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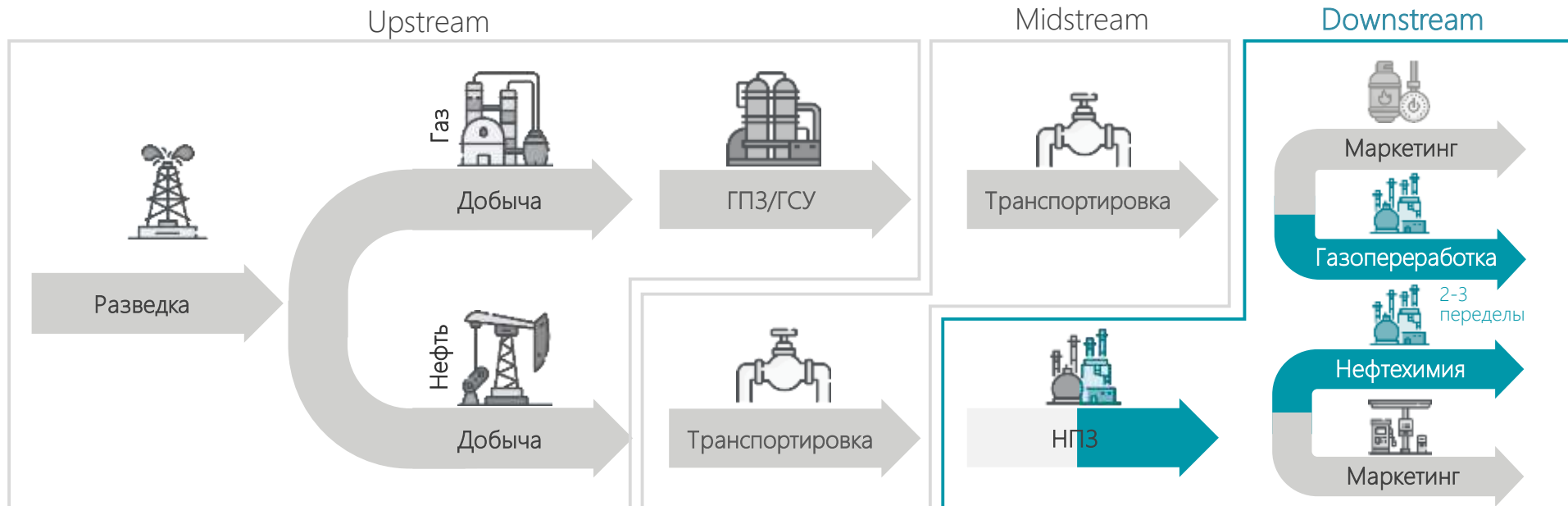
Analysis of the chemical industry in the world and in Kazakhstan

Main conclusions

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Конкурентоспособность лидирующих химических компаний, как правило, основана на кооперации с ресурсодержателями и специализации на химии, а не на вертикальных интеграциях



Нефтегазовые компании

- Глобальные игроки (Chevron, ExxonMobil, Shell, Total Energies, и др.) остаются **энергетическими** компаниями - без «проникновения» в сектор химии
- Нефтегазовые компании сконцентрированы на **увеличении запасов, добычи и реализации нефти и газа**
- Как правило, компании отрасли **не выстраивают вертикальную интеграцию от добычи до этапа нефтехимии**
- В случае «входа» в **химический бизнес**, добывающие компании из-за отсутствия нужных компетенций **формируют СП** с ведущими химическими компаниями (Chevron Philips Chemical, BASF TOTAL Petrochemicals, Sadara Chemical (Dow/Saudi Aramco))

Химические компании

- Компании сконцентрированы на **определенной части downstream сегмента – производство продуктов, а не энергоносителей**
- Многие лидирующие химические компании не имеют собственных активов по добыче нефти и газа (LG Chem, INEOS, Formosa Plastics)
- Несут **высокие затраты на НИОКР** для создания новых продуктов и технологических решений с их дальнейшей коммерциализацией
- Формируют СП с нефтегазовыми компаниями и на их базе **создают интегрированные производства по переработке углеводородов** (BASF, Dow, Linde Group)



The chemical industry takes a significant share in the global economy, covering about 7% of global GDP

