

# Bosicor Pakistan Limited

## Initiating Coverage

**Recommendation: BUY**  
**Fair Value: PRs23.34**

### Investment Consideration

#### Supply Deficit Beneficial for Refinery

The refining industry in Pakistan is currently faced with an excess demand situation, which allows refineries to operate at a 100% of their capacities. Also with open export avenues, the refineries do not face a threat even if local consumption decreases.

#### Bosicor – Refinery and OMC in one

Bosicor Pakistan Limited is the only refinery in Pakistan that has been granted an oil marketing license to establish outlets. Currently, with 12 fuel stations already in place, Bosicor is looking to set up 38 more by the end of FY08.

#### Gross Refining Margin (GRM)

BOSI has a 3-year average GRM of US\$2.96/bbl. The average is low due to the squeezed refining margins last year. However, this year overall margins are expected to improve for BOSI, as the product prices increase in sync with the crude prices.

#### High capex plans lead to increased debt requirements

For Bosicor to keep up with the current market players, it is inevitable that it invests in expansionary projects to increase sales, improve product quality and decrease costs. With its current involvement in projects like Single-Buoy Mooring (SBM), storage tanks, and Isomerization unit scheduled to cost a sum of approximately PRs3.7bn, increasing debt financing becomes unavoidable. However, these investments will reap great benefits in the future.

#### Surge in the Forecasted Sales

Based on our forecasts, sales will increase by 28% in FY08 to reach PRs26.95bn from PRs19.5bn in FY07. This marked increase will be a result of increased capacity and improved refining margins.

#### Recommendation

Through DCF-based valuation, with a WACC of 16.23% and a terminal growth rate of 4%, we price BOSI at a fair value of PRs23.34 per share. Currently, the stock is trading at PRs20.10. According to our valuations, the stock has a potential upside of 16%, therefore at current levels; we recommend a "BUY" on BOSI.

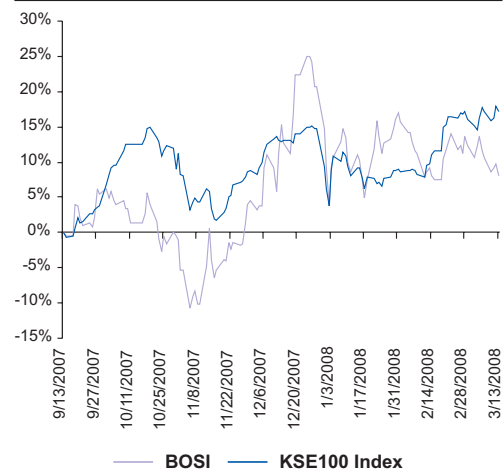
<i>Bloomberg Code</i>	<i>BOSI PA</i>
<i>Current Price (PRs)</i>	20.10
<i>Market Capitalization (PRsmn)</i>	7,881.30
<i>Shares Outstanding (PRsmn)</i>	392.10
<i>Paid-up Capital (PRsmn)</i>	3,921.04
<i>Index Weight (%)</i>	0.199
<i>Average Price (PRs)</i>	17.72
<i>Average Volume</i>	6,286,090

**Table 1: Valuation Statistics**

Estimates	FY06A	FY07A	FY08F	FY09F	FY10F	FY11F	FY12F
Net income (PRs mn)	197.03	(681.27)	250.48	396.01	127.80	1,164.02	1,009.44
Dividend per share (PRs)	0.2	-	-	0.4	-	1.8	1.5
Earning per share (PRs)	0.5	(1.7)	0.6	1.0	0.3	3.0	2.6
Book value per share (PRs)	7.0	9.2	13.6	14.6	14.9	17.9	20.5
Price to Book	2.7	1.9	1.5	1.4	1.3	1.1	1.0
Price to Earnings	37.6	-	31.5	19.9	61.7	6.8	7.8
Dividend Yield	1.1%	-	-	2.0%	-	8.9%	7.7%

Source: Company Reports & IGI Research

**Chart 1: Relative Price Performance**



Source: Bloomberg & IGI Research

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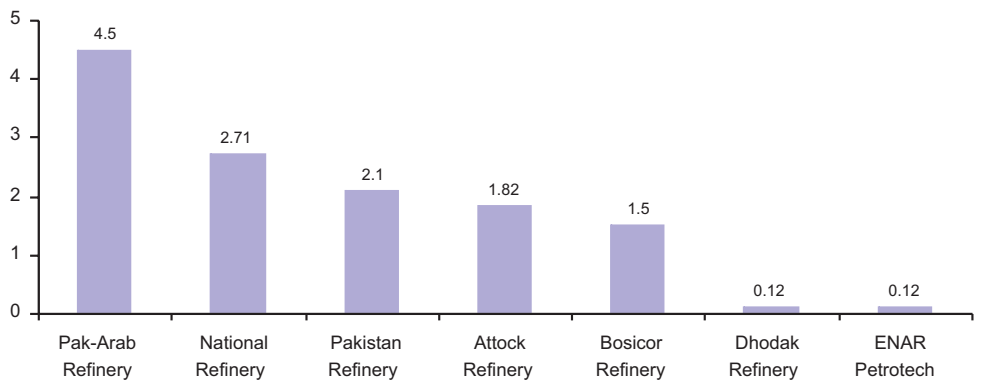
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## Refining Industry of Pakistan

### Overview

Pakistan's refining sector holds an advantage due to its close proximity to countries like Iran and other Middle Eastern countries. These countries are rich in crude oil resources, however, they lack refining capacities, providing Pakistan the opportunity to capitalize on their oil reserves. As of 2007, Pakistan has seven refineries in operation with a total refining capacity of 12.87mntpa or approximately 267,000 bpd, out of which the largest refinery is PARCO with a capacity of 4.5mntpa or approximately 100,000 bpd.

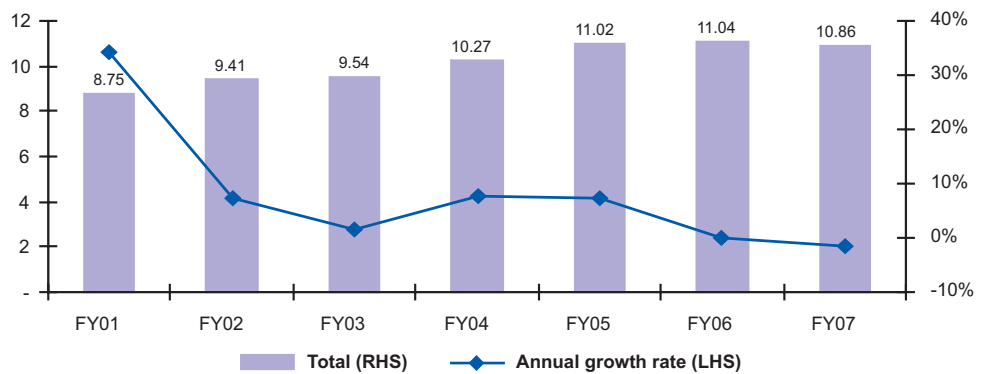
**Chart 2: Pakistan Refining Capacities 2007 (mntpa)**



Source: HDIP Energy Yearbook

Total production of FY07 was 10.86mntn, which indicates 84% utilization of the total available capacity, and a 1.67% decrease from production of last year.

