

A rack of test tubes containing various colored liquids. One tube in the middle row is blue, while the others are red. The tubes are arranged in three rows. A blue geometric shape is overlaid on the left side of the image.

Washing and Cleaning preparations

Our findings, observations and/or recommendations are those that we could reasonably derive from the procedures or scope of services performed. The specific procedures performed were agreed with Georgian National Investment Agency (the Client) and were performed by us as set forth in the Report.

Our work was carried out solely based on the publicly available research data.

We have indicated within our Report the sources of the information presented and have satisfied ourselves, so far as possible, that the information presented in our Report is consistent with other information which was made available to us in the course of our work in accordance with the terms of the Contract. We have not, however, sought to establish the reliability of the sources by reference to other evidence.

All recommendations, provided to you with/in this Report that refer to the future have some limitations in the sense that they are based on the assumptions valid on the issuance date. These assumptions could change with time, after the date of this Report issuance, and so could lose their value.

References to 'KPMG Analysis' in this Report indicate only that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the underlying data.

In order to understand the optimal/maximum industry capacity of production of Washing and cleaning preparations in Georgia, we analyzed the potential consumption of the Georgian production by the countries of the region (EU, Ukraine, Turkey, Southern Caucasus and Central Asia) and Russia, assuming that the significant part of the products will be exported to these countries. The consumption has been analyzed based on the supply/demand data. We calculated the gap between import and export in these countries, as well as considered the existing production, potential capacity increase (pipeline) and consumption data to understand the potential volume of the Washing and cleaning preparations that might be exported to these countries. In addition, we analyzed the main countries from which Washing and Cleaning preparations are imported, and considering several factors, identified the countries which can potentially be replaced by Georgian imports (partially). The factors include:

- distance, i.e. transportation costs,
- economic and political factors
- ease of access to these countries by Georgia

Based on the analysis of the above factors for each country in the region and Russia, as well as considering the overall share of the importing countries, which might be potentially replaced, we calculated approximate maximum share of the potential import of the Washing and cleaning preparations by Georgia to these countries.

The results are as follows:

Country	Import/export gap (USD m)	Existence of production facilities	Main exporter country/region	Total export in tons (2014 data)	Potential replacement	Share of import of the potential replacement countries in total import	Total imported tons by the potential replacement countries (2014 data)	Potential share of import from Georgia	Potential volume (tons)
Turkey	142.4	Yes	Germany, Italy, Poland, Belgium, France, US, India, Russia, Germany, Poland,	218,382	US, India	10%	21,838	15%	3,276
Ukraine	199.1	Yes	UK, US	148,060	Russia, US	29%	42,937	10%	4,294
Armenia	30.6	No	Turkey, Russia, Iran, Bulgaria, Ukraine	15,506	Turkey, Iran, Europe	64%	9,924	50%	4,962
Azerbaijan	84.6	No	Turkey, Russia, China, France, UK	53,201	USA, Russia, Ukraine, Italy, UK	15%	7,980	20%	1,596
Central Asia	293.6	Yes	Russia, China, US, Turkey	110,325	Turkey, US	6%	6,620	3%	199
Russia	386.5	Yes	Germany, US, France, Belgium, Ukraine	371,828	US, Ukraine	16%	59,492	5%	2,975
EU	-3.7	Yes				n/a			
TOTAL									17,302

The analysis shows, that there is a gap between the import and export in the countries of the region, except for EU, and in Russia. As the gap in the EU is negative, which shows that the export exceeds import, as well as considering that the biggest producers of Washing and Cleaning preparations (Unilever, Henkel etc) are based in the EU countries, we considered that the possibility to access these markets is low, therefore didn't consider EU as a potential consumer of the Georgian production.

The calculated optimal capacity of the production of Washing and cleaning preparations in Georgia is 20,000 to 25,000 tons per year

The estimated investment is USD 20 million to USD 25 million

Notwithstanding the existence of the production facilities in most of the countries/regions, the demand exceeds supply and there is a potential for other supplier to enter these markets.