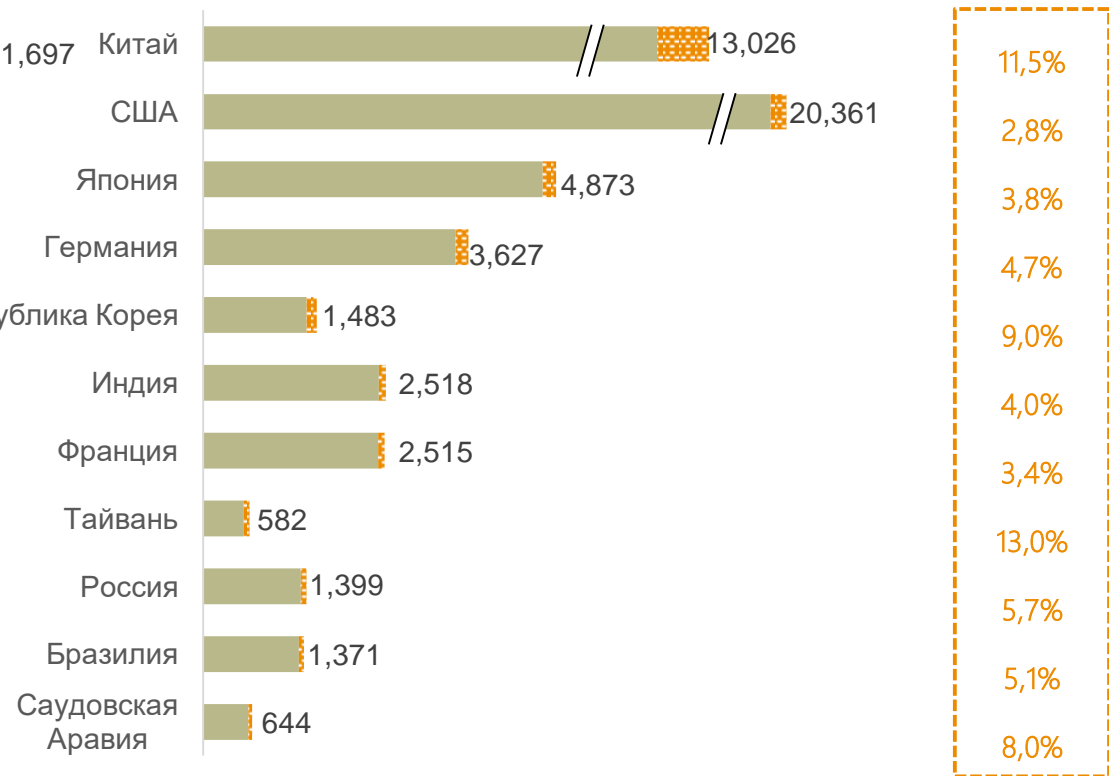
Leading countries in sales of chemical products

\$ billion, 2020



The volume and share of the chemical industry in the GDP of the leading countries (taking into account the "end-to-end" effect)

2020, GDP \$ billion, % share of chemical industries in GDP

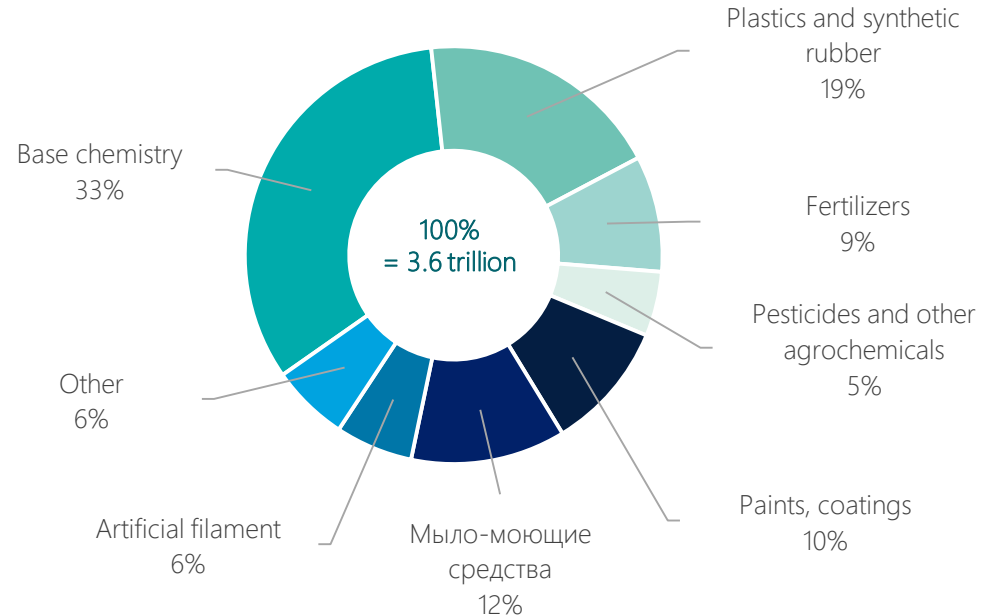


- The chemical industry takes for a significant share of GDP in **developed countries** and generates a large volume of sales in the global chemical industry
- The chemical industry takes **11.5% of China's GDP**
- **Taiwan** has the highest indicator with **13% of GDP**
- The share of the chemical industry in the Russian economy is **5.7% of GDP**

