



Rafineri Holding A.Ş. Valuation Report

This document contains the executive summary section of the original report regarding the valuation of Rafineri Holding A.Ş., dated 5 January 2018. In case of contradiction between the original report and this document, the original report should be taken into account.

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08/01/2018

Dear Members of the Board of Directors,

We enclose our report including our fair value analysis (the "Report").

This report has been prepared by DRT Kurumsal Finans Danışmanlık Hizmetleri A.Ş. ("Deloitte") at the request of Petkim Petrokimya Holding A.Ş. ("Petkim") to provide an independent valuation analysis of Rafineri Holding A.Ş. ("Rafineri Holding") as of December 31, 2018 in relation to a potential related-party transaction. Accordingly, it has been prepared only for the benefit of Petkim, exclusively for the purposes as mentioned and should not be used for any other purpose unless written consent has been provided by us.

Our report is issued subject to the terms of our Engagement Letter with Petkim dated December 29, 2017.

The enclosed report has been prepared principally from information supplied by and obtained from discussions with management, and employees of SOCAR Turkey Enerji A.Ş. ("SOCAR Turkey Enerji"), Petkim and STAR Rafineri A.Ş. ("STAR Rafineri") pursuant to the scope of the work agreed in the Engagement Letter. As agreed with you in the Engagement Letter, unless otherwise stated in our report, we have not sought to verify the information contained herein.

This report is provided solely for your information in connection with potential related-party transaction. Therefore you should not, without our prior written consent, refer to or use our name or the report for any other purpose, refer to them in any investment circular or other document, or make them available or communicate them to any other party (except for regulatory authorities). We accept no liability to any other party who is shown or gains access to this report.

Yours faithfully

Gökhan Altun

Partner

DRT Kurumsal Finans Danışmanlık Hizmetleri A.Ş.

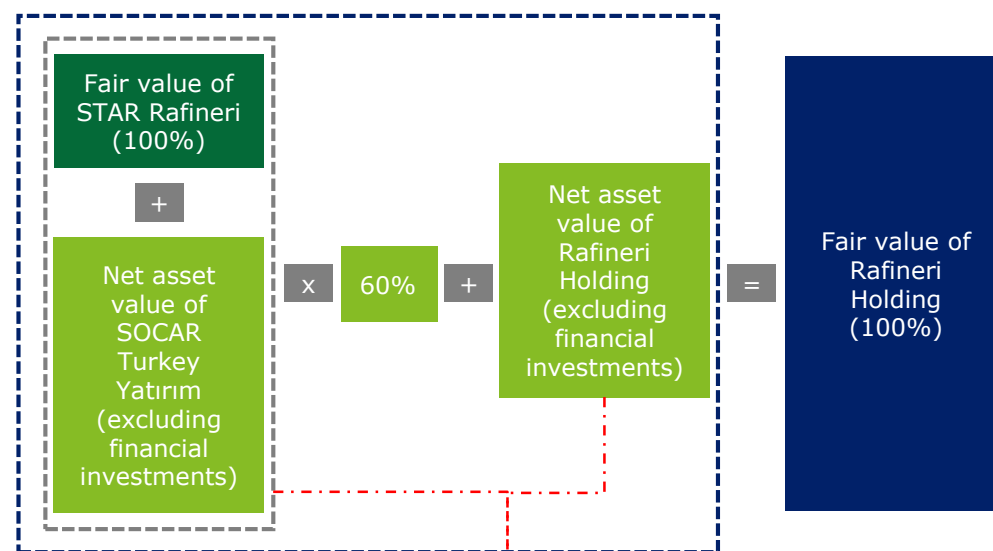
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Executive Summary | Background & Scope

Background & Scope

- STAR Rafineri was established on September 10, 2008, as a subsidiary of Rafineri Holding, so as to construct and operate a new oil refinery in Turkey to be located adjacent to Petkim's petrochemicals complex in Aliağa, İzmir. Started the construction process on October 25, 2011, STAR refinery is the largest foreign investment in one location and will become the 2nd largest refinery in Turkey when it starts operations in September 1, 2018.
- The management of Petkim informed us that they are planning a potential related-party transaction ("Proposed Transaction") on December 31, 2018, in which Petkim will acquire 30% shares in Rafineri Holding from its controlling shareholder, SOCAR Turkey Enerji.
- This report has been prepared by Deloitte at the request of Petkim to provide an independent valuation analysis of Rafineri Holding as at December 31, 2018 ("Valuation Date") in relation to the Proposed Transaction, in accordance with the terms of the "Communique on Corporate Governance" published by Capital Markets Board of Turkey ("CMB") in the Official Gazette No. 28781 dated on January 3, 2014.
- Given that the Valuation Date is a future date, certain assumptions and valuation inputs are determined based on the most recent available data as of the reporting date. However, we reserve the right to amend these assumptions and inputs, therefore the valuation result, in the future if and when this valuation study will be updated.
- For the purposes of our engagement, we define the fair value as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date" (IFRS 13 - Fair value measurement).
- The scope and limitations of our engagement are presented in Appendix 1.