As an example, the gap between the import/export in Turkey is USD 142.4 million. There are big producers in the country, including branches of the biggest producers of the sub-sector (Unilever, Procter&Gamble, Henkel), as well as local producers. Significant share of the local production is exported to the neighbor countries, however there is still significant import of the Washing and Cleaning preparations to the country. The main importer countries are Germany, Italy, Poland, Belgium, France, US and India. Considering the distance factor, as well as ease of access of Georgia to Turkey, i.e. common border, we assumed that Georgia might potentially take up some share of the imports from the US and India. The share of import from the US and India to Turkey is 10% in the total import of the Washing and Cleaning preparations to the country, which is 21,838 tons in volume terms. We assumed that Georgia could potentially take up maximum 15% of the imports from these countries considering the potential specific quality, brand and pricing factors of the US and India products. Thus the potential volume of the import from Georgia can be around 3,276 tons.

The same approach has been applied to the analysis of other countries. For the countries, which do not have local production, bigger potential share of import from Georgia has been applied. We also considered the current political factors in the region, however we assumed that this might potentially have a short-term impact, therefore adjusted the potential share accordingly (e.g. in case of the trade between Russia and Ukraine, we assumed that it might potentially continue and left some share for the mutual trade).

In addition, we also assumed that up to 70% of the local consumption of Washing and cleaning preparations might be supplied by the new market entrant. Based on our analysis, during the first three quarters of 2014 consumption of soap and detergents, cleaning and polishing products amounted to USD 46,008 thousand. If we assume that around 30% of the consumption was of the Washing and cleaning preparations, the potential value would be USD 13,800 thousand, which in volume term, using the average price of the Washing and cleaning preparations in CIS countries, would be around 5,940 tons. The 70% of this volume would be around 4,100 tons per year. Thus, based on the calculations of import/export data and the potential consumption in Georgia, the optimal capacity of the production in Georgia would be around 21,400 tons per year, i.e. range from 20,000 to 25,000 tons per year.

In order to estimate the approximate investment for a manufacturing facility with the capacity of 20,000 to 25,000 tons per year, we searched for similar projects throughout several countries. Based on the results of our search, we identified projects in Indonesia and Malaysia with higher capacities from 165,000 tons to 365,000 tons per year (which have different types of products). Based on the information on the investment amount, which includes construction of the plant, storage place and related infrastructure facilities, installation of machines and boilers, we calculated the cost per ton, which is around USD 1,000 on average. Thus the estimated investment would be from USD 20 million to USD 25 million. This is an approximate range, as the factors like country specifics, construction costs, availability of technologies have not been analyzed for Georgia in detail. As well as we considered that at the initial stage a few types of product will be produced, thus potentially decreasing the cost per ton.

Generally, the Washing and Cleaning preparations are divided into three major groups, including textile washing products (liquid and powder laundry products), general purpose cleaners (liquid substances for house cleaning, sprays and gels etc.) and dishwashing products. Based on our analysis, among the three main groups, the textile washing products is the largest around the globe, as well as in the countries of the region. Taking into account the wide variety of the Washing and Cleaning products we suggest that the new entrants could start with the production of most consumed product, e.g. textile washing products. Further integration of other products might become feasible when the company gains certain level of brand awareness in the targeted markets. Concentration on one product group would also decrease the required amount of initial investment as different product groups have different manufacturing technologies.

However, it should be considered that generally the production of household Washing and cleaning materials is a large scale production with strong brand names. For small scale producers it may be difficult to enter this market. Therefore, we would recommend that Georgia might consider negotiating establishment of a production facility for one of the key players of the market (e.g. Procter&Gamble) in Georgia.