**Chart 3: Total Crude Oil Production (mntn)**

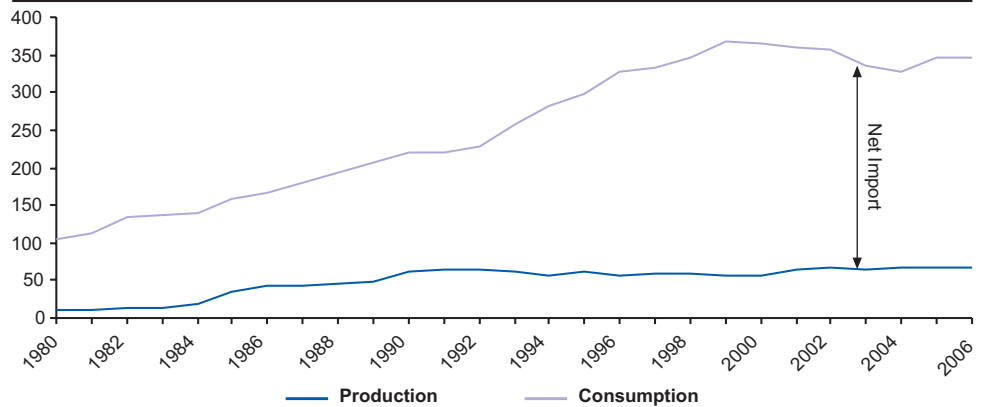


Source: HDIP Energy Yearbook

### Demand/Supply Imbalance

Currently, the local market faces a huge gap between demand and supply of petroleum products. Pakistan's consumption of energy and non-energy products has increased at a CAGR of 5% over the last three years. Total consumption of petroleum products stood at 16.85mntn whereas total production amounted to 10.86mntn in FY07. Oil production from the oilfields remained stagnant in the 1980s, and improved slightly in the 1990s. Similarly, refining capacity was also a constraint in the production of oil products. Although both these bottlenecks have improved over the years, local consumption has increased almost three-folds since then, exaggerating the supply/demand imbalance drastically. This supply deficit is compensated for by imports of crude oil which is then processed by local refineries.

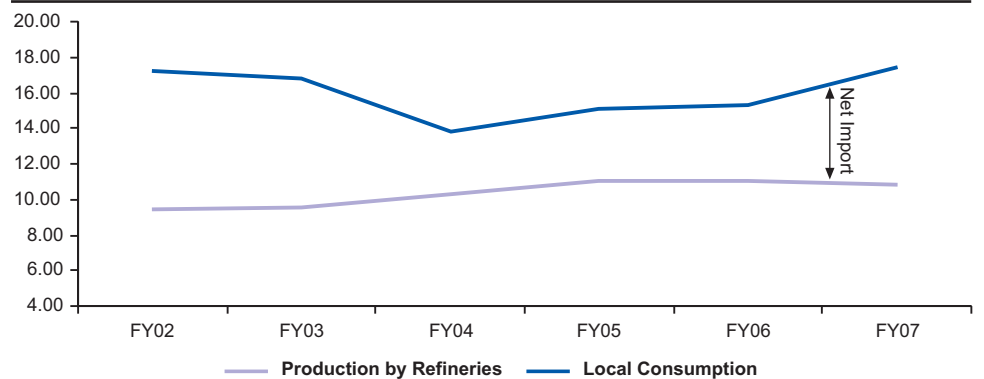
**Chart 4: Pakistan Oil Production and Consumption, 1986 - 2006** ('000 bpd)



Source: EIA

(In the above chart, production of crude oil includes lease condensate, natural gas plant liquids, and other liquids, and refinery processing gain (loss). Consumption refers to consumption of petroleum products and direct combustion of crude oil.)

**Chart 5: Supply Demand Scenario of POL Products** (mntpa)



Source: HDIP Energy Yearbook

Presently, Pakistan has proven reserves of 317.82 mn barrels as of January 1st, 2007\*. In 9MFY07, average oil production was estimated at 66,485bpd. The production of crude oil in Pakistan is not being explored to its full potential. However, even if it were, Pakistan would still not have enough proven reserves to cater to local demand. If similar consumption trends prevail in the country, then the current proven reserves will only be sufficient for another 4 years at the most. Thus, import of crude oil is inevitable; however import of petroleum products can be restricted by an increase in local refining capacities.

The present local demand of petroleum products is not met by local refineries, even though most of the refineries have been functioning at more than 100% of their installed capacity. This is because the demand for petroleum products has been growing at a faster pace as compared to the increase in refining capacities, which is somewhat a global phenomenon. Although, for most products, local production is sufficient to meet demand, High Speed Diesel (HSD) and Furnace Oil (FO) are still being imported in large quantities to meet the demand in the country. In FY07, local refineries only produced around 46% and 43% of total local demand for HSD and FO respectively, primarily due to capacity constraints.

\* Pakistan Economic Survey 2006-07

**Table 2: Product wise consumption FY07 (mntpa)**

Product	Consumption	Locally Produced	Surplus / (Deficit)
Aviation fuels	0.72	1.17	0.45
Motor Spirit	1.14	1.22	0.08
Kerosene	0.21	0.22	0.01
HSD	7.25	3.38	(3.86)
Furnace Oil	7.39	3.19	(4.20)

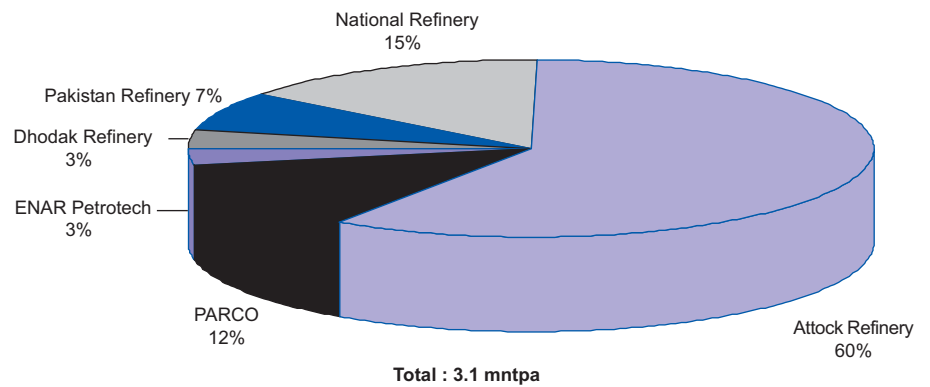
Source: HDIP Energy Yearbook & IGI Research

The growth in the refining industry has stagnated over the last few years; however, demand is still growing at a fast pace, indicating the shortage in refining capacities and the need for additional refineries or implementation of expansionary projects on existing refineries.

**Allocation of Crude Oil**

The allocation of locally produced crude oil is done by the Government of Pakistan. Since there is limited local production, quotas have been assigned to older players, leaving the new ones to contest for a share. Crude oil is sold to refineries based on import parity pricing, so the pricing of local and imported crude oil is fair to all the players.