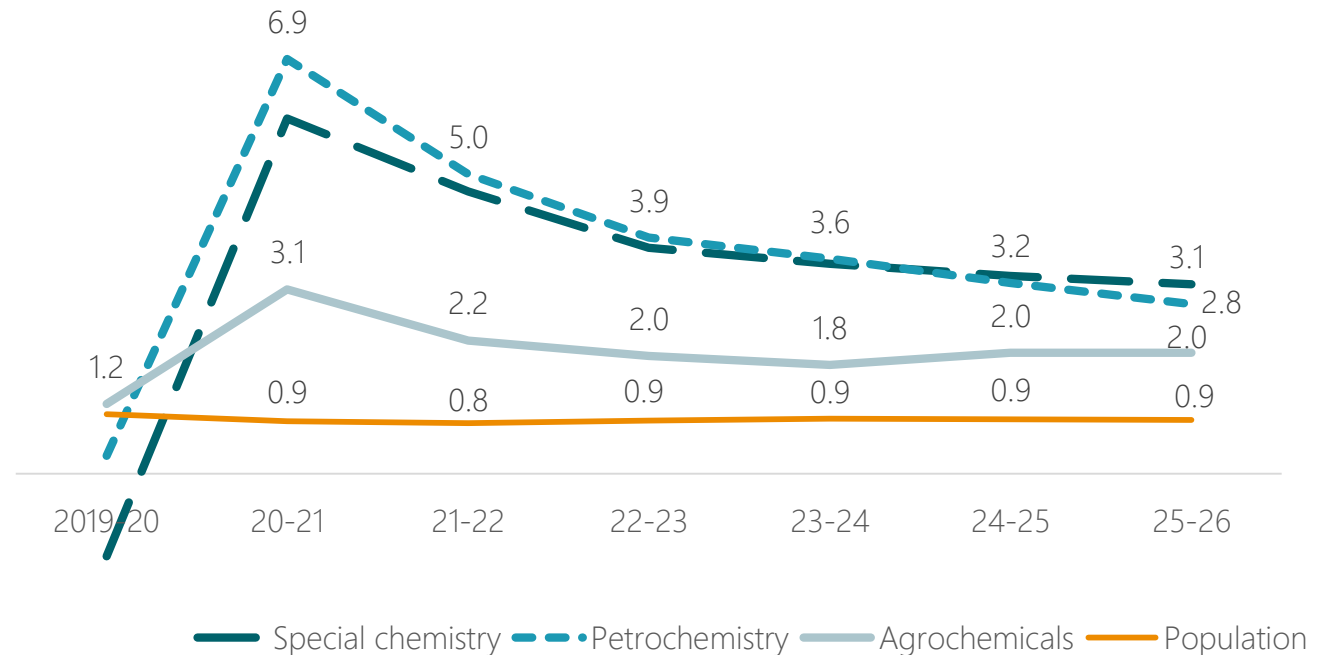


The global chemical industry market is estimated at USD3.6 trillion and is forecasted to grow further by 3% per year until 2026

Global revenue from the chemical industry by segment, 2020, USD trillion, %



Global sales growth of chemical products by segment year-on-year, %



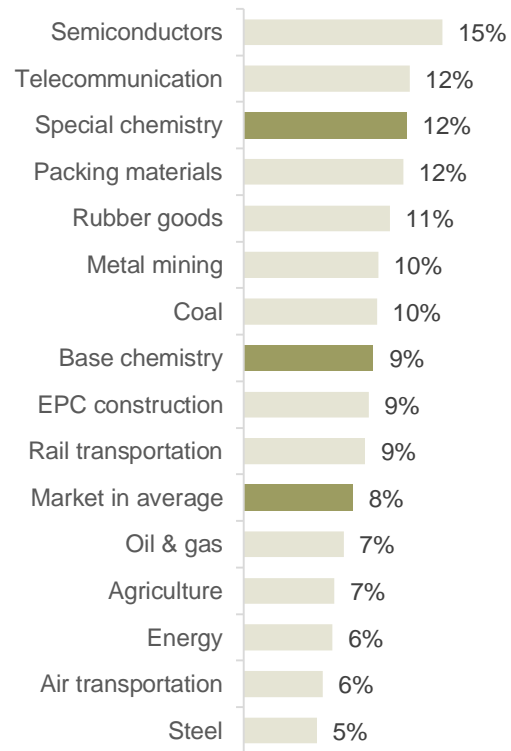
- The structure of the global chemical products market is largely diversified
- The global market of chemical products in 2020 amounted to USD3.6 trillion, of which a third was accounted for by basic chemistry
- The highest growth rates will be observed for sectors of special chemicals and petrochemicals



