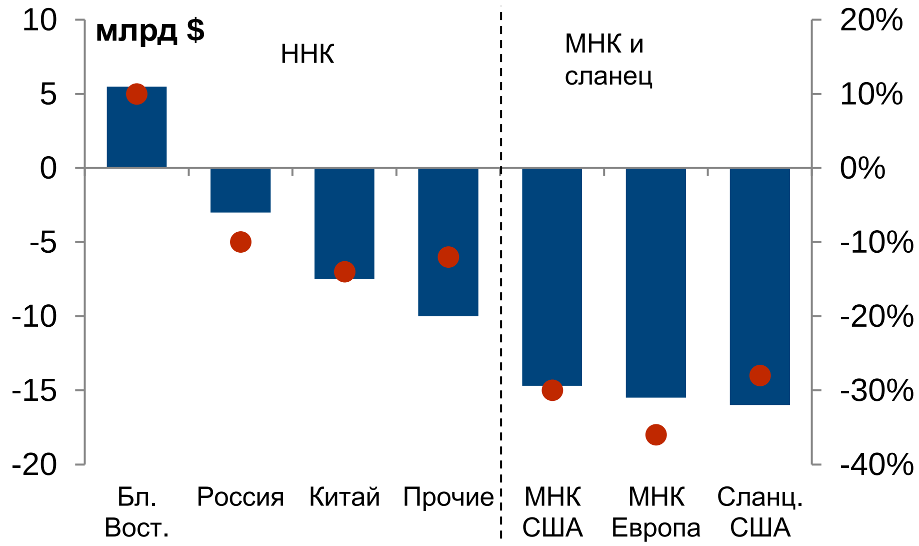
But corporate strategies of Oil&Gas Majors and National Oil&Gas Companies are different:

IOCs are oriented to decarbonization, NOC's are oriented to ensuring energy security

Energy consumption per capita



Oil&Gas Upstream Investment Changes (2022 VS 2019)



- In the next five years, the IOCs does not envisage the implementation of any new project with a peak volume of hydrocarbon production of more than 500 thousand barrels/day
- Most of the projects that are planned to be implemented by 2030 have a break-even point in the region of $20-40/bbl, which reflects the extremely cautious investment strategy of the IOCs
- NOCs are more oriented to ensuring their national energy security
- As a result, national Oil&Gas companies have reduced their investments in Upstream much less significantly than the Majors and shale companies in the USA

Source: BP Statistical Review, IEA

IEF
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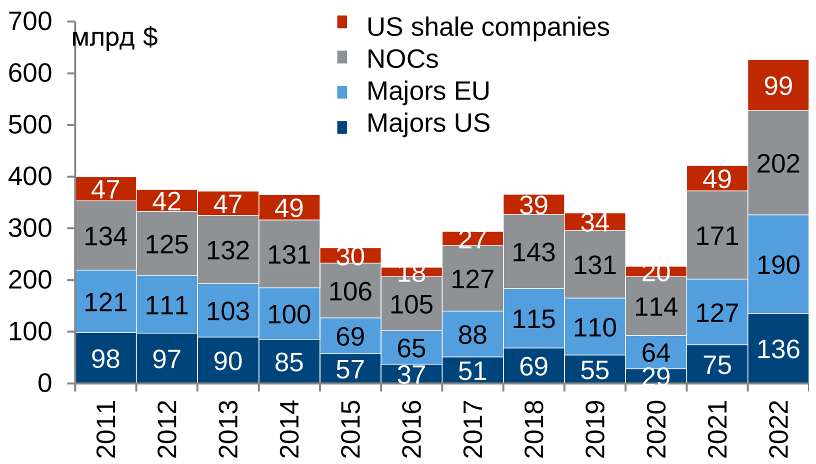
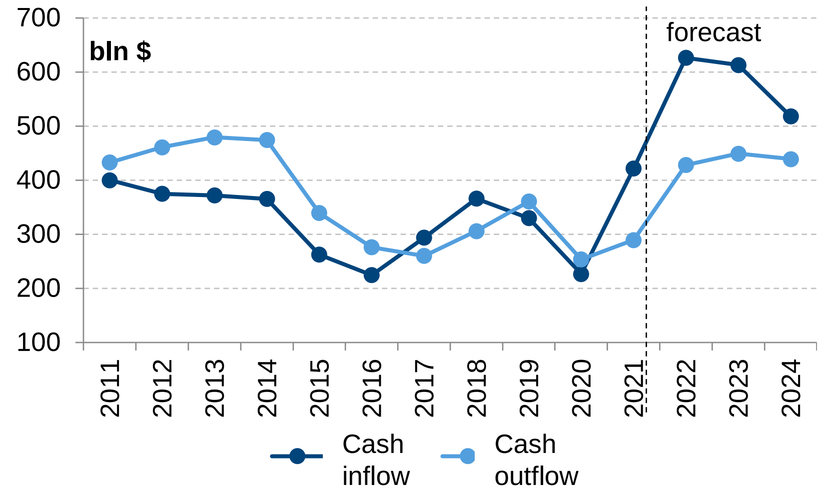
2022 is a year of record revenues in the Oil & Gas sector