The main competitor countries are Turkey, Ukraine and Russia

The major competitor countries can be considered the neighboring countries which have significant production facilities. Based on our analysis, these include:

Main Competitor countries	Main competitor companies
Turkey	<ul style="list-style-type: none"> • Henkel Turkey • Unilever Turkey • P&G Turkey • Hayat Kimiya Turkey • UZAY KIMYA SAN LTD
Ukraine	<ul style="list-style-type: none"> • Henkel Bautechnik (Ukraine) TOW • P&G Ukraine • Unilever Ukraine TOW • SC Johnson • UKRAYINSKI PROMYSLOVI RESURSY TOW
Russia	<ul style="list-style-type: none"> • Henkel AG & Co. KGaA • The Procter & Gamble Company Russia • Reckitt Benckiser Group plc • Unilever • Stupinskii Chem Zavod • SurgutNeftGaz • Vesna

Azerbaijan and Kazakhstan also have production facilities, however these are not significant and supply only small portion of the local consumption.

The above companies have significant shares in each country, as well as supply the neighboring countries. The capacity of the companies is from 20,000 to 100,000 tons per year.

Most of the production is exported to the neighboring countries, except for the local branded products (Uzay Kimiya, Stupinski Chem Zavod, Vesna), which are mainly consumed inside each country.

Given Georgia's access to the neighboring countries and its favorable economic and political position in the region, the country might potentially negotiate significant investments in the sector

- Strategic location* – Georgia's strategic location is an asset to any investor. As a bridge between Europe and Asia, Georgia offers direct access to European, Gulf Cooperation Council and CIS markets. Its three major oil and gas pipelines, Black Sea ports, well-developed railway systems, together with its airports are playing an increasingly important role in linking the East and West
- Stable macroeconomic environment* – even though macroeconomic situation in the region is unstable, Georgia demonstrates positive expected economic growth of 2.5% in 2015, whereas in neighboring countries either economic contraction or growth close to zero is expected
- Liberal Trade Regimes* – Georgia has low tariffs and streamlined border clearance procedures. With a range of Free Trade Agreements, Georgia has access to a 900 million market that is not subject to customs tax, including Turkey, CIS and EU countries
- Free Industrial Zones* – Georgia has two industrial zones, in which businesses are exempted from all tax charges, except for the personal income tax
- Raw materials* – Georgia itself may not be the producer of the key raw materials, however oleochemicals, crude oil and solvents can be easily obtained.
- Consumption* – There is a significant consumption in the country and in the close region, which indicates on high demand for the Washing and cleaning preparations.



- *Low electricity cost* – The highest tariff for industrial consumers of one KWh energy in Georgia in 2014 was around USD 0.045 which is lower than in neighbor countries (in Armenia the price is around USD 0.069/per KWh, in Turkey USD 0.093/per KWh and in Azerbaijan 0.057/per KWh).*
- *Labor cost* in manufacturing industry is low amounting to 410 USD monthly on average
- *Legal environment* - No legal restrictions for importing/exporting and producing Washing and Cleaning preparations in Georgia and in the region
- *Special Customs regime for exporters* – “Internal Processing Customs Regime”, which offers tax incentives for exporting companies. A company may get a license from the Ministry of Finance about “Internal Processing Regime” and receive an exemption from VAT and from import/customs tax on raw materials. If an exporting company sells the products in Georgia, then it has to pay VAT and import/customs tax only for these products.
- *Corporate profit tax* is flat at 15%. *Personal income tax* is 20% and there is no social tax.
- *Depreciation of capital assets* – Based on the Tax code legal entities are able to fully depreciate their assets in the year in which they are put into operation. As a result, significant amount of tax loss-carry forward is generated which could be used during the first years of operation

* Note: The prices are converted to USD based on the exchange rates as at 29 April 2015 (GEL/USD - 2.31, AMD/USD - 475.94, AZN/USD – 1.05, TRY/USD – 2.67)

Soap, washing, polishing, perfume and cosmetics production sector had 108 employees in 2013

We obtained the official data on the average number of people working in chemical production. The number provided below include not only chemists, but also other positions working in the sector (technical staff, administration etc.). The separate data on chemists is not separately available.