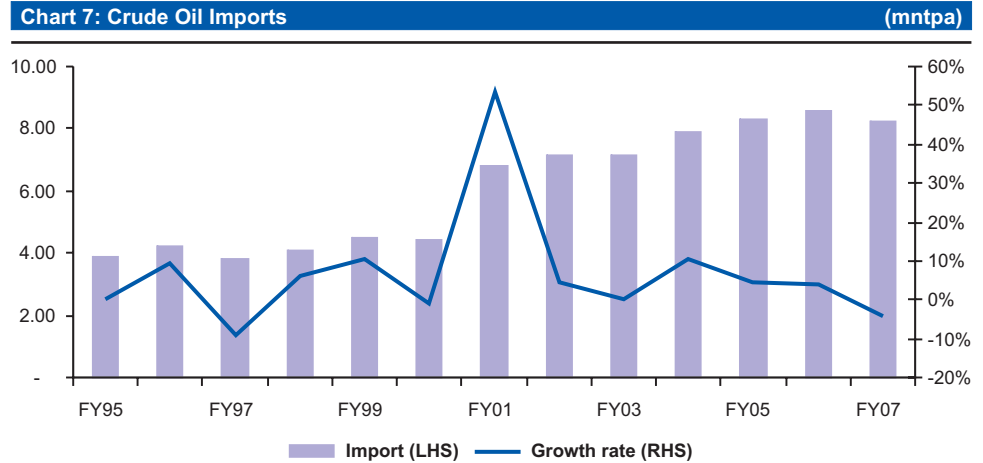
**Chart 6: Allocaton of locally produced crude oil 2006-07 (mntpa)**



Source: HDIP Energy Yearbook

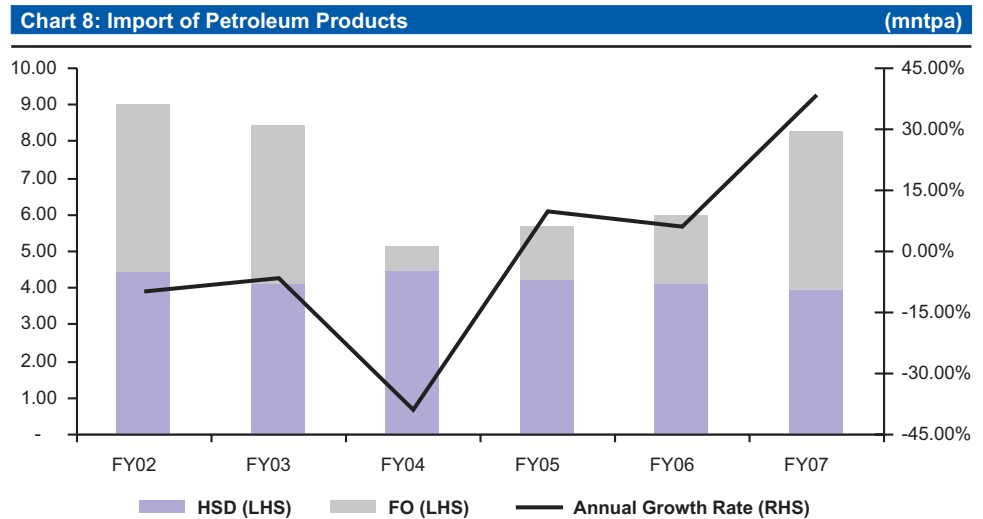
### Imports of POL products

The nation's growing energy demand keeps the national exchequer under pressure due to rising imports of crude oil and petroleum products. In FY01, the industry witnessed a massive hike in crude oil imports due to the commissioning of PARCO in February 2001. Following that, the imports have fallen to the same level. In FY07, 22.5% of total imports of Pakistan comprised of crude oil and petroleum products.



Source: Pakistan Oil Report, HDIP Energy Yearbook

Imports of crude oil fell by 4.34% in FY07 due to maintenance shutdowns of refineries and underutilization of capacity. Consequently, the production of petroleum products was low as well, leading to a 38.61% increase in petroleum product imports over last year, putting pressure on the country's balance of payments.



Source: HDIP Energy Yearbook

Going forward, an improved exploratory effort along with increased refining capacities will enable the industry to have less reliance on imported petroleum products. Even if imports of crude remain inevitable in the future, improved refining capacities can lead to surplus supply of petroleum products in the country, whereby petroleum exports would increase. Such a scenario will improve overall export figures along with improving the current balance of trade.

## Regulatory Framework

The oil sector is partially regulated, with OGRA announcing consumer prices for most of the petroleum products every fortnight. Although, HSD and FO are partially deregulated to set prices as per industry demand and supply situation, these prices are still bound by import parity pricing.

The refineries in Pakistan operate on an import parity pricing mechanism which is linked to Arab Gulf FOB product prices. FOB pricing of petroleum products is derived from four primary products: naphtha, kerosene, gasoil and HSFO. FOB Prices of the four primary products are published fortnightly in the publication Platts. Refineries sell at ex-refinery import parity prices which are calculated by adding premium and incidentals to the FOB prices. Details of the Import Parity Pricing (IPP) formula can be found in the following table.

**Table 3: Import Parity Pricing Mechanism**

**IPP (ex-refinery) = Cartage and Freight ( C & F ) + Incidentals**

**C & F = Arab Gulf FOB Prices + Premium**

**Arab Gulf FOB Product Prices**

JP-1 = kerosene + US\$0.01/gallon

JP-4 = 50% naphtha + 50% kerosene

LDO = 80% gasoil + 20% furnace oil

MS = Naphtha + Caltex Bahrain Posted price differential of Naphtha and 87 Ron subject to a maximum of US\$60/ton

**Premium**

(Published in Platts, an average of the previous 15 days)

**Incidentals**

Marine Insurance: (0.108% of C & F for white products)  
(0.09% of C & F for black products)

Letter of Credit Commission: (0.15% of C & F)

Bank Services: (0.1% of C & F)

Ocean Losses/Handling Charges: (0.65% of C & F)

Wharfage: As per KPT Cargo Handling Charges

Tariff: (10% on HSD)

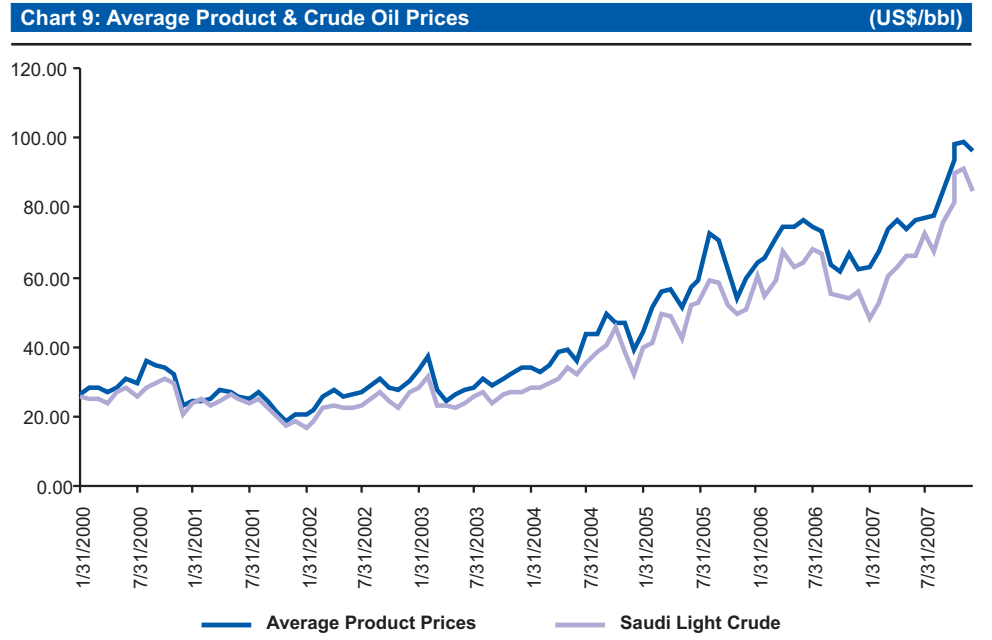
Source: OGRA, Pakistan: Oil & Gas Sector Review (World Bank)

### Gross Refining Margins (GRMs)

Gross Refining Margins (GRMs) are an important determinant of a refinery's profitability in the short term. They are dependant on a variety of factors including world crude oil supply and inventory, political factors concerning crude producing countries, demand for oil products and the exchange rate to name a few.

A crude oil price hike may negatively impact a refinery if the percentage increase in crude oil prices is greater than the percentage increase in product prices or if there is a lag in the pricing revision of petroleum products as compared to crude prices.

