

Hellenic Petroleum SA

Valuation report regarding the refining, supply and trading of petroleum products and petrochemicals sector of the company Hellenic Petroleum SA

September 2021

It should be noted the translation hereof is an unofficial translation rendering the Greek text into the English language. In an event of disagreement between the English and Greek text, the Greek text prevails, whilst it has been submitted with the authorities for pertinent administrative actions.



To the Board of Directors of:

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30 September 2021

Dear Sirs

Valuation report of assets and liabilities of the refining, supply and trading of petroleum products and petrochemicals sector of the company Hellenic Petroleum SA

With reference to our engagement letter, we enclose a copy of our valuation report and will be pleased to provide further copies upon request.

The purpose of this report is the estimation of the fair value of the assets and liabilities of the refining, supply and trading of petroleum products and petrochemicals sector of the company Hellenic Petroleum SA, in accordance with article 17 of L.4548/2018, in the context of the demerger through hive-down with establishment of a new entity (i.e. 100% subsidiary) that will be incorporated in this context. The aforesaid transaction will be carried out according to the provisions of L.4601/2019 and L.4172/2013.

Our conclusions as well as the Management's assumptions are included within the "Executive summary", but we stress that for a full understanding it is necessary to read this in conjunction with our detailed commentary set out in the sections below.

Your attention is drawn to the important notice of Appendix II. This report is confidential and has been prepared exclusively for the Board of Directors of Hellenic Petroleum SA with notice to the competent authorities in accordance with L.4601/2019, L.4172/2013 and L.4548/2018.

Whilst other parties may be interested in receiving a copy of this report, we stress that, to the fullest extent permitted by law, we cannot accept any responsibility whatsoever in respect of any reliance that these parties may place on our report in any decision that they may make in relation to the transaction.

Yours faithfully,

Dimitris Douvris
Certified Public Accountant
SOEL Register No. 33921

Panagiotis Noulas
Certified Public Accountant
SOEL Register No. 40711

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01

Executive summary

Executive summary

Scope of work

- The purpose of this report is to carry out an independent valuation of the assets and liabilities of the refining, supply and trading of petroleum products and petrochemicals sector (herein the “**Sector**”) of the company Hellenic Petroleum SA (herein “**HELPE**” or the “**Company**” or the “**Demerged Entity**”) as of 30/06/2021, according to the relative mandate we received from the management of HELPE (herein the “**Assignor**” or the “**Management**”) by resolution of the Board of Directors of HELPE on its meeting held on 29/07/2021.
- The hive-down of the Sector (herein the “**Hive-Down**”) aims at the strategic transformation of the HELPE Group (herein the “**Group**”), in order to protect its primary business as well as to exploit opportunities to occur from the energy transition.
- The evaluation is carried out pursuant to the provisions of article 17 of L.4548/2018, in the context of the hive-down and contribution of the Sector to a new 100% subsidiary that will be incorporated in this context as a Société Anonyme company (herein the “**New Entity**” or the “**Beneficiary**”). The hive-down and contribution of the Sector will be carried out according to the provisions of paragraph 3 article 57 and articles 59-74 of L.4601/2019 as well as of article 52 of L.4172/2013.
- **June 30th, 2021** was set as the date of drawing up of the Statement of Financial Position of the Sector (herein the “**Transformation Balance Sheet**”).
- It should be noted that both Grant Thornton SA and the undersigned certified public accountants Mr. Dimitris Douvris and Mr. Panagiotis Noulas are independent in relation to both the Demerged Entity as well as the Beneficiary for the last three years before the hive-down and contribution of the Sector and fulfill the independency criteria according to the provisions of article 10 of L.4601/2019, in conjunction with article 21 of L.4449/2017 and paragraph 4 of article 17 of L.4548/2018.

Valuation methodology

- The Adjusted Book Value approach was used for the estimation of the fair value of equity of the Sector (i.e. the Sector’s net worth). According to this method, the book value of the assets and liabilities of the Sector have been adjusted, where appropriate, in order to approximate fair value. The adjustments mainly refer to items which are held at amortized cost.
- Specifically, for assets that are not measured at market or fair value, in accordance with IFRS, such as property, plant and equipment and the investments in subsidiaries of the Beneficiary, we proceeded with valuation of the particular items using internationally accepted methods to adjust their book values.
- Furthermore, the valuation methods applied in this context were the Adjusted Book Value (ABV), the Discounted Free Cash Flows (DFCF) and the Dividend Discount Model (DDM). The valuation methodologies applied and their accompanying assumptions are presented in detail in Appendix III.

Valuation results

- The results of the valuation of the assets and liabilities of the Sector are summarised below:

Amounts in €	30/6/2021
Fair value of assets	5.909.527.155,11
[–] Fair value of liabilities	(4.454.539.606,26)
Sector’s Adjusted Book Value of equity	1.454.987.548,85

- We believe that the above values reflect the fair value of the Sector, based on the estimates and assumptions that were prepared by the Assignor as well as the notes included in Appendix II of this report.

Executive summary

Valuation results

- The adjusted book value of equity of the Beneficiary amounts to € 1,45bil., out of which € 153,99mil. regard tax reserves and provisions formed by the Demerged Entity in relation to the Sector as stipulated in the Draft Demerger Deed (the “**DDD**”), pursuant to articles 57 and 59-74 of L.4601/2019 and article 52 of L.4172/2013 and will be transferred by contribution to the Beneficiary. The following tables present the breakdown of the Sector’s equity.

Amounts in €	30/6/2021
Share capital	1.301.000.000,00
Reserves	153.987.548,85
Sector shareholders' equity	1.454.987.548,85

- In this context and based on the DDD, the Demerged Entity will receive all of Beneficiary’s shares in return for the contributed assets that will be transferred to the latter. The calculation of the intrinsic value per share to be issued by the Beneficiary is presented in the table bellow.

Amounts in €	30/6/2021
Share capital	1.301.000.000,00
Shares number (#)	130.100.000
Face value per share	10,00

- The share capital of the Beneficiary will be divided to 130.100.000 common registered shares with a nominal value of € 10,00 each.

02

HELPE Group overview

Overview of the basic information of the Company

Company name



- The name of company is “Hellenic Petroleum Société Anonyme” with distinctive title “Hellenic Petroleum SA”.
- For transactions with foreign countries, the Company uses its name in an exact translation and its distinctive title in Latin or other characters.

Registered office



- The registered office of the Company is the Municipality of Marousi and specifically the address is at 8^A Chimarras Str., Marousi, PO151 25.
- By decision of the Board of Directors, branches, agencies or offices of the Company may be established all over Greece or abroad.

Company duration



- The duration of the company has been set as indefinite.

General Commercial Registry



- The Company’s registered number on General Commercial Registry is 296601000.
- Former SA registered number: 2443/06/B/86/23

Share capital



- The total share capital of the Company amounts to € 666.284.703,30.
- The share capital of the Company is divided in 305.635.185 common registered shares with a nominal value € 2,18 each.

Overview of the basic information of the Company

Purpose of the company



The purpose of the Company is:

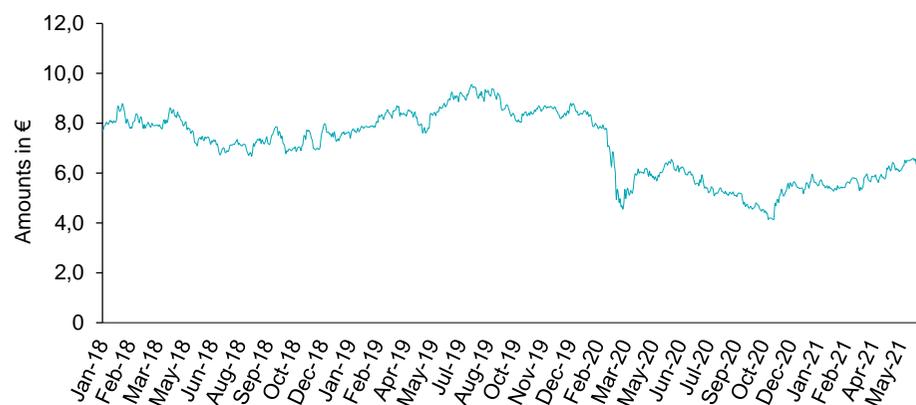
- The commercial, industrial and research activity related to hydrocarbons in Greece and abroad, which includes:
 - The search, exploration, drilling for the location of hydrocarbon deposits and their exploitation.
 - The production, processing, storage and disposal of hydrocarbons.
 - The assignment via a contract of any such project to third parties.
 - The provision of advisory services and the project management of hydrocarbon related projects.
 - The design, supervision, construction and operation of pipelines and hydrocarbon storage tanks, as well as processing facilities, domestic and foreign production or refining products and processing in general.
 - The execution of drillings for the research and utilisation of geothermal potential.
 - The supply and trading of crude oil and its products as well as trading of petroleum products.
 - The operation and exploitation of oil refineries and the distribution and marketing of petroleum refining products, the operation and exploitation of petrochemical and chemical plants as a whole, the operation of industrial infrastructure facilities serving the industrial units of oil refineries and petrochemical plants, as well as other companies that cooperate or are associated with it and finally the provision of various services to these companies. The marketing of petrochemicals and chemical products, the storage of petroleum and chemical products as a whole, their transport by sea, air and land, the conduct of related commercial transactions, including the representation of domestic and foreign companies and any related work.
- The marketing, production and exploitation of any other form of energy.
- The provision of all kinds of administrative, financial, organisational and operational support, service and information support to legal entities associated with the Company, within the meaning of Appendix A of L.4308/2014, as it applies, in Greece and abroad.

HELPE Group overview

Group overview

- The Hellenic Petroleum Group is one of the leading groups in the field of energy in Southeastern Europe with a strong presence in Greece and in 6 foreign countries. The Group engages in the refining and trading of petroleum products, the production and trading of petrochemical products, the provision of consulting and engineering services, while through its investment in DEPA Infrastructure SA, DEPA Commercial SA, DEPA International SA and Elpedison BV is also active in the field of natural gas trading as well as the production and marketing of electricity.
- The parent company of the Group, Hellenic Petroleum SA was established in 1975 as Public Petroleum Corporation SA (DEP). The address of its registered office is 8^A Chimarras Str., Marousi, 151 25.
- The Company's shares are traded on both the Athens and London Stock Exchanges; in London they are traded as Global Depository Receipts – GDRs. Furthermore, the Company's shares are traded on the Luxembourg Stock Exchange through two international bond issues.