- As of the report date, STAR Rafineri is a wholly owned subsidiary of SOCAR Turkey Yatırım A.Ş. ("SOCAR Turkey Yatırım"). Rafineri Holding and the Azerbaijan Ministry of Energy and Industry ("MEI") owns 60% and 40% of SOCAR Turkey Yatırım's shares, respectively (please refer to page 14). The fair value of the 30% shares in Rafineri Holding as of December 31, 2018 is estimated based on the estimated fair value of STAR Rafineri by using the formulation below:



- The management of SOCAR Turkey Enerji informed us that Rafineri Holding and SOCAR Turkey Yatırım are two special purpose vehicles and do not have any business operations on their own. For the purposes of our study, the net asset value of SOCAR Turkey Yatırım (excluding financial investments) and the net asset value of Rafineri Holding (excluding financial investments) are assumed to be zero. During the Proposed Transaction, the value of these assets and liabilities (if any) should be taken into consideration when calculating the actual price to be paid.

Executive Summary | Valuation Conclusion

Valuation results

USD'm	Weight	Base	Low	High
Income approach	75.0%	4,625.3	4,013.7	5,533.4
Discounted cash flow method	100.0%	4,625.3	4,013.7	5,533.4
Market approach	25.0%	5,657.9	3,859.3	7,456.4
Guideline public company method	50.0%	3,859.3	3,859.3	3,859.3
Guideline transaction method	50.0%	7,456.4	7,456.4	7,456.4
Eq. value of STAR Rafineri (100%)		4,883.0	3,975.0	6,014.0
Eq. value of Rafineri Holding (100%)		2,929.8	2,385.0	3,608.4
Eq. value of Rafineri Holding (30%) before minority dis.		878.9	715.5	1,082.5
Minority discount (15%)		(131.8)	(107.3)	(162.4)
Eq. value of Rafineri Holding (30%) after minority dis.		747.1	608.2	920.1

Valuation Methods

- The valuation of STAR Rafineri is based on income and market approaches.
- Under the income approach, the discounted cash flow method has been applied. This methodology is based on the concept that an ongoing business's value is directly related to the present value of the STAR Rafineri's net cash flows generated in the future. Further information regarding the income approach is provided on page 26.
- The market approach incorporates objective market data but it may not fully account for the companies' expected future cash flows. Under the market approach, average LTM EBITDA multiples of guideline public companies and guideline transactions are applied to the expected future EBITDA of STAR Rafineri.
- As presented on page 18, STAR Rafineri expects a fluctuant trend in EBITDA as a consequence of fluctuation in raw material cost and sales price projections. We have applied average LTM EBITDA multiples separately to 2019, 2020 and 2021 EBITDA estimates of STAR Rafineri, in order to cover a wider time period with both low and high EBITDA outcomes. The results presented above under the market approach represent the average result for 2019, 2020 and 2021.

- The market approach result covers a wide range of values not only because of the fluctuant trend in prices, but also because of the fact that average EBITDA multiples of guideline transactions are higher than those of guideline public companies, due to the possibility that prices in guideline transactions may have incorporated buyer specific synergies. Further information regarding the market approach is provided on page 28.
- In comparison with the market approach, the income approach has been assigned a higher weight, not only because of the above-mentioned shortcomings of the market approach, but also because of the fact that it directly accounts for STAR Rafineri's expected future cash flows.
- The cost approach has not been applied in our analyses mainly because STAR Rafineri is expected to be operational as at the Valuation Date and market participants would not be able to recreate an asset with substantially the same utility as the subject asset, without regulatory or legal restrictions, and the asset could not be recreated quickly enough that a participant would not be willing to pay a significant premium for the ability to use the subject asset immediately.

Valuation Conclusion

- Based on the income and market approaches, we estimate the fair value of the 100% shares in STAR Rafineri as of December 31, 2018 in the range of **4 and 6 billion USD**.
- Based on this estimate, we estimate the fair value of 30% shares in Rafineri Holding as of December 31, 2018 in the range of **608 and 920 million USD**.
- The fair value estimate of 30% shares in Rafineri Holding includes a 15% minority discount, which relates to the lack of control that minority shareholders may have over the operation and corporate policy of a given investment. The minority shareholders can not exert control over the board of directors of the company and veto acquisition, sale or liquidation of assets. Minority discounts are therefore usually applied when valuing a non-controlling interest to discount the value for lack of control.

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