More recently though, rising crude oil prices have improved refining margins as the product prices have increased in proportion to crude prices in most cases. As a result of this, the refineries showed favorable earnings during 1HFY08. The crude prices are on an upward momentum and petroleum prices seem to be adjusting accordingly. With crude oil prices predicted to decrease in the future, the GRMs are a subject of immense speculation. A slight decrease could serve as a cushion to the GRMs, however, a drastic decrease could harm the sales revenue and squeeze the GRMs again.



## Industry Outlook

The local refineries realize the potential for improving and catering to the local needs, as do the foreign investors. With new refineries in the process of being set up, a threat is being created for the existing players who are now also involved in expansionary projects to enhance capacity and storage in order to keep their share of the market intact. However, with the increasing consumption trends and demand in the country, the market size will also increase, allowing new entrants to get a share of the pie. Although the market shares of the existing players will subsequently decrease, the sales volume will have increased by then due to increased demand, thus nullifying any negative impact of a decreased market share on the existing players.

**Chart 4: Upcoming Projects**

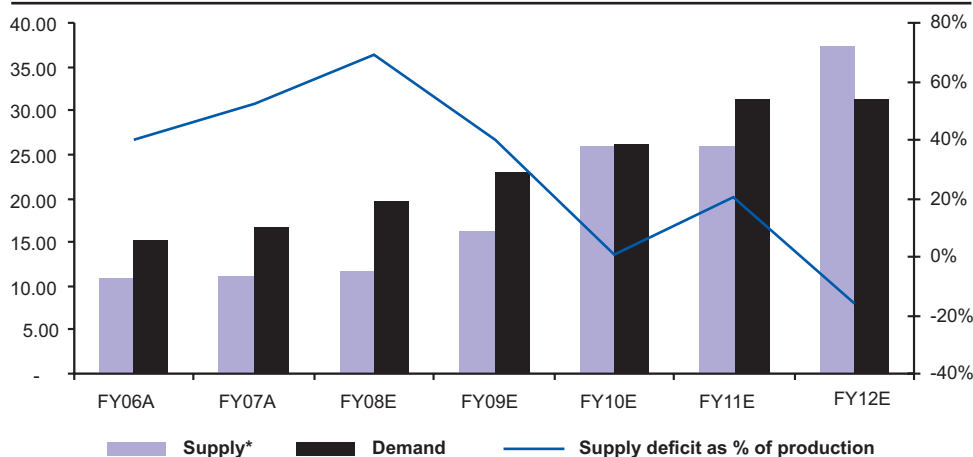
Name	Capacity (bpd)	Expected Completion Date
Bosicor Oil Pakistan Limited	115,000	2010
Attock Refinery Limited	12,400 (expansion)	2009*
Khalifa Coastal Refinery	200,000 - 300,000	2012
Coastal Refinery Limited	50,000	TBA
TransAsia Refinery Limited	100,000	2010
Indus Refinery	93,000	2008

\* Tentative

Source: Industry Sources & IGI Research

If these projects are completed as scheduled (with the exception of Coastal Refinery Limited as the project has been shelved for now), by 2013, the market size can grow by approximately 200% to 800,000bpd – 900,000bpd\*. This is a likely figure, as from the project charts above; installation of Khalifa Refinery alone would increase the current industry capacity of 267,000bpd by almost a 100%.

**Chart 10: Refining Industry in the Future (mntpa)**

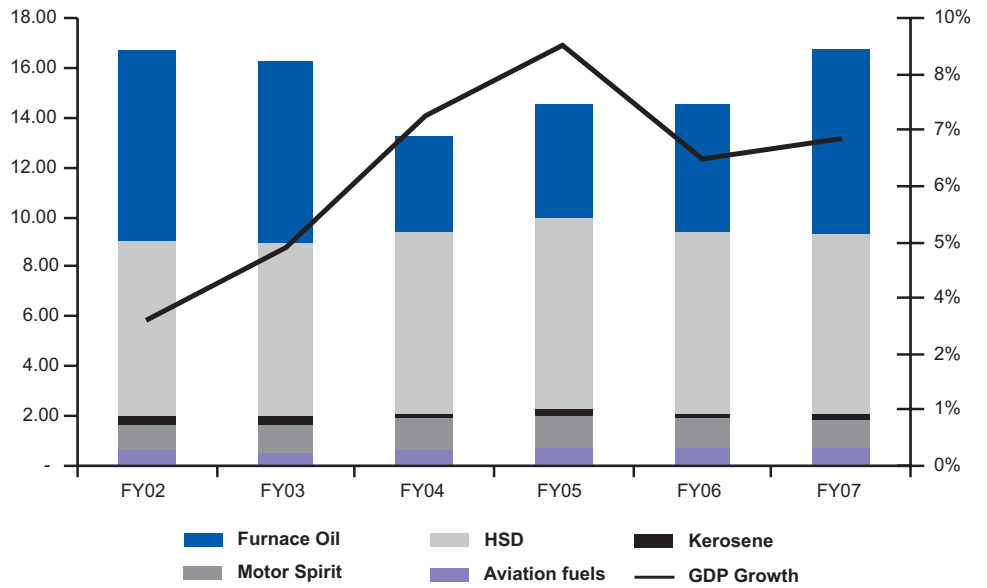


\*Production has been assumed as 90% of refining capacity. Upcoming projects have been incorporated in the increase of refining capacities, and no delay has been assumed. Demand has been taken from OCAC's forecasted values

Source: HDIP Energy Yearbook

\* Depending on Khalifa Coastal Refinery's final capacity.

**Chart 11: Petroleum Product Consumption (mntpa)**



Source: HDIP Energy Yearbook & IGI Research

Additionally, local consumption trends of petroleum products show a drastic increase in FO demand over the years, primarily in the power sector due to gas shortage coupled with rising electricity demand in the country. Such a trend could lead to an adverse impact on GRMs as increased demand for furnace oil would require increased production of the same. Since FO is a negative margin product, its increased production would squeeze refiner’s margin and adversely affect profitability.

Setting up of oil refineries is a very costly and time consuming investment. However, given the current supply/demand situation at hand, increasing the refining capacity to meet demands is inevitable. The most rapid increase in refinery capacity is planned for the Middle East, followed by the rest of Asia, which also shows promise for the most increase in oil demand over the next few years.

Similarly, Pakistan’s refinery sector has needed acceleration for quite some time. Now with the foreign investment pouring in, it certainly seems likely that Pakistan will have the resources to meet its local demand and eventually even export surplus petroleum products to ease the pressure on its balance of payments. This will contribute to economic stability of the country in the future years.

## Bosicor Pakistan Limited

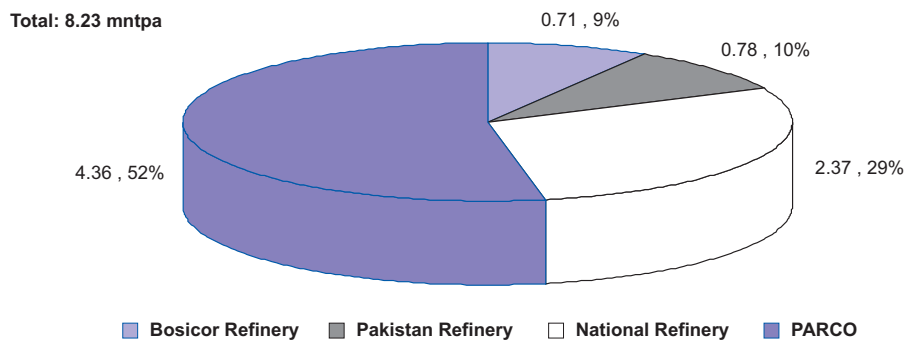
### Plant and Capacity

Bosicor had acquired its refining plant from Tesoro Petroleum Corporation Inc. at Carrizo Springs, Texas, USA, with an actual designed capacity of 30,000 bpd. The plant was subsequently relocated to The Hub, Lasbella, Balochistan. Bosicor's plant is a case of relocated refinery project, in which only the process plants were relocated while other equipment and machinery were new and built up locally. In November 2007, the refinery underwent a revamp of its crude distillation unit, after which the attainable capacity has increased from 18,000 bpd to the designed 30,000 bpd level.