Share price



— Hellenic Petroleum S.A. (ATSE:ELPE) - Share Pricing



Board of Directors

Name	Title
Ioannis Papathanasiou	Chairman of the Board
Andreas Shiamisis	Chief Executive Officer
Georgios Alexopoulos	Non-executive member
Anastasia Martseki	Non-executive member
Alkiviadis-Konstantinos Psarras	Non-executive member
Theodoros-Achilleas Vardas	Non-executive member
Alexandros Metaxas	Non-executive member
Iordanis Aivazis	Independent non-executive member
Nikolaos Vrettos	Independent non-executive member
Lorraine Scaramanga	Independent non-executive member
Panagiotis Tridimas	Independent non-executive member

Notice: The duration of term of office of BoD has been defined from 30/06/2021 to 30/06/2024. Source: General Commercial Registry



Capital structure

Shareholder	Number of shares (#)	Percentage (%)
Pan-European Oil & Industrial Holdings S.A.	143.608.719	47,0%
HRADF	108.430.304	35,5%
Institutional investors – Greek	16.180.161	5,3%
Institutional investors – Foreign	10.449.361	3,4%
Individuals investors	26.966.640	8,8%
Total	305.635.185	100,0%

HELPE Group overview

Overview of refineries

Domestically, the Group possesses three refineries, which account for approximately 65% of the total refining capacity of Greece and are located in Aspropyrgos, Elefsina and Thessaloniki. The refineries have tanks for the storage of crude oil and other products with a total capacity of 6,65mil. cubic meters.

Aspropyrgos Refinery | Annual refining capacity: 7,5mil. MT.

- It was constructed in 1958 and is one of the most modern refineries in Europe. The refinery is a fluid catalytic cracking (FCC) type refinery, and has been upgraded several times since 1986, producing petroleum products that are in line with EU standards. The refinery has a large number of atmospheric distillation and conversion units, while at the same time it has significant capacity to produce gasoline through isomerisation and reforming units.

Elefsina Refinery | Annual refining capacity: 5,0mil. MT.

- The Elefsina refinery has a daily refining capacity of 106th. barrels, while at the same time has a high pressure hydrocracking unit with a daily capacity of 39th. barrels, a thermal cracking unit with a daily capacity of 20th. barrels and a vacuum unit distillation. The latest upgrade of the refinery took place in 2012 and contributed to the reduction of pollutant emissions. This refinery is of hydrocracking type.

Thessaloniki Refinery | Annual refining capacity: 4,5mil. MT.

- The Thessaloniki refinery is hydroskimming type with a storage capacity of 1,4mil. cubic meters. Due to the fact that it is the only refinery in all of Northern Greece, it supplies both the Greek market and the Southeastern European market. In 2011 both the units and storage facilities of the refinery were upgraded, while a catalytic reforming unit was added (CCR: 15th. barrels/day). The Thessaloniki refinery is connected through a pipeline to the Group refinery in the Republic of Northern Macedonia.

The refineries of HELPE in Greece



HELPE Group overview

Other activities

The Group is active in the marketing and distribution of petroleum products in Greece through its subsidiary EKO SA, with the tradenames of "BP" and "EKO", with more than 1.700 fuel stations.



Regarding the electricity sector, the Group is active in the production, supply and marketing of electricity in Greece through its participation (50%) in the Joint Venture (JV) Elpedison BV. Elpedison SA, a wholly-owned subsidiary (100%) of Elpedison BV, is currently the second largest independent producer of electricity in Greece.



The Group international business operates through its subsidiaries in Cyprus, Serbia, Montenegro, Bulgaria and the Republic of North Macedonia, with a total network of almost 300 petrol stations.



In the natural gas sector the Group is active through its participation (35%) in DEPA SA, which operates in the import of natural gas through long-term contracts, in the supply of natural gas from large to small scale consumers, as well as in the distribution of medium and low-pressure gas through the Gas Distribution Companies (EDA).



In addition, the Group is active in the production and marketing of polypropylene, BOPP and solvents, holding a market share of more than 50% in Greece. More specifically, the refinery in Aspropyrgos produces and supplies the polypropylene Thessaloniki chemical plant. Polypropylene production is made available to international markets, mainly in the Mediterranean area and the domestic market, with part of the production converted into BOPP.



HELPE Renewables, is a wholly-owned subsidiary of HELPE and operates in the field of production and trading of energy products from renewable sources. On October, 2020 HELPE Renewables completed the acquisition of the portfolio of photovoltaic projects that will be constructed by the German company "JUWI" in the region of Kozani. The project will be the one of the largest PV parks in Europe and it is expected to generate 300GWh per year.



Furthermore, HELPE has been awarded hydrocarbon exploration and exploitation rights in 9 research areas through its participation in international Licensing Rounds of the Environment & Energy Ministry of Greece in collaboration with foreign companies. The portfolio of the 9 selected areas in Greece is managed by HELPE Upstream (100% subsidiary of HELPE), which operates in the field of research, development and implementation of projects related to the industry of hydrocarbon exploration and exploitation (upstream).



In addition, the Group engages in the provision of engineering and consulting services in the energy sector through its wholly-owned subsidiary Asprofos SA. In more detail, the company supports the Group's investments in the fields of refining and natural gas.



HELPE Group overview

Investments in operating subsidiaries

Hellenic Petroleum Cyprus Ltd

- Hellenic Petroleum Cyprus Ltd was established in 2002, following the acquisition of BP Cyprus Ltd and operates in the supply, transportation and marketing of liquid fuels, lubricants and liquefied petroleum (LPG) to commercial and industrial customers. Hellenic Petroleum Cyprus Ltd distributes its products through a network of 94 gas service stations and 5 tank-trucks for the transportation of LPG.

ELPET BALKANIKI SA

- ELPET BALKANIKI SA is a holding company with participation in oil companies and specifically to OKTA Crude Oil Refinery AS – Skopje and VARDAX SA. ELPET BALKANIKI SA is wholly-owned (100%) subsidiary of HELPE.

VARDAX SA

- The company with trade name Crude Oil Pipeline Company Thessaloniki – Skopje - Vardax SA and corporate title VARDAX SA, was founded in 2002 and engages in the construction and operation of the oil pipeline connecting Thessaloniki with Skopje. In addition, the company has a branch in Northern Macedonia in accordance with the legislation of the latter, for representation in local authorities and services.

Jugopetrol AD

- Jugopetrol AD was founded in 1947 and is one of the largest companies in the petroleum sector in Montenegro. In 2002, HELPE acquired 54,53% of the company through its subsidiary Hellenic Petroleum International (HPI). Jugopetrol AD activities include the retail and wholesale trade of petroleum products and lubricants under the EKO brand, as well as the exploration and exploitation of hydrocarbons in two offshore concessions in the Adriatic Sea.

EKO Bulgaria EAD

- EKO Bulgaria EAD was established in 2002 and is 100% subsidiary of HELPE. EKO Bulgaria EAD operates in the wholesale and retail sale of petroleum products and lubricants under the brand name “EKO”, as well as in the distribution and storage of LPG. The company operates the 5th largest retail network in Bulgaria with 91 service stations under the tradename “EKO”.

EKO SERBIA Novi Beograd

- EKO SERBIA Novi Beograd was founded in 2002 in Belgrade and is 100% subsidiary of HELPE. The company is active in the supply, transportation and marketing of petroleum, lubricants and LPG, to commercial, industrial and agro clients. EKO SERBIA service stations also offer car wash, coffee, a convenience store under the brand “OLYMPUS PLAZA”, while providing a traditional Pit-Stop (free checks of six key points on car essential for safe driving).

OKTA AD Skopje

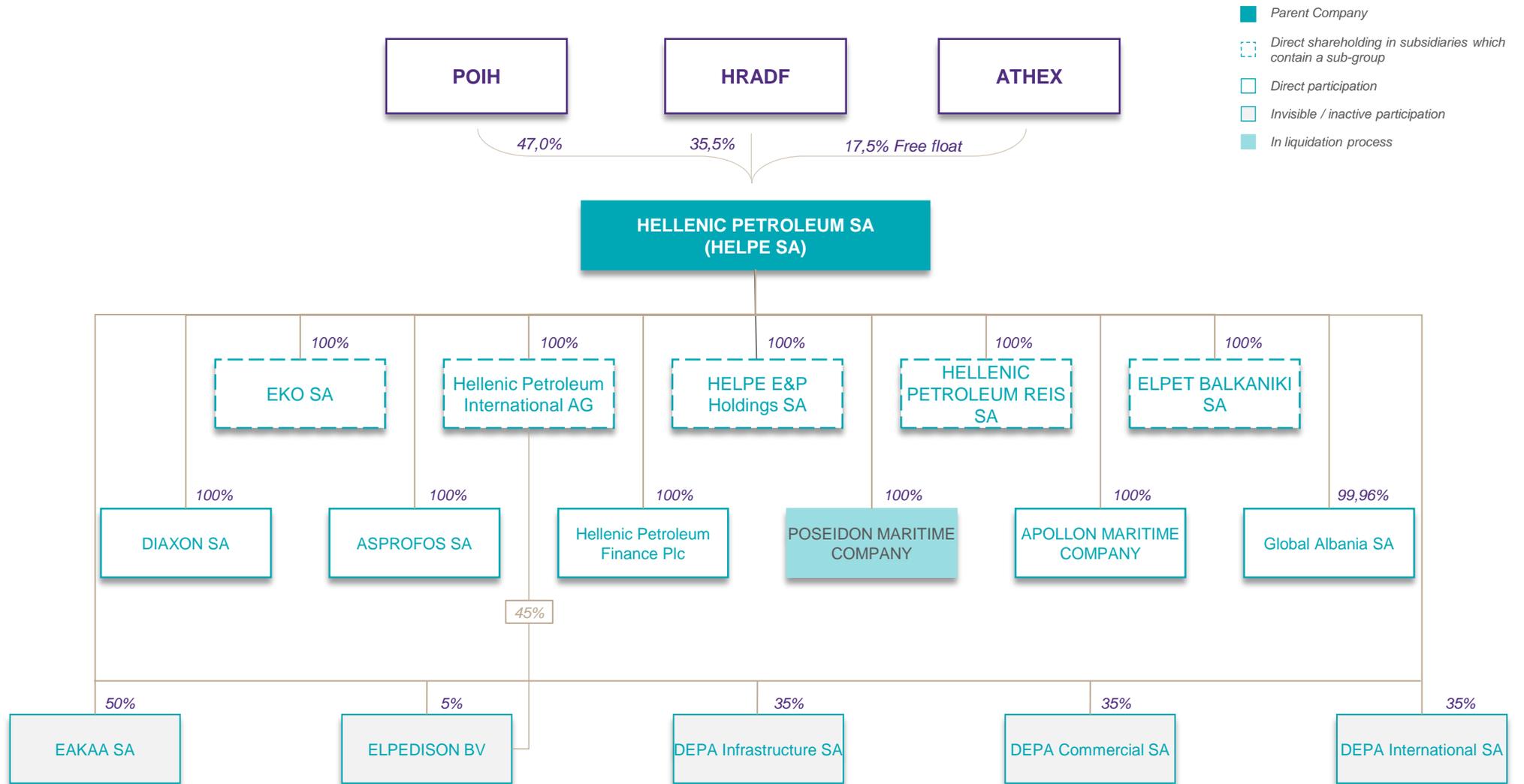
- OKTA AD Skopje was established in 1978, however it became part of the Group in 1999 when ELPET BALKANIKI SA (subsidiary of HELPE) acquired 81,51% of the shares of the aforesaid company. OKTA AD is currently considered as the largest supplier of fuel in the Republic of Northern Macedonia. In July 2002 OKTA's AD installations were connected via a 210km pipeline with HELPE refinery in Thessaloniki.