From a financial point of view, the industry is highly marginal and close to industries with high added value

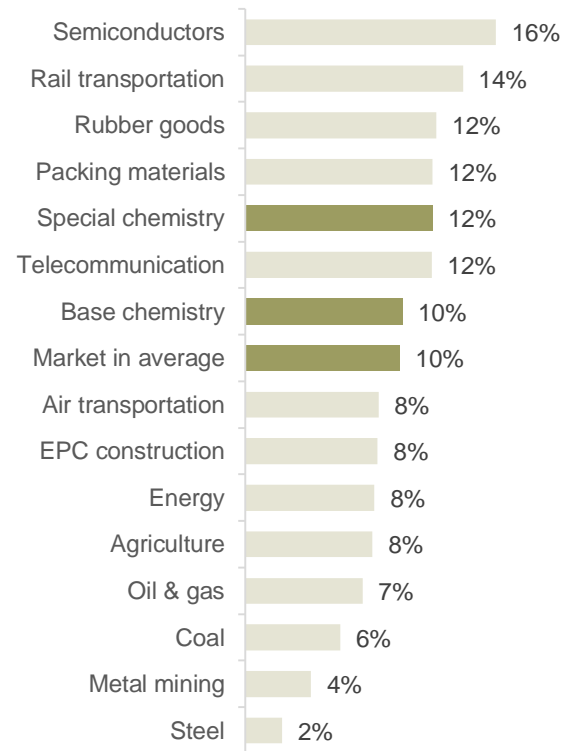
ROIC

2013-2020, %



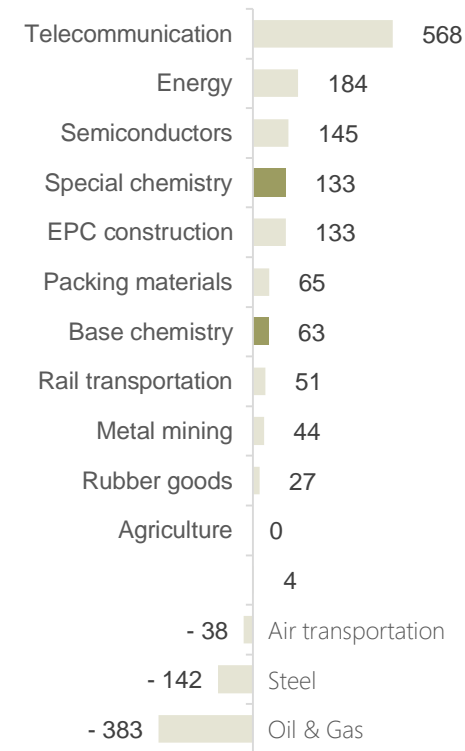
ROE

2013-2020, %



EVA

2013-2020, USD billion



In terms of return on invested capital (ROIC), the special chemistry sector is one of the leaders along with the telecom industry and semiconductor manufacturing