### Crude Oil Allocation & Product Mix

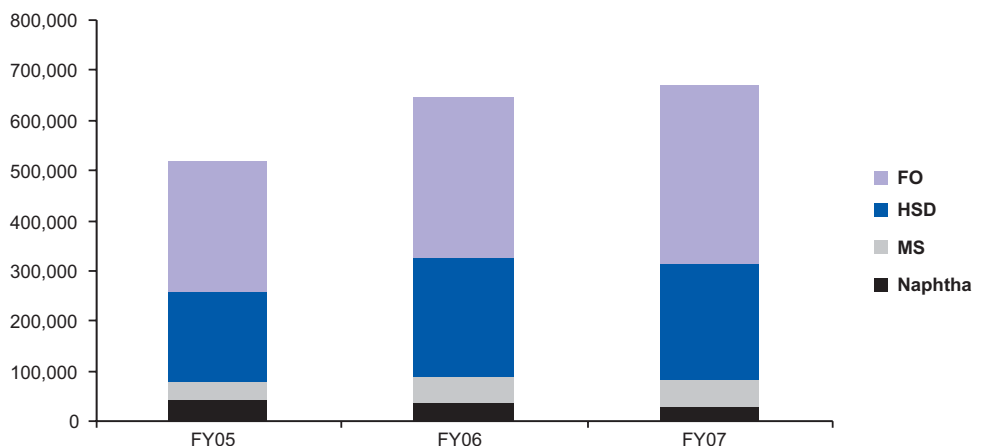
Bosicor solely relies on imports of crude oil for refining purposes. Of the total crude imported in Pakistan, Bosicor imports approximately 8.66%. This is primarily due to the fact that Bosicor has the lowest processing capacity, and is relatively new compared to others in the industry. Going forward, we expect Bosicor's crude purchases to increase as its refining capacity increases and also as it plans to set up additional storage tanks by the end of FY08.

**Chart 12: Import of Crude Oil by Refinery in FY07 (mntpa)**



Source: HDIP Energy Yearbook

**Chart 13: BOSI: Product Breakdown (tn)**

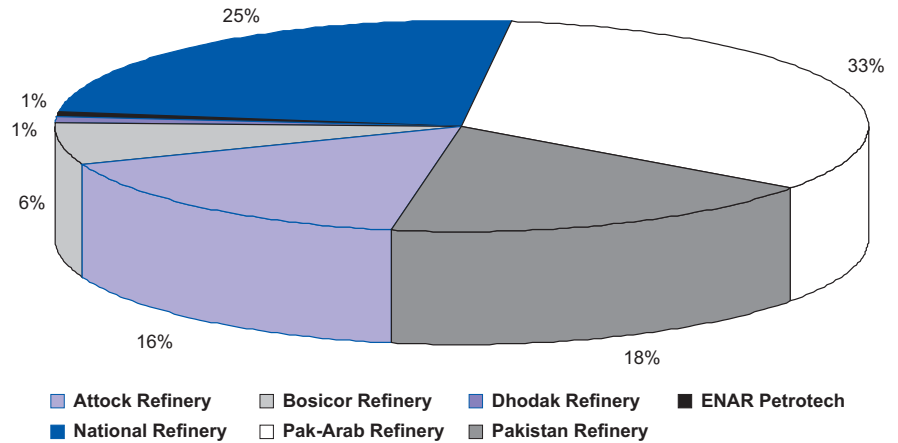


Source: HDIP Energy Yearbook

### Market Share

Based on these refining capacities, market shares can be assumed as a refinery can only sell how much it produces. Market shares are dependant upon the amount of crude oil processed by a refinery. Bosicor is relatively new in the industry, which is the main reason why it only enjoys 6% of the market share in terms of production and 12% in term of refining capacity so far. However it has constantly shown a growing trend since inception and with the increase in its attainable capacity, this number is expected to grow in the future.

**Chart 14: Market Share of Production FY07**



Source: HDIP Energy Yearbook

### Oil Marketing Unit and Distribution

Bosicor has a sales-purchase agreement with Pakistan State Oil (PSO). Under this agreement, PSO is entitled to purchase all of Bosicor’s petroleum products, and in return for this exclusivity of product sales, PSO is required to handle the crude oil for the refinery. Under the crude oil handling agreement, PSO receives crude oil for Bosicor at Port Qasim and stores it in two storage tanks of 30,000tn at Zulfiqarabad Oil Terminal. From there, the oil is transported to the Bosicor refinery site in tank lorries.

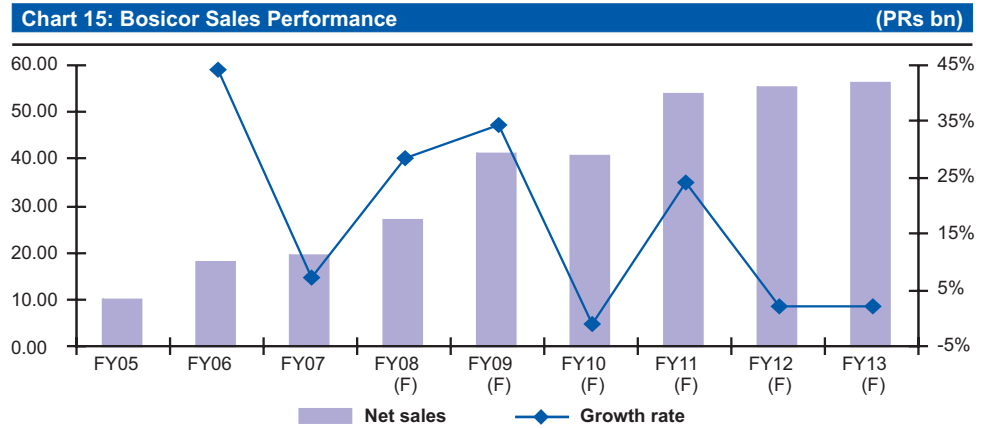
In March 2002, the Ministry of Petroleum and Natural Resources granted the company a direct marketing license to set up an Oil Marketing Company (OMC) and establish outlets across the country. It set up its first fuel station in July 2007 and intends to put up a total of 50 fuel stations by the end of FY08. Currently 12 fuel stations are fully operational, whereas approximately 38 are still in the pipeline, and are expected to be completed by June 2008. These outlets will be 100% dealer financed for most part, however, in rare cases Bosicor may put up company financed (partially or wholly) or company owned fuel stations as well.

When it comes to the allocation of the petroleum products between Bosicor and PSO, Bosicor’s own marketing outlets get first priority and this assures that company requirements of products are met. The surplus goods are then transported off to PSO. For Southern OMC operations, Bosicor refinery is the supplier of petroleum products, while for the Northern outlets, arrangements have been made with Attock and PARCO to supply petroleum products.

## Financial Performance

### Sales Performance

Bosicor Pakistan started operations in 2005 and has reported an increase in net sales ever since. We assume this trend of growth will continue in the future as the capacity of the plant and the demand for Bosicor's products increases.