Annual average number of people working in chemicals production 2012-2013 (Declared Data)		
Person		
	2012	2013
Chemicals production	5,560	5,414
From above		
Soap, washing, polishing, perfume and cosmetics production	323	108

As of 2013 the number of people employed in the chemical production sectors was 5,414. The number of people in Soap, washing, polishing, perfume and cosmetics production sub-sector was 108.

Washing and Cleaning preparations

Key assumptions

Based on the data gathered and analyzed in the previous stages, we performed high level financial calculations for the potential project on producing Washing and cleaning preparations in Georgia. The more detailed description of the assumptions and relevant calculations are provided further on

- Construction period was forecast to last one year
- Capacity utilization was forecast to reach 30% in the second projection period and further increase to 40% and 60% and 80% in the years 3, 4 and 5 respectively, reaching 100% in the 6th projection period.
- The delay in the launch of the production is due to the forecasted plant construction period. The delay in reaching full forecasted capacity of the production is due to the estimated time needed for marketing the product and building brand recognition, as well as learning curve effect.
- During the forecasted period the maximum capacity has been estimated as the nominal capacity determined based on the analysis of the data obtained during the research, i.e. potential debottlenecking of production has not been considered.
- Maintenance capital expenditures were forecasted based on initial investment and estimated useful life of the plant of 30 years. As a result, maintenance CAPEX amounted to USD 713 thousand, further adjusted for the expected USD inflation
- Maintenance CAPEX was assumed to be incurred starting from the 5th projection year
- As per the Georgian tax code, legal entities are able to fully depreciate their assets in the year in which they are commenced. As a result, the project will generate significant amount of tax loss-carry forward in the 1st projection year, making the project effectively exempt from corporate income tax during the first four years

Construction project details

Investment, '000 USD	21,400
Capacity	21,400
Construction timeline	1
Annual maintenance CAPEX '000USD	713
Domestic sales	18%
Export sales	82%

Source: KPMG Analysis

- WACC is estimated to be 15% for all chemicals products
- Based on the data provided by Damodaran, industry average capital structure of the chemicals producing companies in the emerging markets comprises of 29% debt and 71% of equity. The capital structure of the project was assumed to be the same as industry average

Washing and Cleaning preparations Financial performance

We have assumed projection period of 10 years, followed by terminal period. The construction of factory is expected to be finished by the end of the first projection period, after which the plant will be commenced.

Gross and EBITDA margins were forecast to amount to 47.3% and 18.5%, respectively throughout the forecast and terminal periods. EBT margin was projected to vary between 12.1% and 16.4%. Volatility of EBT margin is explained by increasing capital expenditures starting from year 5 and absence of corporate income tax till year 6. The COGS and the SG&A expenses have been calculated based on the industry average margins published in CapitalIQ.