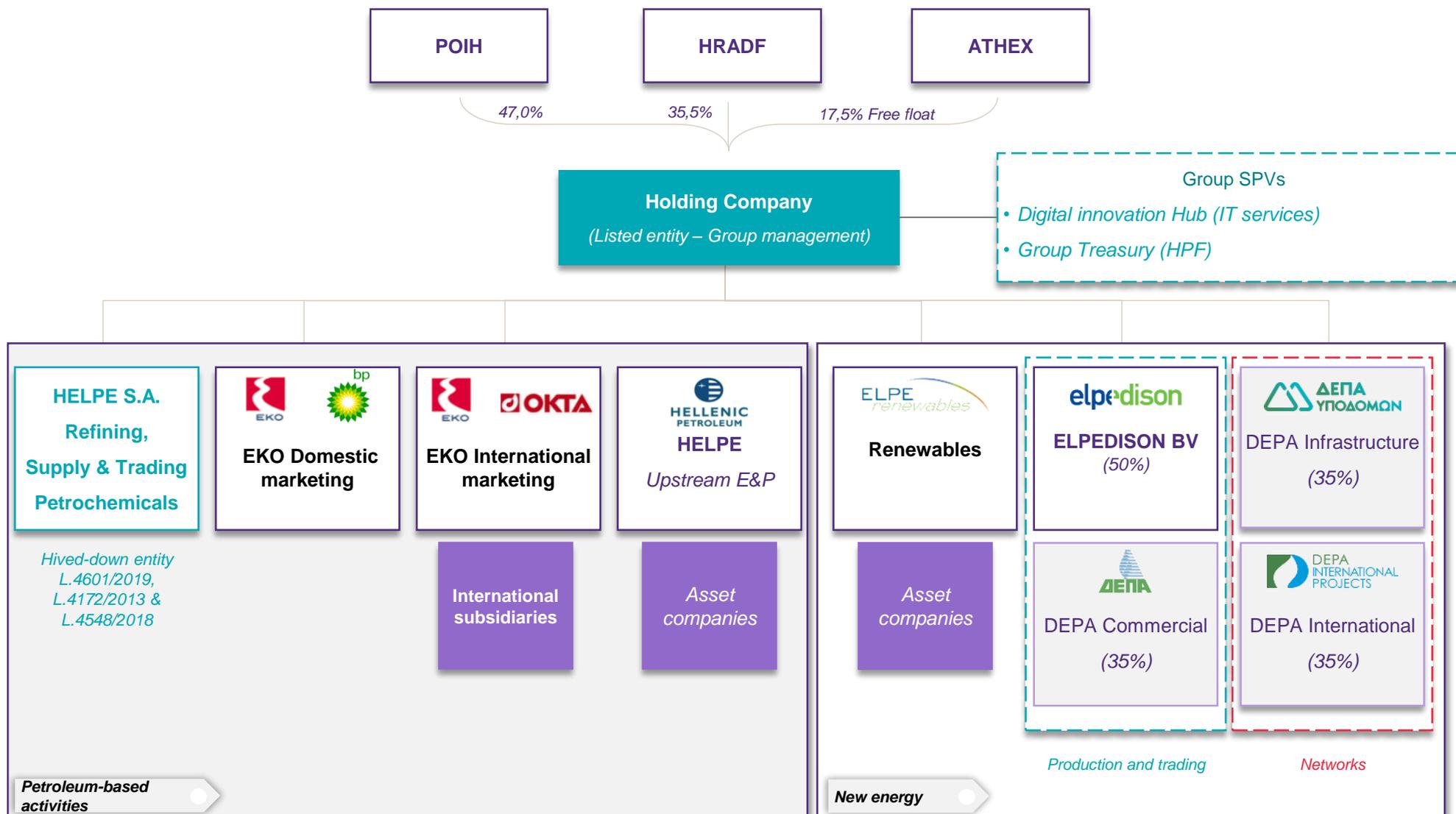
Geographical location of subsidiaries



Group structure summary per company | Before the Sector's Hive-Down



Group structure summary per business unit | After the Sector's Hive-Down



Historical Financial Statements

Statement of Financial Position

amounts in € mil.	FY2018	FY2019	FY2020	H12021
Non-current assets				
Property, plant and equipment	2.684	2.694	2.767	2.733
Right-of-use assets	-	32	32	28
Intangible assets	5	9	8	13
Investments in associates and joint ventures	1.032	1.045	1.065	1.039
Investment in equity instruments	0	1	1	0
Loans, advances and long term assets	9	22	43	43
Total non-current assets	3.731	3.803	3.915	3.857
Current assets				
Inventories	894	900	600	968
Trade and other receivables	643	791	490	571
Income tax receivable	38	88	34	16
Derivative financial instruments	-	3	10	37
Cash and cash equivalents	1.070	889	993	990
Total current assets	2.646	2.671	2.126	2.582
Total assets	6.376	6.473	6.041	6.438
Equity				
Share capital and share premium	1.020	1.020	1.020	1.020
Reserves	262	283	280	275
Retained Earnings	864	936	520	642
Total equity	2.147	2.239	1.820	1.937
Non-current liabilities				
Interest bearing loans and borrowings	1.658	1.608	2.065	1.879
Lease liabilities	-	21	21	18
Deferred income tax liabilities	152	182	3	47
Retirement benefit obligations	133	147	160	160
Provisions	38	23	22	22
Other non-current liabilities	15	14	13	12
Total long term liabilities	1.995	1.995	2.284	2.139
Current liabilities				
Interest bearing loans and borrowings	915	876	495	749
Trade and other payables	1.226	1.272	1.427	1.572
Derivative financial instruments	16	-	5	1
Income tax payable	76	6	0	1
Lease liabilities	-	10	9	7
Trade and other payables	1	77	1	32
Total short term liabilities	2.235	2.240	1.937	2.362
Total liabilities	4.230	4.235	4.221	4.501
Total equity and liabilities	6.376	6.473	6.041	6.438

Statement of Comprehensive Income

amounts in € mil.	FY2018	FY2019	FY2020	H12021
Revenue from contracts with customers	8.968	8.024	5.115	3.625
Cost of sales	(8.288)	(7.563)	(5.417)	(3.287)
Gross profit/(loss)	680	460	(302)	338
Selling and distribution expenses	(99)	(104)	(96)	(46)
Administrative expenses	(96)	(86)	(79)	(38)
Exploration and development expenses	(1)	(2)	(1)	(0)
Other Operating Income / (expense) and other gains / (losses)	(8)	(6)	1	(21)
Operating profit/(loss)	476	262	(477)	233
Finance income	9	11	10	3
Finance expense	(137)	(116)	(103)	(46)
Lease finance cost	-	(1)	(1)	(1)
Dividend income	319	195	52	8
Currency exchange gains/(losses)	2	(1)	5	-
Profit/(Loss) before income tax	670	350	(515)	197
Income tax	(146)	(34)	176	(44)
Profit/(Loss) for the year	523	316	(339)	153
KPIs				
Gross profit margin (%)	7,60%	5,70%	(5,90%)	9,30%
EBITDA	616	417	(311)	318
EBITDA margin (%)	6,90%	5,20%	(6,10%)	8,80%
EAT margin	5,80%	3,90%	(6,60%)	4,20%

- The Company's turnover decreased by 36,25% in 2020 in comparison to FY2019, mainly due to the decline in crude oil prices and the continuing decline in refining margins.
- Furthermore, the Company's financial figures were also affected by fluctuations in demand due to the restrictive measures taken to counter the effects of the Covid-19 pandemic outbreak, such as the lockdown. However, the impact of the epidemiological crisis was partly offset by the increased demand for heating gasoil.
- Regarding the first half of 2021, crude oil prices and refining margins improved, while the launch of the antiviral vaccination program helped to improve domestic demand, with the Company's financial results recovering.
- As a result, HELPE's EBITDA recorded an increase reaching pre-pandemic levels. It should be noted that the effect on the profits from the rising prices of emission rights (i.e. CO₂) was not recorded in the first half of 2021 due to a change in the method of calculation of accruals for liabilities for CO₂ emissions in the interim reporting periods.