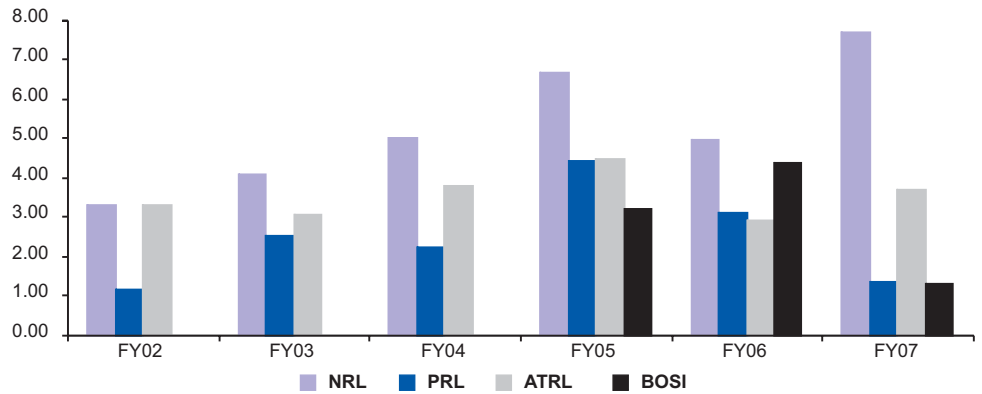
Source: Company Reports & IGI Research

In FY07, Bosicor's sales increased by 7%, whereas total local consumption grew by 14%. Bosicor cannot increase its sales according to the consumption trend due to its restricted capacity. However, Bosicor's sales are expected to grow by 28% in FY08, due to the marked increase in capacity initiated in February 2008. Sales for FY09 are consequently expected to increase by a massive 35% as the refinery is expected to operate at a 100% capacity utilization of its newly attainable capacity of 30,000 bpd. FY10 is expected to mark a decrease of 1% due to the forecasted decrease in crude prices, and consequently product prices, that is hedged by an increase in capacity to 40,000 bpd. Thereafter, the refinery is expected to smoothen its sales, after a one time jump of 24% in FY11, and will operate at full capacity unless in the case of a maintenance shutdown.

### Profitability

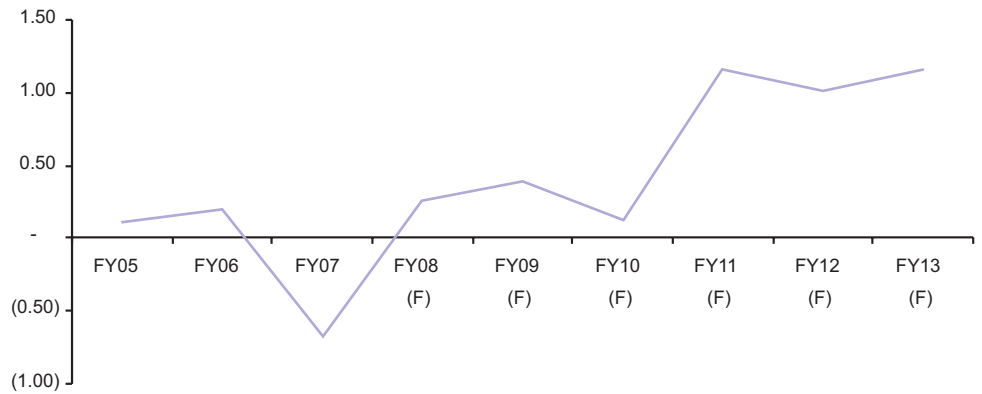
Bosicor's profitability has been quite volatile since inception. Like all other refineries, Bosicor's profitability is largely dependant on GRMs which are determined by crude prices and product prices in the international market. Bosicor in particular is extremely sensitive to changes in GRMs as its profits solely depend on its sales, while refineries such as NRL and ATRL are cushioned by dividend income of investments in associated companies, which lessens the impact of volatility in GRMs. The first two years of operations reported profits for Bosicor, however, FY07 marked a significant loss for the company due to tightening GRMs. Going forward, we expect the company to have a positive bottomline, although in FY10 a slight pressure on GRMs is expected. Here we have not assumed any maintenance shutdowns, except in December 2009, where the company is expected to undergo a revamp to increase its capacity to 40,000 bpd.

**Chart 16: Industry Wide GRMs (US\$/bb)**



Source: Company Reports & IGI Research

**Chart 17: Profitability (PRs bn)**

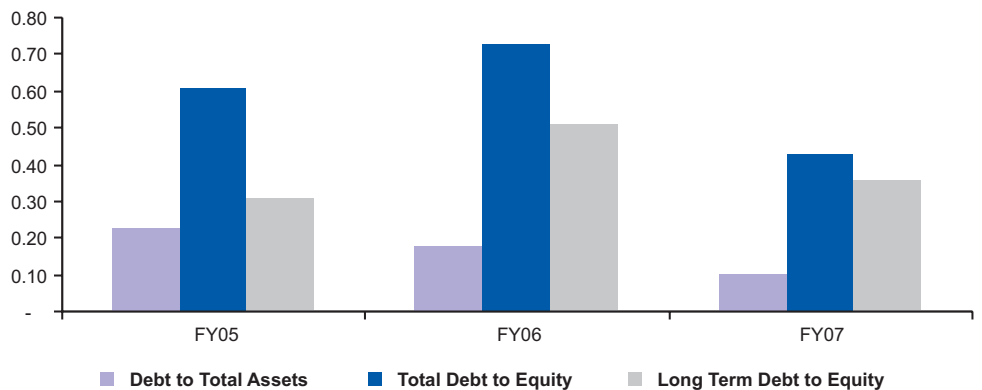


Source: Company Reports & IGI Research

### Leverage

Most refineries currently operating in the industry have been operating for quite a few years. Therefore, they do not have any long term loans at hand. Bosicor, however, is a new refinery, that is undergoing major expansions and projects to enhance production. Due to its newly developed operations, it does not have the free cash flow to invest in capital expenditures. Thus, it resorts to long terms loans. Currently it has a leverage of 10% (Debt-to-Total Assets), which is expected to increase till 2010. After the completion of its projects, Bosicor, like the other refineries, is likely to remain debt free. To finance its upcoming projects, Bosicor has taken out an additional syndicate financing facility of PRs2.6bn under a consortium of financial institutions with Allied Bank Limited as the trustee, which is expected to be fully utilized by the end of FY08.

**Chart 18: Leverage (PRs bn)**



Source: Company Reports & IGI Research

### Inventory Gains

Bosicor presently has a crude storage capacity of 30,000tn, which is only sufficient for about 6-7 days if the refinery operates at a capacity of 30,000 bpd. However, with the drastic fluctuation in crude prices, inventory gains, however minute, can still be realized. During the first week of January, crude augmented by about 2%, through which the company realized inventory gains of PRs105.71mn. Taking around 75% of total inventory gains gives us a conservative figure, and according to our calculations inventory gains of PRs0.20 per share were realized in the first week of January alone.

**Table 5: Inventory gains estimate**

December inventory level (PRs mn)	5,285.33
Increase in crude prices	2%
Potential inventory gains	105.71
75% of estimates	79.28
PRs/share	0.20

Source: Company Reports & IGI Research

## Upcoming Projects

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Bosicor is involved in a handful of projects, both at initial and advanced stages, to improve its refining capacity, while decreasing associated costs at the same time.