Projected statement of Profit and Loss											
'000 USD	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TP
Revenues	-	11,122	15,171	23,326	31,723	40,486	41,377	42,246	43,133	44,039	44,919
<i>Growth</i>			36.40%	53.75%	36.00%	27.63%	2.20%	2.10%	2.10%	2.10%	2.00%
COGS	-	(5,862)	(7,995)	(12,293)	(16,718)	(21,336)	(21,806)	(22,263)	(22,731)	(23,208)	(23,673)
Gross profit	-	5,261	7,176	11,033	15,005	19,150	19,571	19,982	20,402	20,830	29,937
<i>Gross profit margin</i>		47.30%	47.30%	47.30%	47.30%	47.30%	47.30%	47.30%	47.30%	47.30%	47.30%
SG&A	-	(3,203)	(4,369)	(6,718)	(9,136)	(11,660)	(11,917)	(12,167)	(12,422)	(12,683)	(12,937)
EBITDA	-	2,058	2,807	4,315	5,869	7,490	7,655	7,815	7,980	8,147	8,310
<i>EBITDA margin</i>		18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%
Financial Depreciation	-1070	-713	-713	-713	-753	-780	-808	-836	-865	-895	-925
EBT	-	1,344	2,093	3,602	5,116	6,710	6,847	6,979	7,114	7,252	7,385
<i>EBT margin</i>		12.09%	13.80%	15.44%	16.13%	16.57%	16.55%	16.52%	16.49%	16.47%	16.44%
Corporate Income tax	-	0	0	0	0	0	-955	-1,046	-1,068	-1,090	-925
Net Income	-1070	1,344	2,093	3,602	5,116	6,710	5,891	5,933	6,046	6,162	6,273
<i>NI margin</i>		12.09%	13.80%	15.44%	16.13%	16.57%	14.24%	14.04%	14.02%	13.99%	13.97%

Source: CapIQ, KPMG Analysis

Note: For our calculation purposes, we have not adjusted corporate income tax for the changes in deferred tax

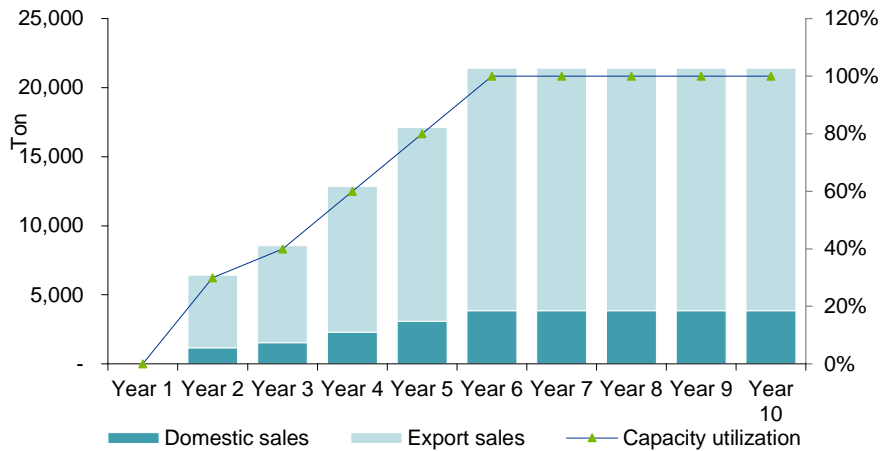
Sales volumes

Production of Washing and cleaning preparations was projected to start in Year 2 at the level of 7,200 tons per annum further increasing to 21,400 tons in Year 6. Sales volume on the domestic market was estimated to be 18% of total production, while remaining 82% is expected to be exported to the target markets.

Sales price

Average price per ton for the domestic market was estimated to be USD 1,359 based on average import price as provided by International Trade Centre (ITC), while export price was forecasted based on average export price per ton in the target markets and amounted to USD 1,771 per ton.

Sale volume of plant



Source: ITC, KPMG Analysis

Washing and Cleaning preparations COGS and SG&A expenses

Cost of Goods Sold and Selling, General and Administrative expenses were forecast based on industry average Gross and SG&A margins of 47.3% and 28.8%, respectively

71% of COGS were accounted for raw materials and remaining 29% was split between Labor (10%), Energy (7%) and Overheads, taxes and other (12%).