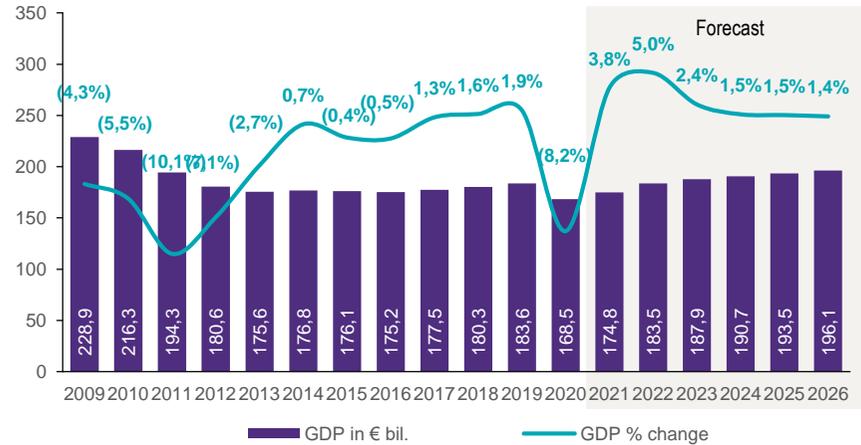
03

Market analysis

Macroeconomic Environment of Greece | Economy

The Covid-19 outburst will have a negative impact on the Greek economy during 2020. Greece is expected to recover from the recession in 2021.

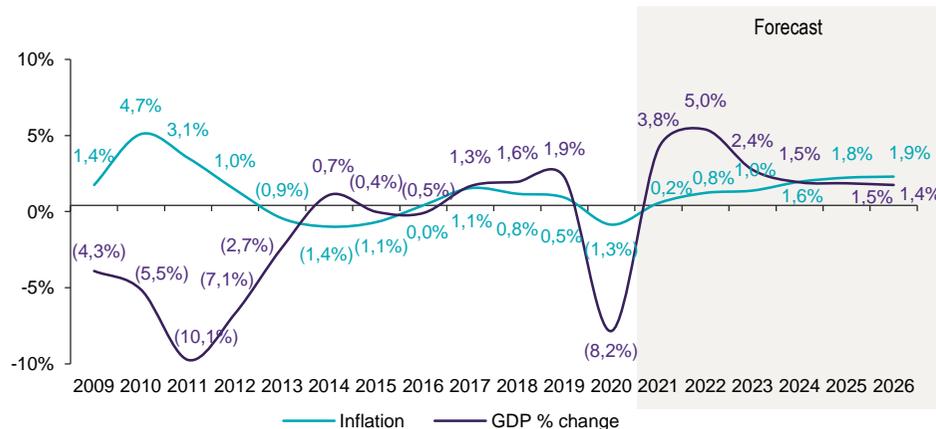
Gross Domestic Product



Population and unemployment



Inflation



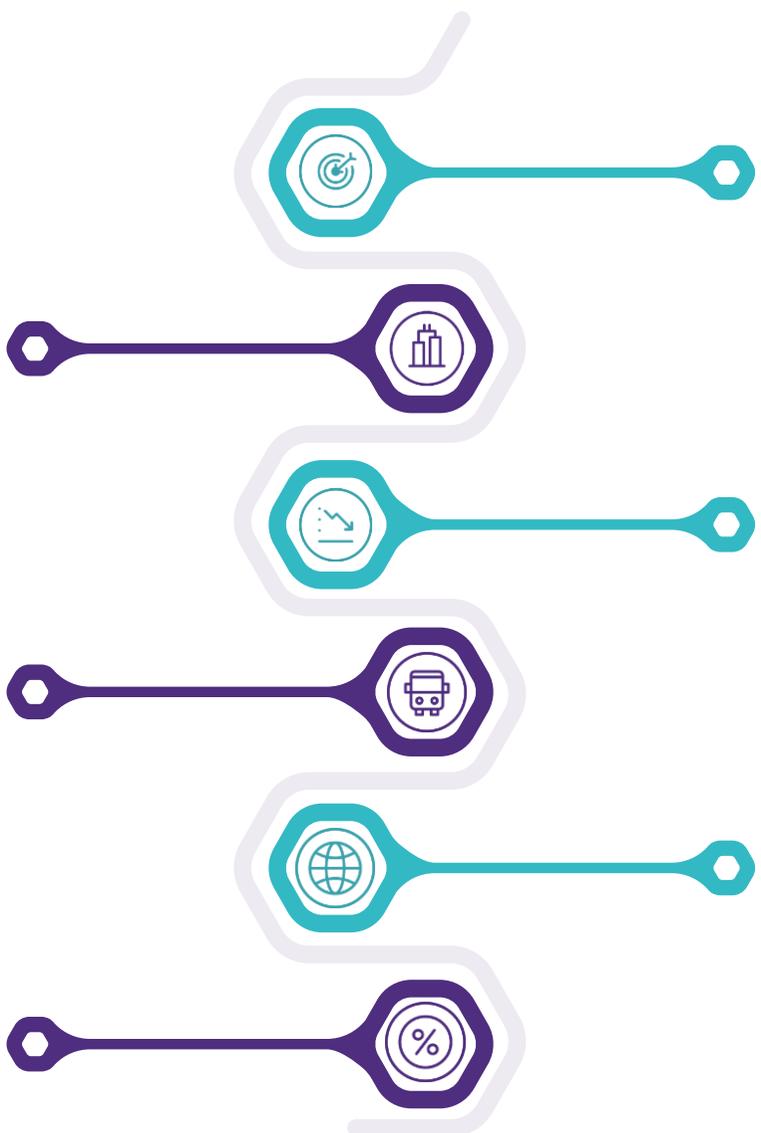
Macroeconomic Environment

After a prolonged recession, the country's GDP showed recovery trends in 2017, however the Covid-19 pandemic halts the positive course of the economy leading to a recession similar to that of 2011. Recovery is expected from 2021, with ELSTAT's provisional data for growth (+16,2%) regarding the second quarter, being indicative of the expected recovery during the year.

Unemployment was at 16,4% in 2020, due to the Covid-19 pandemic. At the same time, the population of the country shows declining trends, which are expected to continue in the future.

Inflation is at very low levels in the period 2017-2019, while due to the impact of Covid-19 pandemic, further deflationary pressures were created on the economy. The advent of the pandemic has disrupted the supply chains leading to an increase in inflationary pressures worldwide.

Greek domestic oil products market | Key milestones



Crude oil imports to Greece increased by **20%** since **2011** and reached almost **23mil. tons** in **2019**.

Oil consumption in Greece is picking up the last years, reaching **7,3mil** in **2019**. tons from **7,0mil.** tons in **2015**.

The domestic production of crude oil was less than **170k tons** in **2019** and has slumped to **zero** in **March** and **April 2020**.

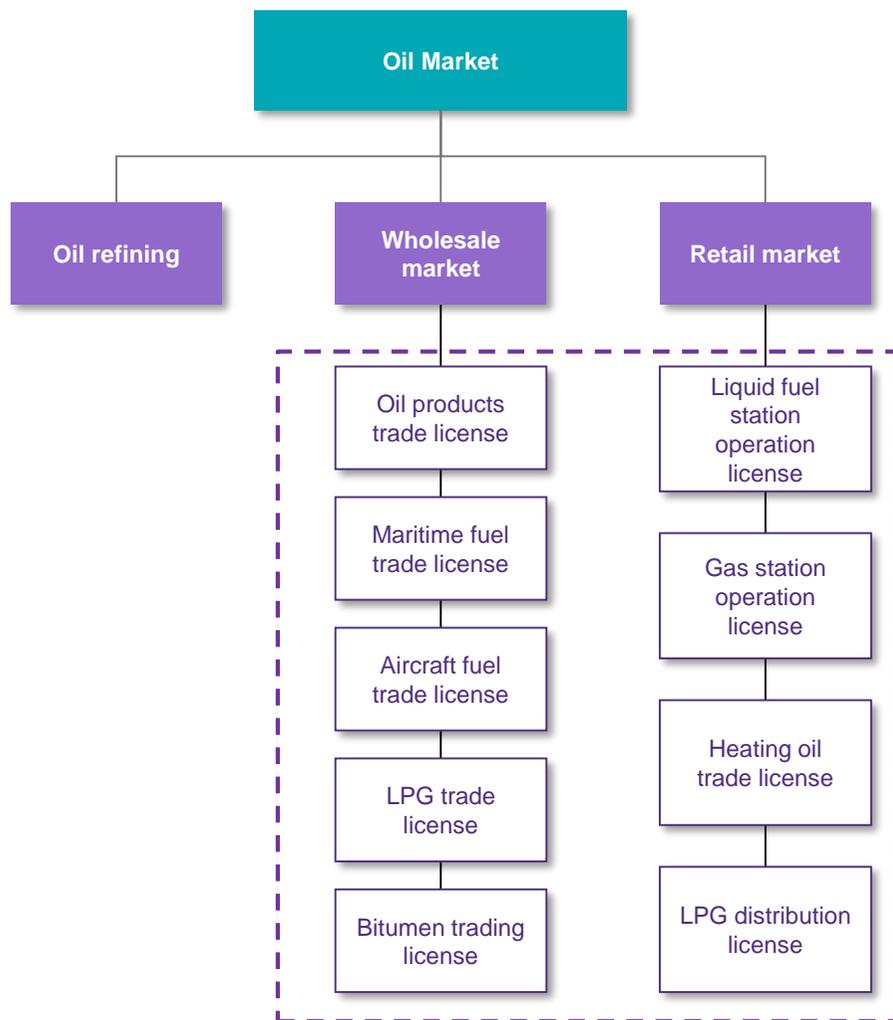
The transportation sector accounts for the largest share in the final consumption of oil and oil products both at **European level (68,6%)** and in **Greece (70,5%)**.

The main source of crude oil for Greece for **2019** was Iraq, representing almost **50%** of the **imports** amounting to **82mil. barrels of crude oil**.

In **2020**, **diesel and unleaded petrol** account for **38,2%** (2015: 35,7%) and **23,4%** (2015: -29,8%) of the **total consumption of refined products**.