- **Increase in storage capacity**  
Bosicor plans to increase on-site storage capacity to 126,000 tons by constructing additional storage tanks. This project is set to be completed and operational by the end of FY08. Additional on-site storage tanks may result in inventory gains, along with saving on the incidentals paid to PSO and FOTCO. This project is scheduled to cost approximately PRs900mn.
- **Sub-sea pipeline and Single Buoy Mooring (SBM)**  
SBM is like a floating port, which will be used to unload the crude fuel oil and will be transported to the refinery through sub-sea pipelines. This arrangement will enable offloading of the crude oil closer to the refinery and will reduce costs affiliated with oil storage and transportation. An agreement with Coastal Refinery Limited (CRL) has been reached, whereby Bosicor will use the port facility, owned by CRL for agreed upon consideration of US\$1/ton and at the same time, CRL will pay for using the sub-sea pipelines and the Bosicor terminal. This project is expected to be completed by July FY09 and is scheduled to cost approximately PRs900mn.
- **Isomerization plant**  
By December 2009, Bosicor has plans to set up an Isomerization unit to convert and upgrade all of its light naphtha into environmentally friendly low benzene motor gasoline. It will have a feedstock processing capacity of 12,500 bpd, which is sufficient to process all the exportable naphtha. This project is scheduled to cost approximately PRs1.9bn.
- **Revamp of crude distillation unit**  
Another revamp is expected around December 2009, which will increase the capacity of the refinery to 40,000bpd. The effects of this revamp have been incorporated in our model.

## Investments in associated companies

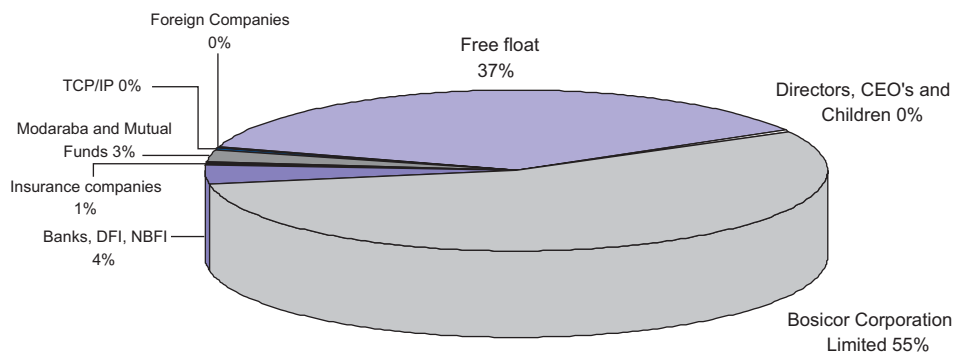
Bosicor has also made additional investments in projects through associates. It is planning to set up a 115,000 bpd oil refinery under Bosicor Oil Pakistan Limited (BOPL). Bosicor Pakistan Limited has injected an amount of PRs150mn in BOPL, as an investment in the ordinary share capital of the company. BOPL will set up an oil refinery with a crude refining capacity of 115,000 bpd at the Mouza Kund site, leased from Bosicor Pakistan Limited. This refinery will be procured from UK, and will be installed by 2010. The cost of this newly acquired refinery is estimated to be PRs30bn, and is said to be one of the biggest refineries in Pakistan. It has also injected PRs150mn in Bosicor Chemicals Pakistan Limited, to set up an Aromatics Plant with a capacity of 17,100 bpd to produce petrochemical products.

## Ownership Structure

As of June 30th, 2007, Bosicor Pakistan Limited had 245,065,248 shares outstanding. After the issuance of 60% right shares, it currently has 392,104,397 shares outstanding. The major shareholder is Bosicor Corporation Limited with 55.44% of total shares. Other institutions include other FIs, NBFIs and banks hold 3.87% of the total shares, modarabas and mutual funds hold about 2.56%, while insurance companies hold 0.56% of total shares. Directors, CEOs and their children hold a minor 0.15% of total shareholdings. TCP/IP amount for 0.2% of total shares. Foreign companies' stake equals to 0.29% of the company, whereas the remaining 36.92% of the share are free float, owned by general public, both foreign and local, and other individual investors.

Additionally, Abraaj Capital, a private equity firm from the Middle East has finalized its private equity placement of US\$135mn for a 40% stake in Bosicor Corporation Limited (BCL), more specifically in Bosicor Oil Pakistan Limited (BOPL) and Bosicor Chemicals Pakistan Limited (BCPL). BCL is the parent company that owns BOPL, BCL and BPL. Abraaj also plans to fund Byco Industries Incorporated (BII)'s Mandatory Tender Offer for acquisition of 5% or more of Bosicor Pakistan Limited's minority shareholdings, the offer price of which is yet to be determined. Proceeds from this stake sale will be utilized in the set up of BOPL's refining unit and BCPL's petrochemical plant.

**Chart 19: Bosicor Shareholdings FY07**



Source: Company Reports & IGI Research

## Bosicor Pakistan Limited – 1HFY08 Result Review

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Bosicor Pakistan Limited (BOSI) recently announced its results for 1HFY08. The company's profit after tax (PAT) amounted to PRs143.1mn which translated into earnings per share (EPS) of PRs0.37.

- Net sales increased by 1.32% Year-on-Year (YoY) to reach PRs9.68bn as compared to PRs9.56bn in 1HFY08. This increase is marginal as the plant remained shut down for a period of 30 days during November 2007 to revamp its crude distillation unit and increase its capacity to 30,000bpd. This shut down hindered short term growth, however it will prove to be beneficial in the long term as increased capacity will lead to increased sales.
- Gross profit was recorded at PRs583.25mn in 1HFY08 versus a gross loss of PRs638.82mn in the corresponding period last year. This substantial rise is attributable to the industry-wide phenomenon of improving refining margins whereby the difference between the product prices and the cost of crude has increased. The cost of sales decreased by 10.75% to reach PRs9.1bn, while at the same time sales only increased by 1.32%, signifying a major decrease in the cost of raw material i.e. crude oil.
- Profit before tax (PBT) amounted to PRs183.44mn as compared to a loss before tax of PRs899.91mn in the corresponding period last year. Financial charges increased by 60.29% from PRs185.70mn to reach PRs297.66mn, implying an increase in short term borrowings in addition to the existing long term loans.
- PAT resulted in PRs143.1mn as compared to a loss after tax of PRs946.36mn in the corresponding period last year. Consequently, the EPS was recorded at PRs0.37 versus a loss per share of PRs3.30 in 1HFY07. Bosicor operates under a formula whereby it is subjected to taxation of 0.05% of net sales. However in the period under review, the company utilized a deferred tax credit of PRs8.09mn, which resulted in an effective tax rate on profit of 22%.

The Board of Directors did not recommend a disbursement for 1HFY08. Currently, the stock is trading at a P/E multiple of 27.1x on its 1HFY08 earnings.

## Assumptions

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**Crude Prices:** We have assumed world wide crude prices to decline from current levels. These estimates have been based on expected forecasts of Brent crude by analysts from all over the world. Our current assumptions comprise of historical average crude prices of Arab Light crude, and based on their historical relationship with Brent crude, we have assumed future forecasts for Arab Light.

**Capacity:** Going forward, we have assumed that Bosicor's refinery will operate at 100% capacity utilization, keeping in mind the excess demand situation in the industry. We have also incorporated the increase in capacity to 40,000 bpd in our forecasts from January 2010 onwards. We believe that the supply demand imbalance is likely to prevail for atleast another 5 years, until the new refineries come online. Additionally, it has been assumed that going forward, Bosicor will maximize on its production of HSD, while at the same time reducing FO production. This will improve Bosicor's refining margins in the future.

**Upcoming Projects:** We have not assumed a delay in the implementation of the company's upcoming projects (storage tanks, SBM, isomerization unit, revamp). Additionally, we have assumed a decline in freight charges after the implementation of the SBM, and have also assumed an increase in production of MOGAS, while naphtha will be eliminated from the refinery's production slate, after the implementation of the Isomerization unit.

**Increase in debt:** Since the company has a debt financing facility of PRs2.6bn till the end of FY08 with an outstanding balance of PRs1.9bn, we have assumed that the remainder will be withdrawn within FY08 to complete the projects concerning storage tanks and the SBM.