But Oil&Gas companies remain in "standby mode"…

Cash inflow from operating activities of the biggest Oil&Gas companies



The ratio between cash inflow and outflow of the biggest Oil&Gas companies



- The rise in energy prices increase in 2022 will increase the total cash inflow from operating activities for oil and gas companies by 48.6% (YoY), and it will be 2.76 times higher than the level of 2020, which creates a significant cash surplus for companies
- The Oil&Gas companies will distribute the growing cash flow between attracting shareholders through dividends and share buybacks, capital investment growth and debt repayment.
- At the same time, Oil&Gas companies have not significantly revised their capital investment plans for 2022 compared to the initial statements made in 2021
- Companies remain in "standby mode" due to uncertainty about how long high oil and gas prices will remain, and whether the decarbonization factor will remain dominant in their decision-making process

Source: Corporate' data, Bloomberg, Goldman Sachs

The main risks for Oil&Gas companies in their way to Global Energy Transition

Insufficient disclosure of information on specific steps that will allow to achieve their declared ambitious decarbonization goals

The risk of a long “energy transition", when the availability of traditional fossil energy resources will decrease to a critical level, but the capacity of "clean" energy (which is financed by revenues from traditional hydrocarbon projects) will still be insufficient to replace oil and gas projects

High competition and lack of competence of IOCs in the sector of renewable energy and "clean" energy. Majors are moving from an industry where they are leading to an industry where they are still "second-tier" players

Low profitability, high capital intensity of electric power projects and a smaller volume of energy produced compared to oil and gas projects

The trilemma of Oil&Gas sector investment strategy

Should we continue investing in the profitable Oil&Gas projects in the current favorable (but possibly short-term) global commodity prices?

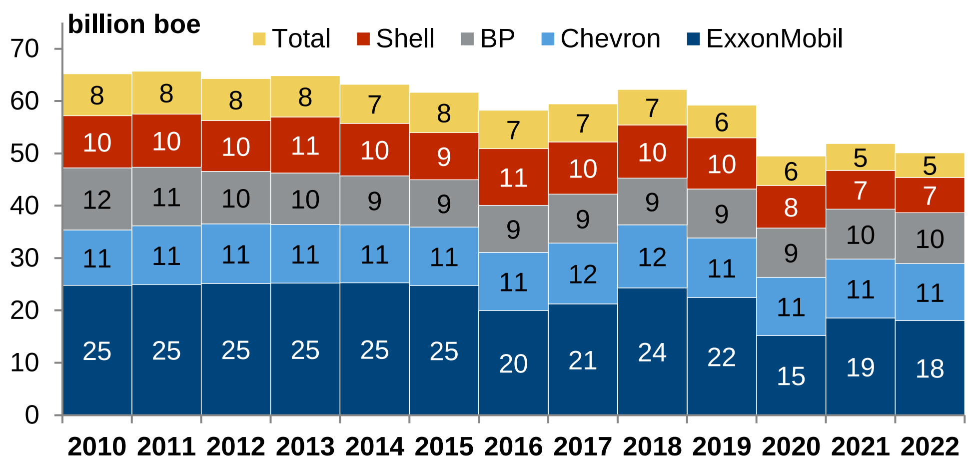
Should we redistribute investment flows from oil and gas projects to low-carbon business, which is necessary to achieve long-term decarbonization goals?

Should we ensure the increased expectations of investors regarding dividend payments and/or share by back as a kind of 'compensation' for the high carbon footprint from the current activities in the Oil&Gas sector?

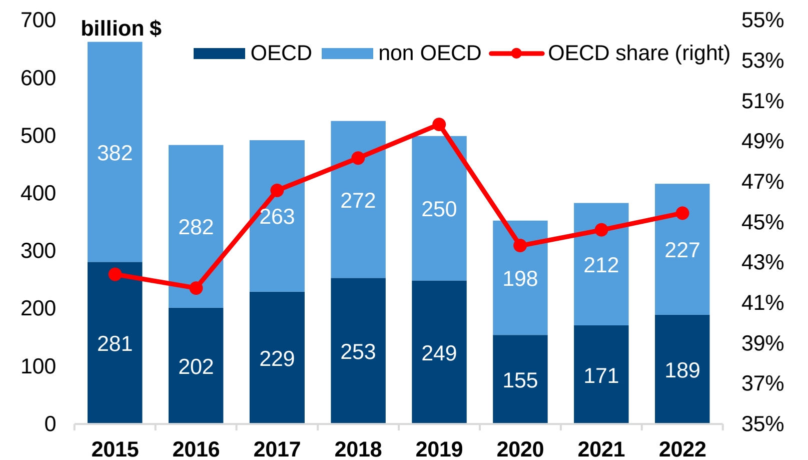
The Majors have made their choice in favor of the gradual winding down of their Oil & Gas business

Will it follow to the risk of lack of global hydrocarbons supply in the future?

Oil and natural gas reserves



Global investment in upstream oil and gas



- Insufficient investment recovery in 2021-22 and beyond will result in Majors proved reserves being 22-24% below pre-pandemic levels
- Without IOC investment, meeting growing demand for oil and gas and offsetting depletion will be extremely difficult
- Majors are industry leaders in terms of technology and human resources
- IOCs are key investors in the oil and gas sectors of developing countries. The share of developed countries in world oil and natural gas production in 2021 was at the level of 34%, but 45% of investments were made by OECD companies

Oil and natural gas production