Greek domestic oil products market

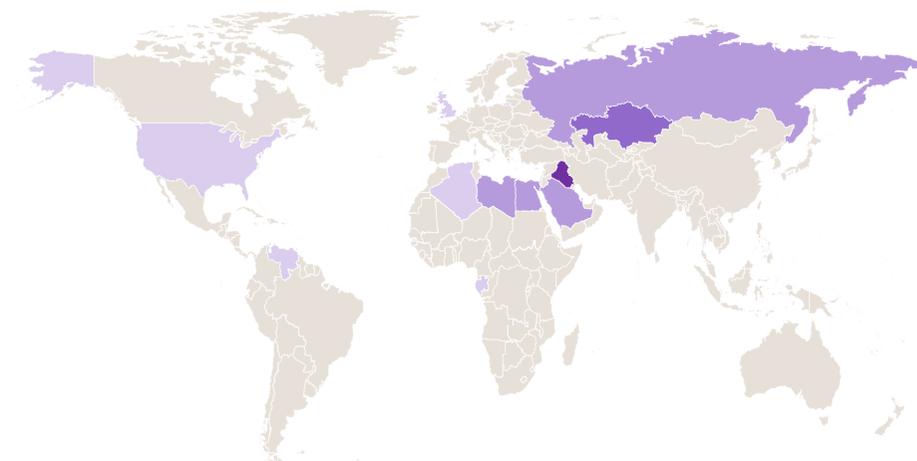
Structure of the domestic oil market



Oil imports and exports

- The main source of crude oil in 2019 was Iraq, representing almost 50% of imports, with 82mil. barrels of crude oil, followed by Kazakhstan with 14,77% and imports of 24mil. and Russia with 9,26% and 15mil. barrels.
- Other oil producing countries that export crude oil to Greece are Saudi Arabia with 7,8%, Libya with 5,7%, Egypt with 5%, the USA with 2,1%, Azerbaijan with 2% and Algeria with 2%
- In the European Union (EU), crude oil exports have been declining since 2000, reaching 45mil. tones in 2019. In Greece there is a similar trend, where oil exports reached 240th. tones in 2019.

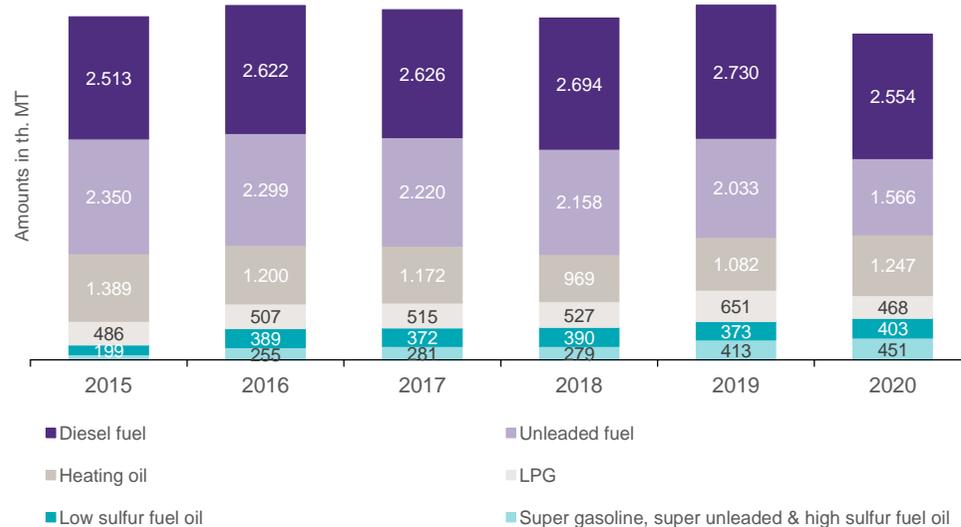
Crude oil imports in Greece per country (%), (2019)



Greek domestic oil products market

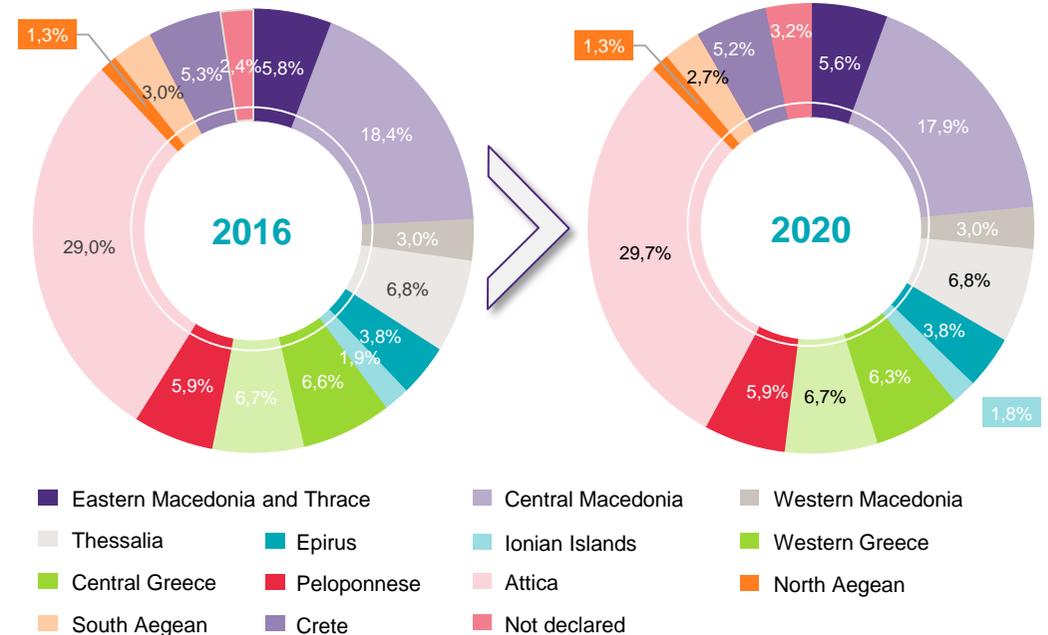
Consumption of petroleum products

- The consumption of petroleum products captured a decrease of -8,1%, from 7,3th. MT in 2019 to 6,7th. MT in 2020, due to the outbreak of the Covid-19 pandemic.
- In 2020, unleaded fuel recorded a decrease of -23,0%, from 2.033th. MT in 2019 to 1.566th. MT in 2020, while diesel fuel recorded the smallest decrease, i.e. 6.5%, from 2.730th. MT in 2019 to 2.554th. MT in 2020.
- In addition, the largest decrease was recorded in LPG consumption, i.e. -28,1% from 0,7mil. MT in 2019 to 0,5mil. MT in 2020, while the biggest increase in consumption was recorded in heating gasoil by +15,2%, from 1.082th. MT in 2019 to 1.247th. MT in 2020.



Consumption of petroleum products by region

- The major part of all regions recorded fluctuations during the reviewed period, however the oil consumption remains at similarly low levels between 2015 and 2020.
- Attica consumed the largest percentage of petroleum products in 2020, i.e. 29,7%, compared to the other regions of the country, with Central Macedonia following with 17,9%.
- North Aegean has the lowest consumption and does not follow the fluctuations that occur in other regions compared to previous years, maintaining a stable share of 1,3% from 2016 to 2020.

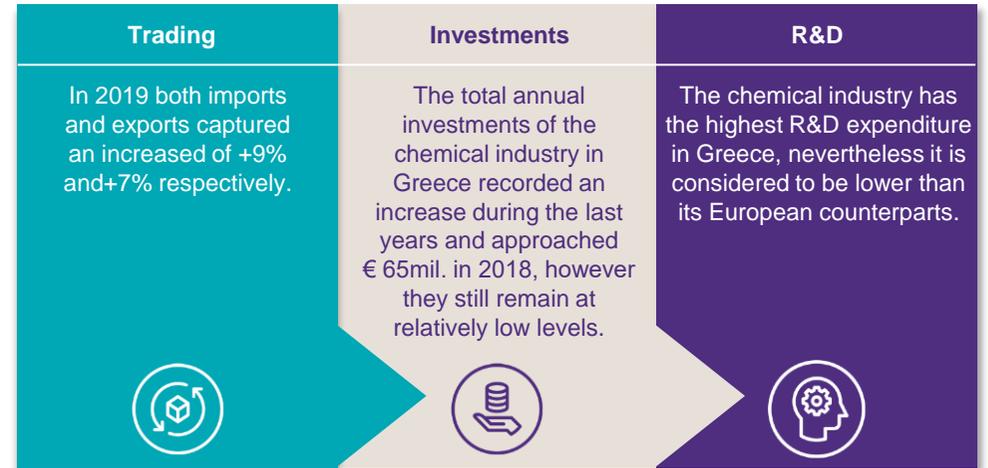


The chemical industry in Greece

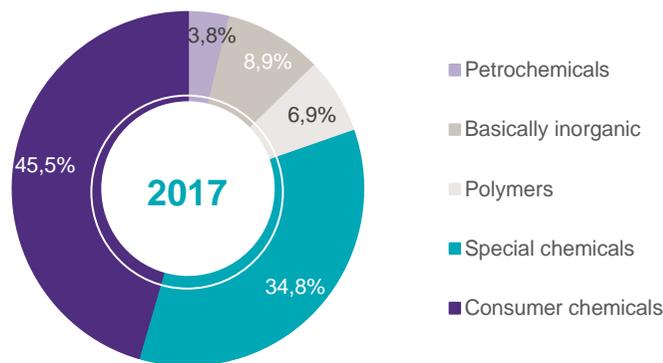
Overview of the chemical industry

- In 2017 939 companies were active in the Greek chemical industry, with the majority of them, i.e. 45,5%, being engaged in the production of consumer chemicals, 34,8% with specialty chemicals, while the remaining 19,7% with production of basic chemicals.
- Compared to EU28, companies operating in the Greek chemical industry have a lower turnover compared to their counterparts abroad. In 2017, the bigger companies in Greece in terms of revenue approached € 78mil. per company, while in the EU28 they approached an average of € 463mil. per company.
- The production value of chemical products recorded a compound annual growth (CAGR) of +1,2% in the last decade. In 2019 the value of chemical production amounted to € 2,2bil., compared to € 2,1bil. in 2018.