COGS and SG&A											
'000 USD	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TP
COGS	0	(5,862)	(7,995)	(12,293)	(16,718)	(21,336)	(21,806)	(22,263)	(22,731)	(23,208)	(23,673)
Raw materials	0	(4,162)	(5,677)	(8,728)	(11,870)	(15,149)	(15,482)	(15,807)	(16,139)	(16,478)	(16,807)
Other	0	(1,700)	(2,319)	(3,565)	(4,848)	(6,187)	(6,324)	(6,456)	(6,592)	(6,730)	(6,865)
Labor	0	(586)	(800)	(1,229)	(1,672)	(2,134)	(2,181)	(2,226)	(2,273)	(2,321)	(2,367)
Energy	0	(410)	(560)	(860)	(1,170)	(1,494)	(1,526)	(1,558)	(1,591)	(1,625)	(1,657)
Overheads	0	(703)	(959)	(1,475)	(2,006)	(2,560)	(2,617)	(2,672)	(2,728)	(2,785)	(2,841)
SG&A expenses	-	(3,203)	(4,369)	(6,718)	(9,136)	(11,660)	(11,917)	(12,167)	(12,422)	(12,683)	(12,937)

Source: CapIQ, KPMG Analysis

The NPV of the project is positive amounting to USD 10, 338 thousand

Discounted cash flow results											
'000 USD	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Terminal period
Total revenues	-	11,122	15,171	23,326	31,723	40,486	41,377	42,246	43,133	44,039	44,919
<i>% of growth</i>		-	36.40%	53.75%	36.00%	27.63%	2.20%	2.10%	2.10%	2.10%	2.0%
EBITDA	-	2,058	2,807	4,315	5,869	7,490	7,655	7,815	7,980	8,147	8,310
<i>EBITDA margin</i>		18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.5%
EBT	-	1,344	2,093	3,602	5,116	6,710	6,847	6,979	7,114	7,252	7,385
Income tax (adjusted)	-	0	0	0	0	0	(955)	(1,046)	(1,068)	(1,090)	(925)
NOPAT		1,344	2,093	3,602	5,116	6,710	5,891	5,933	6,046	6,162	6,460
Cash flow adjustments											
Depreciation	-	-	-	-	-	0	955	1,046	1,068	1,090	1,112
CAPEX	(21,400)	-	-	-	(791)	(807)	(825)	(842)	(860)	(878)	(896)
Change in working capital	-	(1,112)	(405)	(815)	(840)	(876)	(89)	(87)	(89)	(91)	(88)
FCFF	-21,400	945	2,402	3,500	4,238	5,806	5,785	5,840	5,963	6,088	6,214
WACC	15.00%										
Terminal growth rate	2.00%										
Terminal value											48,758
Discount period	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10
Discount factor	0.9	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3
Discounted FCFF	-19,956	767	1,694	2,146	2,260	2,692	2,332	2,047	1,818	1,614	12,924
Sum of discounted cash flows	-2,587										
Terminal value	12,924										
NPV	10,338										

Source: CapIQ, KPMG Analysis

Based on the high-level calculations the project is feasible

Key profitability factors of the project											
'000 USD	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TP
Revenues	-	11,122	15,171	23,326	31,723	40,486	41,377	42,246	43,133	44,039	44,919
EBITDA	-	2,058	2,807	4,315	5,869	7,490	7,655	7,815	7,980	8,147	8,310
Net Income	-	1,344	2,093	3,602	5,116	6,710	5,891	5,933	6,046	6,162	6,273
EBITDA margin	-	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	0.00%
Net income margin	-	12.09%	13.80%	15.44%	16.13%	16.57%	14.24%	14.04%	14.02%	13.99%	13.97%
NPV of the Project	10,338										
IRR	21.79%										
Payback period	5.8										

Source: CapIQ, KPMG Analysis

Our assumptions and analysis have been performed based on the general economic and sector indicators. The detailed calculations for Georgia, including construction costs, labor costs, specific legal and environmental costs etc have not been considered. However, the country specific taxation, as well as the CPI and the pricing data have been considered.

Per the general analysis, the results show that the project is feasible for the calculated optimal capacity and the relevant investment, as well as given costs assumptions. The NPV of the project is positive amounting to USD 10.338 thousand, the IRR is high amounting to 21.79%. The payback period is estimated to be 5.8 years.



cutting through complexity

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