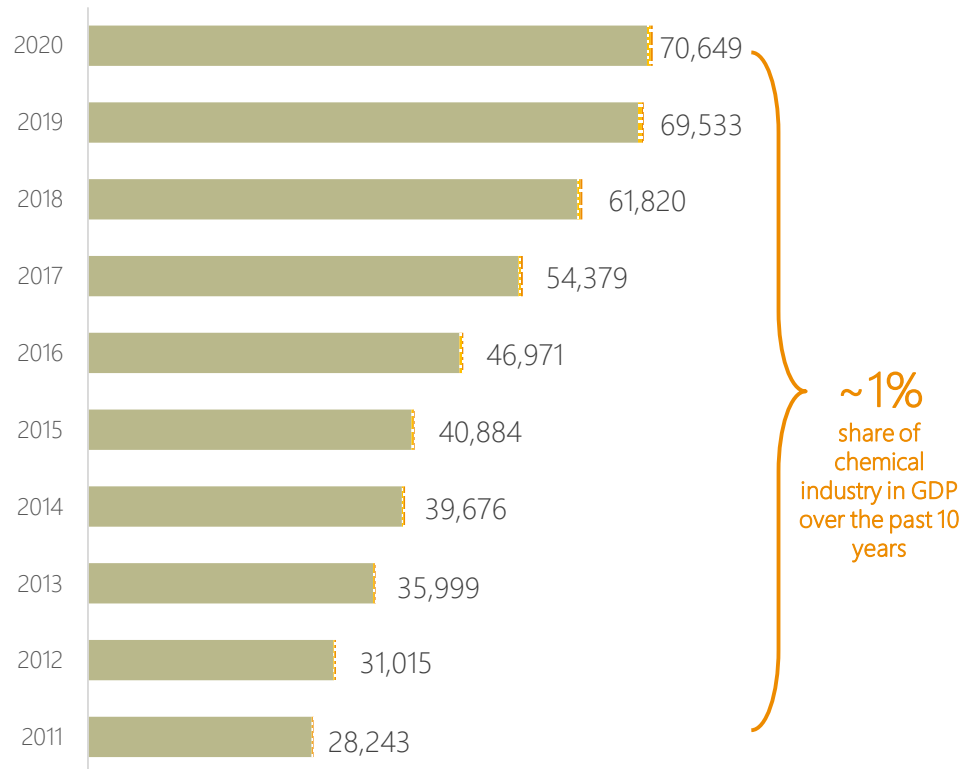
The return on equity (ROE) and profitability of the chemical industry sectors, expressed by the EVA indicator, exceed the average indicators for the sectors of the economy



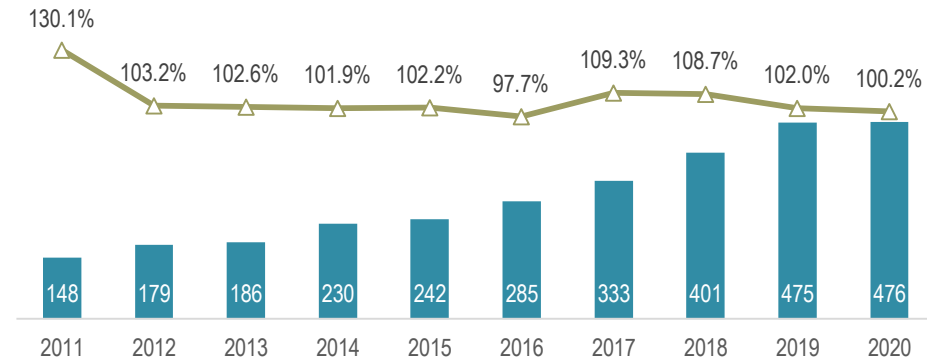
The volume of chemical industry production in Kazakhstan is less than 1% of the country's GDP

The share of the chemical industry in Kazakhstan's GDP has been stagnating at ~1% of GDP for the past 10 years

2011-2020, Kazakhstan's GDP and the share of chemical industry (KZT billion)

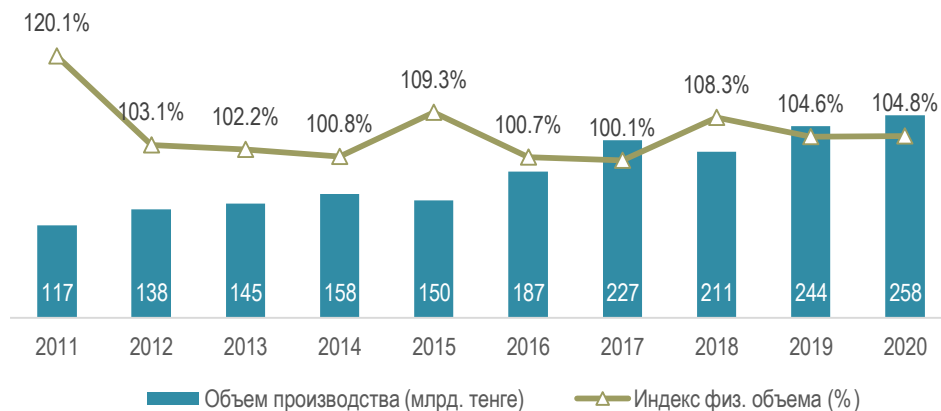


Volume production of products of the chemical industry of the Republic of Kazakhstan



NOMINAL GROWTH of chemical production volumes over 10 years is **3.2x**, whereas the growth of the PHYSICAL VOLUME of production is only **1.7x**

The volume of production of rubber and plastic products in the Republic of Kazakhstan



NOMINAL GROWTH of chemical production volumes over 10 years is **2.2x**, whereas the growth of the PHYSICAL VOLUME of production is only **1.6x**



Thanks for your attention!