Key milestones



Breakdown of the production of consumer chemicals by product



The value of production of chemicals and chemicals products in Greece



05

Evaluation of assets and liabilities of the Sector

Evaluation of assets and liabilities of the Sector

Statement of financial position

Amounts in €	Notes	Carrying value 30/06/2021	Adjustment	Fair value
Non-current assets				
Property, plant and equipment	1	2.728.588.271,62	730.558.869,67	3.459.147.141,29
Intangible assets	2	1.034.585,05	-	1.034.585,05
Right-of-use assets	3	15.443.566,64	-	15.443.566,64
Investments in subsidiaries, associates and JV	4	26.470.826,92	60.252.509,23	86.723.336,15
Loans, advances and long-term assets	5	37.574.230,15	-	37.574.230,15
Total non-current assets		2.809.111.480,38	790.811.378,90	3.599.922.859,28
Current assets				
Inventories	6	968.074.922,05	-	968.074.922,05
Trade and other receivables	7	429.841.107,74	-	429.841.107,74
Derivative financial instruments	8	37.448.064,85	-	37.448.064,85
Income tax receivables	9	15.659.802,63	-	15.659.802,63
Cash and cash equivalents	10	858.580.398,57	-	858.580.398,57
Total current assets		2.309.604.295,83	-	2.309.604.295,83
Total Assets		5.118.715.776,21	790.811.378,90	5.909.527.155,11
Equity				
Share capital		510.188.621,11	790.811.378,90	1.301.000.000,00
Reserves		153.987.548,85	-	153.987.548,85
Retained Earnings		-	-	-
Total equity		664.176.169,96	790.811.378,90	1.454.987.548,85
Non-current liabilities				
Interest bearing loans and borrowings	11	1.878.856.475,10	-	1.878.856.475,10
Lease liabilities	12	5.962.966,83	-	5.962.966,83
Deferred income tax liabilities	13	57.488.972,48	-	57.488.972,48
Retirement benefit obligations	14	154.440.046,64	-	154.440.046,64
Other non-current liabilities	15	29.510.489,21	-	29.510.489,21
Total non-current liabilities		2.126.258.950,26	-	2.126.258.950,26
Current liabilities				
Interest bearing loans and borrowings	16	749.319.680,29	-	749.319.680,29
Trade and other payables	17	1.570.271.577,46	-	1.570.271.577,46
Derivative financial instruments	18	857.516,83	-	857.516,83
Income tax payable	19	645.342,27	-	645.342,27
Lease liabilities	20	7.186.539,15	-	7.186.539,15
Total current liabilities		2.328.280.656,00	-	2.328.280.656,00
Total Equity and Liabilities		5.118.715.776,21	790.811.378,90	5.909.527.155,11

- The adjacent table presents the statement of financial position of the Sector as of 30/06/2021, including the fair value adjustments to assets and liabilities.
- The valuation of the individual assets and liabilities of the Sector is presented in detail in the following pages.

Evaluation of assets and liabilities of the Sector

1 Property, plant and equipment

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Land	141.662.135,23	40.682.986,98	182.345.122,21
Buildings	281.524.694,52	80.849.165,96	362.373.860,48
Machinery equipment	2.120.690.527,13	609.026.716,73	2.729.717.243,86
Transportation equipment	3.566.260,67	-	3.566.260,67
Furniture and other equipment	8.102.652,25	-	8.102.652,25
Construction in progress	173.042.001,82	-	173.042.001,82
Total	2.728.588.271,62	730.558.869,67	3.459.147.141,29

- On the financial statements of HELPE, the tangible assets are recorded on the acquisition cost minus their accumulated depreciation. In order to estimate the fair value, we calculated the value in use of the assets by applying the Discounted Free Cash Flows method (DFCF). For presentation purposes, the value in use was allocated between land, buildings and machinery equipment based on their carrying value. The valuation method and the results thereof are presented in more detail in the Appendix III of this report.
- The fair value of the tangible assets as of 30/06/2021 was estimated at 3,46bil.

2 Intangible assets

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Computer software	528.554,85	-	528.554,85
Research & development	504.218,90	-	504.218,90
Licences & rights	1.811,30	-	1.811,30
Total	1.034.585,05	-	1.034.585,05

- The above table presents the Sector's intangible assets categories as of 30/06/2021. Computer software comprise the largest part of intangible assets. The research and development regards relevant contracts for the concession of exploration and production rights of hydrocarbons in Western Greece.
- The fair value of the intangible assets was estimated at € 1,03mil., which is equal to their carrying value.

3 Right-of-use assets

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Right-of-use buildings	1.823.520,23	-	1.823.520,23
Right-of-use machinery equipment	9.853.712,57	-	9.853.712,57
Right-of-use transportation equipment	3.766.333,84	-	3.766.333,84
Total	15.443.566,64	-	15.443.566,64

- The breakdown of the account right-of-use assets is presented in detail in the above table. The rights regard the tangible assets which the Demerged Entity rents and will be contributed to the Beneficiary as of 30/06/2021. The machinery equipment constitutes the biggest part of right-of-use assets and mainly comprises catalysts.
- The company records the specific rights on their fair value based on IFRS 16 and as a result their fair value coincides with the carrying value of € 15,44mil.

4 Investments in subsidiaries, associates and JVs

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Subsidiaries			
APOLLON MARITIME COMPANY	6.000.000,00	4.429.000,00	10.429.000,00
POSEIDON MARITIME COMPANY	1.299.990,00	1.693.479,00	2.993.469,00
ASPROFOS S.A.	191.656,20	-	191.656,20
DIAXON S.A.	16.083.770,65	54.130.030,23	70.213.800,88
Associates			
EAKAA S.A.	2.895.410,07	-	2.895.410,07
Total	26.470.826,92	60.252.509,23	86.723.336,15

- The above table presents the investments in subsidiaries, associates and JVs of the Sector (herein will be referred separately as the “**Participation**” and jointly as the “**Participations**”).
- The investments in subsidiaries are accounted for in the historical cost on the financial statements of HELPE. To calculate their fair value, we used the valuation methods presented in Appendix III.
- The total fair value of account was estimated at of € 86,72mil.

Evaluation of assets and liabilities of Sector

5 Loans, advances and long-term assets

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Loans and advances	34.680.172,15	-	34.680.172,15
Trade and other receivables, long term	2.894.058,00	-	2.894.058,00
Total	37.574.230,15	-	37.574.230,15

- The account loans and advances regards the long term arrangements with customers, while the other long term receivables concern mainly guarantees. Furthermore, the Company applies the IFRS 9 for reporting purposes. In this context, we examined the terms of arrangements as well as the discount rates applied which were found to be in market terms.
- Consequently, the fair value was estimated equal to the carrying value of € 37,57mil.

6 Inventories

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Inventories	26.371.719,75	-	26.371.719,75
Finished and semi-finished goods	425.997.140,62	-	425.997.140,62
Direct and indirect raw materials	456.742.883,19	-	456.742.883,19
Consumable supplies	14.462.072,75	-	14.462.072,75
Spare parts	75.841.137,23	-	75.841.137,23
Containers	140.346,58	-	140.346,58
Upcoming purchases	1.579.157,09	-	1.579.157,09
Provisions for inventory reduction	(33.059.535,16)	-	(33.059.535,16)
Σύνολο	968.074.922,05	-	968.074.922,05

- The Sector's breakdown regarding the inventories as of 30/06/2021 is presented in the table above. Raw materials and finished products constitute the most of inventories and their value was estimated at € 456,74mil. and € 425,99mil., respectively. Furthermore, the account of inventories includes spare parts and provisions for inventory obsolescence.
- With regard to the measurement of inventory, this was calculated on per kind basis at the lower value between the acquisition cost and the net realisable value (NRV), in order to calculate the recoverable value.
- The fair value of inventories equals to their carrying value of € 968,07mil.

7 Trade and other receivables

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Trade Receivables	245.568.567.180,00	-	245.568.567,18
Other Receivables			
Contested claims against the Greek State	126.656.313,34	-	126.656.313,34
Restricted deposits	17.103.311,60	-	17.103.311,60
Dividends payable	1.309.803,39	-	1.309.803,39
VAT	12.977.599,72	-	12.977.599,72
Transit debit accounts	9.772.242,06	-	9.772.242,06
Personnel relief account	4.516.243,21	-	4.516.243,21
Withheld taxes	3.921.109,87	-	3.921.109,87
Advances to suppliers	316.253,36	-	316.253,36
Other miscellaneous debtors	7.699.664,01	-	7.699.664,01
Σύνολο	429.841.107,74	-	429.841.107,74

- The trade receivables comprise the outstanding balances of and debt instruments provided to customers, while other receivables consist of advances to suppliers and employees, receivables from VAT, withholding taxes as well as taxes paid from previous years as a result of tax audits.
- The Company applies IFRS 9 in order to estimate the expected credit losses over the life of the receivables, for reporting purposes. Therefore, the fair value of trade and other receivables coincides with the carrying value of € 429,84mil.

Evaluation of assets and liabilities of Sector

8 Derivative financial instruments

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Derivatives at fair value through the income statement	34.845.600,00	-	34.845.600,00
Derivatives used for hedging	2.602.464,85	-	2.602.464,85
Total	37.448.064,85	-	37.448.064,85

- The table above presents the derivative financial instruments categorised within the measurement of their fair value hierarchy. The Company in order to estimate the fair value of the aforesaid assets in the context of preparation of its financial statements, uses valuation techniques that are either based on the quoted prices (unadjusted) in active markets or based to inputs other than quoted prices that are observable for the assets or liabilities either directly (i.e. prices) or indirectly (i.e. derived from prices). The fair value of the derivative financial instruments corresponds to the carrying value of € 37,45mil.

9 Income tax receivables

- The fair value of income tax receivables matches the carrying value of € 15,66mil.

10 Cash and cash equivalents

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Cash	12.348,39	-	12.348,39
Time deposits	3.966,70	-	3.966,70
Restricted deposits	(17.103.311,60)	-	(17.103.311,60)
Dividends payable	(1.309.803,39)	-	(1.309.803,39)
Domestic banks	631.016.713,12	-	631.016.713,12
Foreign banks	376.960.792,80	-	376.960.792,80
Cash and cash equivalents that will not be contributed to the Sector	(131.000.307,45)	-	(131.000.307,45)
Total	858.580.398,57	-	858.580.398,57

- The above table includes the analysis of Sector's cash and cash equivalents as of 30/06/2021. The Sector owns bank deposits both in domestic and foreign bank institutions. With regard to the deposits their domestic bank accounts amount to € 631,02mil., while those in foreign banks amount to € 376,96mil.

10 Cash and cash equivalents (continued)

- It should be noted that the restricted deposits and dividends payable are included in the other receivables section on the financial statements of the Sector.
- As of 30/06/2021 the fair value of the cash and cash equivalents account corresponds to the carrying value of € 858,58mil.

11 Interest bearing loans and borrowings

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Long term debt European Investment Bank (EIB)	0,04	-	0,04
DIAXON SA loan	33.000.000,00	-	33.000.000,00
Eurobank SA bond loan	725.000.000,00	-	725.000.000,00
National Bank of Greece SA bond loan	277.510.752,67	-	277.510.752,67
Piraeus Bank SA bond loan	99.531.250,00	-	99.531.250,00
Eurobank SA loan	392.553.472,39	-	392.553.472,39
Hellenic Petroleum Finance (HPF) loan	351.261.000,00	-	351.261.000,00
Total	1.878.856.475,10	-	1.878.856.475,10

- The account includes the long-term borrowings of the Sector, with the exception of the part of loans that have short-term profile and are therefore included in the accounts of short-term loan liabilities.
- Loans are initially recorded at their fair value less any direct costs arising from the transaction. Subsequently they are accounted at depreciable cost. The current lending terms of the Company have not changed significantly, therefore the fair value of loans and borrowings was estimated equal to the carrying value of € 1,88bil.

12 Lease liabilities

- The long term lease liabilities of the Sector as of 30/06/2021 amount to € 5,96mil., with the main part concerning the lease of catalysts.
- The Company records the respective liabilities at fair value based on IFRS 16, hence the fair value corresponds to the carrying value of € 5,96mil.

Evaluation of assets and liabilities of Sector

13 Deferred income tax liabilities

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Deferred tax liability	65.659.946,91	-	65.659.946,91
Deferred tax asset	(8.170.974,44)	-	(8.170.974,44)
Total	57.488.972,48	-	57.488.972,48

- The deferred income tax liabilities regard liabilities for tangible assets, derivative financial instruments and transferred tax losses.
- The fair value of deferred income tax liabilities as of 30/06/2021 was estimated at € 57,48mil.

14 Retirement benefit obligations

- The retirement benefit obligations of the Sector have been calculated based on an actuarial study dated 31st of December 2020. The assumptions used as well as the demographics data present no material differences as of 30/06/2021, hence the fair value of the account equals the carrying value of € 154,44mil.

15 Other non-current liabilities

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Government advances and grants	6.831.062,49	-	6.831.062,49
Environmental provision	14.952.874,00	-	14.952.874,00
Litigation provision	7.287.199,91	-	7.287.199,91
Guarantees received	120,00	-	120,00
Beneficiaries of money guarantees	439.352,81	-	439.352,81
Total	29.510.609,21	-	29.510.609,21

15 Other non-current liabilities (continued)

- The adjacent table presents the breakdown of the Sector's other non-current liabilities as of 30/06/2021. The environmental provisions concern the restoration of the factory site in Thessaloniki.
- The fair value of other non-current liabilities corresponds to the carrying value of € 29,51mil.

16 Interest bearing loans and borrowings

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Loans for Working Capital			
WC Eurobank SA	25.000.000,00	-	25.000.000,00
WC National Bank of Greece SA	39.500.000,00	-	39.500.000,00
WC Alpha Bank	199.000.000,00	-	199.000.000,00
WC Attica Bank SA	75.000.000,00	-	75.000.000,00
WC Piraeus Bank SA	30.000.000,00	-	30.000.000,00
Factoring			
Factoring Eurobank SA	32.825.530,98	-	32.825.530,98
Factoring Alpha Bank	2.526.815,93	-	2.526.815,93
Reclass from long-term debt	301.022.888,94	-	301.022.888,94
Short-term part of long-term debt	44.444.444,44	-	44.444.444,44
Total	749.319.680,29	-	749.319.680,29

- Most of the short-term loan liabilities comprise borrowings to finance the working capital of the Sector from domestic banking institutions of € 368,50mil. Furthermore, the amount of € 35,35mil. regards the Sector's factoring from Eurobank SA and Alpha Bank.
- The current lending terms of the Company have not changed substantially therefore the fair value equals to the carrying value of € 749,32mil.

Evaluation of assets and liabilities of Sector

17 Trade and other payables

Amounts in €	Carrying value 30/06/2021	Adjustment	Fair value
Suppliers	776.015.608,37	-	776.015.608,37
Advances from customers & suppliers	604.370.684,44	-	604.370.684,44
Checks outstanding	215.685,77	-	215.685,77
Social security\ liabilities payable	3.323.471,31	-	3.323.471,31
Employee compensation payable	296.884,44	-	296.884,44
Payroll taxes and duties	9.811.918,70	-	9.811.918,70
Accrued expenses and interest	176.237.324,43	-	176.237.324,43
Total	1.570.271.577,46	-	1.570.271.577,46

- Most of trade and other payables regard liabilities to suppliers and advances from customers and suppliers of € 1,38bil.
- Trade and other payables are initially recognised at fair value and are subsequently accounted at depreciable cost where the effective interest rate method is used.
- The fair value of trade and other payables approximates the carrying value of € 1,57bil.

18 Derivative financial instruments

- The short-term derivative financial instruments amount to € 0,86mil. and are related to the valuation of the Sector's derivatives. The Company in order to estimate the fair value of the aforesaid liabilities in the context of the preparation of its financial statements, uses valuation techniques that are either based on the quoted prices (unadjusted) in active markets or based to inputs other than quoted prices that are observable for the assets or liabilities either directly (i.e. prices) or indirectly (i.e. derived from prices).
- The fair value of derivative financial instruments corresponds to the carrying value.

19 Income tax payable

- The income tax payable as of 30/06/2021 stands at € 0,65mil. and regards taxes on dividends as well as the provision for income taxes.
- The fair value equals the carrying value.

20 Lease liabilities

- The Company presents the lease liabilities at the fair value based on IFRS 16, consequently the fair value coincides with the carrying value which was € 7,18mil. as of 30/06/2021.

Summary

Summary

- Based on the aforesaid, the table bellow summarises the valuation of the assets and liabilities of the Sector.

Amounts in €	30/6/2021
Fair value of assets	5.909.527.155,11
[-] Fair value of liabilities	(4.454.539.606,26)
Sector's Adjusted Book Value of equity	1.454.987.548,85

- The adjusted book value of equity of the Beneficiary amounts to € 1,45bil., out of which € 153,99mil. regard tax reserves and provisions formed by the Demerged Entity in relation to the Sector as stipulated in the Draft Demerger Deed (the "DDD"), pursuant to articles 57 and 59-74 of L.4601/2019 and article 52 of L.4172/2013 and will be transferred by contribution to the Beneficiary. The following tables present the breakdown of the Sector's equity.

Amounts in €	30/6/2021
Share capital	1.301.000.000,00
Reserves	153.987.548,85
Sector shareholders' equity	1.454.987.548,85

- In this context and based on the DDD, the Demerged Entity will receive all of Beneficiary's shares in return for the contributed assets that will be transferred to the latter. The calculation of the intrinsic value per share to be issued by the Beneficiary is presented in the table bellow.

Amounts in €	30/6/2021
Share capital	1.301.000.000,00
Shares number (#)	130.100.000
Face value per share	10,00

- The share capital of the Beneficiary will be divided to 130.100.000 common registered shares with a nominal value of € 10,00 each.

Appendices

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III. Valuation methodology	34

I. Glossary of terms

General terms	
ABV	Adjusted Book Value
ASPROFOS	Asprofos SA
Assignor / Management	The Management of Hellenic Petroleum SA
ATHEX	Athens Stock Exchange
Beneficiary / New Entity	The new subsidiary Société Anonyme which will be established for the absorption of the Sector
Bil.	Billions
BoD	Board of Directors
CAGR	Compound Annual Growth Rate
CCR	Continuous catalytic reforming
Company / Demerged Entity / HELPE	Hellenic Petroleum SA
DDD	Draft Demerger Deed
DDM	Dividend Discount Model
DFCF	Discounted Free Cash Flows
DIAXON	Diaxon Plastic Packaging Materials SA
EAKAA	EAKAA SA
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortisation
ELSTAT	Hellenic Statistical Authority
EU / EU28	European Union
FY20XX	Fiscal year 20XX

General terms	
GDP	Gross Domestic Product
Group	The group Hellenic Petroleum SA
HAEE	Hellenic Association for Energy Economics
HELPE Apollon	Hellenic Petroleum-Apollon Maritime Company
HELPE Poseidon	Hellenic Petroleum-Poseidon Maritime Company
HX202X	Semi-annual
IFRS	International Financial Reporting Standards
KPIs	Key performance indicators
Mil.	Millions
MT	Metric Tones
Participation	The participations of the Sector to associate companies and joint ventures
R&D	Research and Development
Sector	The sector of refining, supply and trading of petroleum products and petrochemicals
Sector's Hive Down	The hive-down of the Sector
Transformation Balance Sheet	The balance sheet of hive-down on 30/06/2021
WACC	Weighted Average Cost of Capital
“,”	Decimal separator
“.”	Thousands separator

II. Important notice

The following list contains the sources of information in relation to the valuation of assets and liabilities of the Sector:

- Published financial statements of HELPE for the fiscal year of 2018, 2019 and 2020.
- Published financial statements of HELPE for the period 01/01/2021 – 30/06/2021.
- Trial balances and accounting records of the Sector as of 30/06/2021.
- Transformation Balance Sheet as of 30/06/2021 which has been prepared in accordance with IFRS and provided to us by the Management.
- Business Plan of the Sector which was provided to us by the Management for the period 2021-2047 and incorporates its assumptions.
- Business Plan of Diaxon SA which was provided to us by the Management for the period 2021-2025 and incorporates its assumptions.
- Analyses and explanations provided to us by the Assignor.
- Published data and experience of Grant Thornton regarding the sector in which the Company operates.
- International Monetary Fund, World Economic Outlook Database, April 2021
- General Commercial Registry
- Website <https://www.helpe.gr/>
- International Databases

We would like to underline the following limitations with respect to our engagement:

- All documents, historical facts and information were given to us by the Management, as well as estimations regarding the future evolution of the financial figures of the Sector. This information and historical data regarding the Company have not been audited and/or reviewed by us as per their accuracy and/or completeness. Therefore Grant Thornton Greece cannot guarantee to anyone reading this report, the accuracy and reliability of the documents, historical facts and future estimates that were given to us by the Management.
- It should be noted that this report does not constitute a full scope audit and/or review in accordance with the International, Greek or other Accounting and Auditing Standards and does not include an assessment of the Company's internal control system for a period of time, nor can it provide a basis for disclosure of significant weaknesses, errors, irregularities of the Company under assessment, if any.

- Furthermore, Grant Thornton Greece does not accept any responsibility or liability in case any information or fact presented herein proves to be inaccurate, wrong, misleading or non-acceptable. Grant Thornton does not accept any responsibility or liability if proved that the Management withheld important documents or facts.
- Most of the information used for the valuation methods was based on the latest available and updated data. The valuation of assets and liabilities of the Sector was based on the objective and qualitative evaluation of the information, which were assessed based on our experience and knowledge.
- This valuation report does not cover any legal, technical, regulatory and/or tax issues related to the Sector's Hive-Down, however is limited to financial valuation issues.
- The assessment of market value of the tangible assets and the Participations of the Sector was made based on the business plans provided to us by the Management and incorporating its assumptions. This valuation was performed and evaluated based on Grant Thornton's experience and in accordance with the assumptions and limitations incorporated in this report.
- The expression of opinion is also based on the business, economic and other market conditions prevailing at the date of this report, on the current conditions of the Greek Economy but also on macroeconomic data. We have no obligation to revise our opinion in the event of a change in circumstances at a later stage, unless requested in writing by the Assignor.
- It is noted that future financial performance may differ materially from the one estimated by the Management, due to changes in the economic, business or other market conditions. Should this prove to be the case, it is possible that the results of our valuation and opinions no longer apply or are materially different from the ones stated in this report.
- It is suggested that anyone interested in this report should evaluate, based on his personal judgment, the relevant economic facts and data. It is recommended that further analysis by economic, legal or financial analysts is carried out, so that any business decision is not based solely on this report.
- This report is confidential and is addressed exclusively to the Board of Directors of Hellenic Petroleum SA by notification to the competent authorities, in accordance with L.4601/2019, L.4172/2013 and L.4548/2018.

III. Valuation methodology

Valuation of assets and liabilities

- Based on the Transformation Balance Sheet that was provided to us by the Management, the value of each asset and liability under evaluation was adjusted if there was indication that the carrying amount does not reflect their fair value as at June 30th, 2021.
- In order to assess any adjustments to the carrying value of assets and liabilities, we proceeded by:
 - Reviewing the carrying values of assets and liabilities, based on accounting standards,
 - Valuation based on internationally accepted methods, for assets whose accounting measurement under IFRS is not performed at fair value (e.g. property, plant and equipment).
- Furthermore, in order to calculate the value in use of the tangible assets the Discounted Free Cash Flows (DFCF) method was applied.
- Finally, for the assessment of the fair value of the investments in subsidiaries, associates and JVs of the Beneficiary, the Adjusted Book Value (ABV), the Discounted Free Cash Flows (DFCF) and the Dividend Discount Model (DDM) were applied. The aforesaid methodologies and their accompanying assumptions are presented in the pages that follow.

Adjusted Book Value Method

In accordance with the adjusted book value method, the value of a company is equal to its book value of equity, as this is presented in the Financial Statements as at the valuation date, after having calculated the fair value of assets and liabilities, according to the information provided.

- The adjusted book value is defined as the difference between the adjusted assets and the adjusted liabilities of the company under review.
- The adjusted book value includes the valuation of the carrying amount of the assets and liabilities concerning their conformity with the current market values. This method (with the respective parameters) is appropriate under the following occasions:
 - for specific type of firms like property and asset management or investment management firms or
 - when the net realisable value of the company is above its going concern value.
- The adjusted book value method integrates the value of the assets (after the payment of liabilities) not only in market values but under the framework of their contribution for the continuation of a company's operations.
- Consequently, the adjusted book value approach for the estimation of the fair value of equity reflects the potential of using existing resources. The value of off balance sheet items (e.g. contingent receivables and liabilities) must also be included in the valuation process.
- The Adjusted Book Value differs from a liquidation exercise as the latter is used in occasions where there are doubts regarding the going concern of the firm. The liquidation value is the sum of the value acquired from a forced sale process of the assets after the payment of the liabilities and expenses that are associated with the liquidation process.
- The ABV method was considered the most appropriate method for the valuation of wholly-owned (100%) subsidiaries of the Beneficiary, namely:
 - Hellenic Petroleum – Apollon Maritime Company (“**HELPE Apollon**”),
 - Hellenic Petroleum – Poseidon Maritime Company (“**HELPE Poseidon**”),
 - Asprofos SA (“**Asprofos**”)

III. Valuation methodology | Discounted Free Cash Flows

DFCF Method

- The Discounted Free Cash Flows (DFCF) method is widely recognised as one of the most credible valuation methodologies worldwide. The specific DCF model examines the company “dynamically”, by analysing its performance through the years as well as by considering its ability to generate “cash surpluses”.
- The analysis of Discounted Free Cash Flows model considers the value of a firm to be equal to the net present value of its future free cash flows that are available for the repayment of company’s debt and for securing returns on the shareholders’ funds.
- The net present value of future cash flows consists of:
 - the present value that corresponds to a period for which projections can be made. This period is defined as the time it takes for the company business plan to be achieved and
 - Company’s value in perpetuity.
- Consequently, if we want to take into account the time value of money, the DFCF is considered one of the most appropriate methods.
- The company’s value equals to the expected future free cash flows, discounted by rates which reflect the riskiness of these cash flows (e.g. WACC).

Calculation of future cash flows

- The method of Discounted Free Cash Flows initially involves the calculation of future free cash flows for a period of at least three (3) years, as well as the determination of the company’s terminal value. Thereafter, the future free cash flows and Terminal Value are discounted using the Weighted Average Cost of Capital in order to calculate the Net Present Value of the company.
- The formulas used to apply the method are as follows :
 - **Free Cash Flows** = Earnings Before Interest & Taxes * [1 – (tax rate)] + Depreciation – Capital Expenditure – Change in Working Capital
 - **Terminal Value** = Free cash flow of the year following the specific projected period / ((WACC) – Growth in perpetuity)
 - **Firm Value** = Present Value of Free Cash Flows of planned period + Value in perpetuity

Calculation of future cash flows (cont.)

The DFCF method was considered as the most appropriate method for the valuation of the tangible assets of the Company and the wholly-owned subsidiary Diaxon SA (“**DIAXON**”).

Discount rate

- The WACC is considered the appropriate discount rate for free cash flows. The WACC is the discount rate that converts the expected future return into present value. It takes into account quality factors such as: the systematic risk of the company, the performance risk premium and the tax liabilities of the company. Calculated based on the formula:

$$WACC = K_e * \frac{E}{D + E} + (K_d * \frac{D}{D + E} * (1 - T))$$

where:

- **Ke** = Cost of Equity,
- **Kd** = Cost of Debt,
- **T** = Tax Rate,
- **D** = Debt,
- **E** = Equity

- The table bellow presents the discount rates used for the valuation of each asset.

(%)	Valuation method	Discount rate
	Tangible assets	5,90%
	DIAXON SA	8,00%

III. Valuation methodology | Dividend Discount Model Method

Dividend Discount Model Method

The Dividend Discount Model (DDM) is essentially a variation of the Discounted Free Cash Flow Model (DFCF).

- DDM is based on the principle that the value of an asset is equal to present value of future dividends discounted using the cost of equity. When an investor buys a shareholding stake, he expects two types of cash flows: a) dividends and b) capital gains. However, capital gains depend on future dividends, hence, the current price of a stock is substantially equal to the present value of future dividends that the stock can yield. The present value of future dividends consists of:
 - The present value that corresponds to a period for which projections can be made. This period is defined as the time it takes for a company's business plan to be achieved.
 - The company's value in perpetuity.

Consequently, if we want to account for the time value of money, the Dividend Discount Model is considered to be one of the most appropriate methods.

- DDM is deemed to be more appropriate for the valuation of minority stakes in companies as minority shareholders cannot affect the trading, financial, investing and other decisions of the firm in the same capacity as majority shareholders. Thus, the value to minority shareholders arises solely out of the potential dividends that they are expected to receive through their participation and not through the total future free cash flows of the Company.
- On the other hand, the Cost of Equity of a business is the expected return that shareholders seek from their equity. The most common method of calculating the Cost of Equity is the Capital Asset Pricing Model (CAPM).

Assumptions for Dividend Discount Model

- The forecasts used for the application of the respective method were based on the assessments of the Management and were examined for their reasonableness in relation to the historical data, the asset status of the investment, as well as the competitive and macroeconomic environment and the future prospects of the industry in which the business operates.
- Then, the future dividends that are expected to be generated during the concession contract, were discounted using the Cost of Equity.
- The DDM method was considered as the most appropriate method for the evaluation of EAKAA SA ("EAKAA"). The Beneficiary participates with a 50% stake in EAKAA.

Discount rate

- The Cost of Equity (Cost of Equity – Ke) of the company is considered the most appropriate discount rate as it better expresses the expected returns of investors from similar investments. It was calculated based on the CAPM (Capital Asset Pricing Model), according to which:

$$K_e = R_f + \beta * (ERP + CRP) + \text{Size premium}$$

where:

- R_f = Risk free rate,
- β = Beta coefficient,
- ERP = Equity risk premium,
- CRP = Country risk premium,
- **Size premium** = Size premium

- Based on this context, the discount rate for the valuation of EAKAA was estimated at 10,70%.



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