### Potential Risks to our Valuation

- Crude price forecast – Keeping in view the recent volatility in crude oil prices the forecasts for the future are under immense scrutiny. Due to Bosicor's extreme sensitivity to crude prices, any revisions in the forecasts could cause a change in our valuation.
- Deemed duty on HSD – Currently, 10% Deemed duty on HSD has been accounted for in calculating import parity prices. A reduction in the duty could affect sales revenue as HSD accounts for 38% of the current production slate.

## Valuation and Recommendation

### Comparative Valuations

With the second highest current P/E ratio in the table below, Bosicor's stock is certainly one that the investors believe has the most growth potential. However this high P/E ratio is because of their low EPS so far in this year which is expected to decline slightly as the earnings normalize. The lowest P/B ratio of 1.53x indicates that the company is undervalued and has moderate potential for growth. Based on this table, BOSI seems to be an attractive investment compared to both local and global peers, despite being one of the newer players in the industry.

Table 6: Comparative Valuations				
	P/B	P/E	ROE (FY07A)	ROA (FY07A)
<b>Pakistan</b>				
BOSI*	1.53	27.57	5.47%	1.74%
PRL	1.55	3.22	5.22%	1.71%
NRL	2.18	7.03	32.97%	12.88%
ATRL	5.00	5.79	19.82%	2.33%
<b>China</b>				
Sinopec	2.09	8.82	22.13%	9.29%
CNPC	1.43	11.52	13.01%	8.25%
<b>India</b>				
RIL	4.85	28.59	20.25%	10.53%
IOCL	1.61	7.62	23.42%	7.93%
<b>Saudi Arabia</b>				
SARCO	3.49	10.84	2.64%	2.53%

\* BOSI values and multiple are as of 1HFY08, as these derive more value than their loss-driven accounts in FY07

Source: Company Reports, Bloomberg, IGI Research

### Recommendation

We have based our valuation on the forecasts of the next 5 years. Additionally, we have assumed a WACC of 16.23%, a terminal growth rate of 4% and a tax rate of 35%. Using the DCF model, we have arrived at a fair value of PRs23.34. Currently, the stock is trading at PRs20.10. According to our valuations, the stock has an upside potential of 16%, therefore at current levels; we recommend a "BUY" on BOSI.

Table 8: FCFF Valuation

	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Terminal
EBITDA	872	1,321,101	2,405,121	2,105,5617	3,184,840	2,838,695	2,914,641	
Less: Tax	305	462,385	841,792	36,946	1,114,694	993,543	1,020,124	
Less: Change in WC	(92,746)	1,085,857	179,568	74,000	256,105	73,021	73,884	
Less: Capex	2,668,212	2,689,125	(299,943)	(570,325)	15,314	17,777	21,702	
<b>Free Cash Flow</b>	<b>(2,574,899)</b>	<b>(2,916,266)</b>	<b>1,683,704</b>	<b>1,864,939</b>	<b>1,798,727</b>	<b>1,754,353</b>	<b>1,798,931</b>	
<b>WACC</b>		16.23%	16.23%	16.23%	16.23%	16.23%	16.23%	
<b>PV of future cash flows</b>		<b>(2,789,278)</b>	<b>1,385,543</b>	<b>1,320,410</b>	<b>1,095,719</b>	<b>919,098</b>	<b>810,866</b>	<b>1,870,888</b>

**Terminal Value**

Terminal growth rate	4.0%
Terminal WACC	16.23%
Terminal Value	15,300,213
PV of Terminal Value	6,896,553

**DCF Valuation**

Sum of PV of future cash flows	2,742,358
PV of terminal value	6,896,553
Enterprise Value	9,638,911
Less: Net Debt	487,305
Equity Value	9,151,606

Number of shares 392,104,320

Per share equity value **23.34**

Table 9: Sensitivity Table

WACC	Sum of PV of future cash flows	Terminal Value	PV of Terminal Value	Enterprise Value	Equity Value	Per share equity value
11.23%	3,502,219	25,884,410	8,706,053	12,208,272	11,720,967	29.89
12.23%	3,336,925	22,738,462	8,302,796	11,639,721	11,152,416	28.44
13.23%	3,178,652	20,274,351	7,921,550	11,100,202	10,612,897	27.07
14.23%	3,027,028	18,292,083	7,560,934	10,587,962	10,100,657	25.76
15.23%	2,881,706	16,662,914	7,219,665	10,101,371	9,614,066	24.52
<b>16.23%</b>	<b>2,742,358</b>	<b>15,300,213</b>	<b>6,896,553</b>	<b>9,638,911</b>	<b>9,151,606</b>	<b>23.34</b>
17.23%	2,608,680	14,143,547	6,590,485	9,199,165	8,711,860	22.22
18.23%	2,480,382	13,149,472	6,300,430	8,780,812	8,293,507	21.15
19.23%	2,357,196	12,285,958	6,025,424	8,382,620	7,895,315	20.14
20.23%	2,238,867	11,528,867	5,764,570	8,003,437	7,516,132	19.17
21.23%	2,125,156	10,859,668	5,517,032	7,642,187	7,154,882	18.25

Table 10: Sensitivity Analysis

WACC		Terminal growth rate				
		3.00%	3.50%	4.00%	4.50%	5.00%
	14.73%	25.94	26.81	27.77	28.82	29.97
	15.23%	24.52	25.30	26.16	27.09	28.12
	15.73%	23.22	23.92	24.69	25.52	26.44
	<b>16.23%</b>	22.01	22.65	<b>23.34</b>	24.09	24.91
	16.73%	20.89	21.47	22.10	22.77	23.50
	17.23%	19.86	20.38	20.95	21.56	22.22
	17.73%	18.89	19.37	19.88	20.44	21.03

**Table 7: Valuation Summary**

	FY06A	FY07A	FY08F	FY09F	FY10F	FY11F	FY12F	FY13F
<b>Income Statement (PRs '000)</b>								
Net Sales	17,929,007	19,328,906	26,954,026	41,146,929	40,778,719	53,881,757	55,117,547	56,180,794
Cost of Goods Sold	17,304,379	19,401,391	25,744,145	39,161,140	39,538,280	51,054,300	52,665,992	53,673,454
Operating Income	501,982	(268,627)	956,721	1,596,353	828,715	2,369,596	1,981,937	2,027,121
EBITDA	912,524	872	1,321,101	2,405,121	2,105,561	3,184,840	2,838,695	2,914,641
Net Income	197,029	(681,266)	250,483	396,010	127,805	1,164,015	1,009,442	1,154,612
<b>Balance Sheet (PRs '000)</b>								
Current Assets	7,375,766	8,523,699	7,733,043	14,057,756	13,560,370	18,101,165	17,846,629	18,539,568
Operating Assets	3,719,322	6,387,534	9,076,659	8,776,716	8,206,392	8,221,705	8,239,483	8,261,185
Long Term Loans	419,543	984,739	3,649,232	2,649,210	1,582,190	483,878	-	-
Total Equity	2,758,591	3,614,769	5,335,643	5,731,654	5,701,054	6,865,069	7,176,102	7,725,049
<b>Per Share</b>								
No. Of Shares	245,065,248	245,065,248	392,104,397	392,104,397	392,104,397	392,104,397	392,104,397	392,104,397
Book Value (PRs)	7.04	9.22	13.61	14.62	14.94	17.91	20.49	23.43
Earning Per Share (EPS)	0.50	(1.74)	0.64	1.01	0.33	2.97	2.57	2.94
DPS (PRs)	0.21	-	-	0.40	-	1.78	1.54	1.77
Sales Per Share	45.73	49.30	68.74	104.94	104.00	137.42	140.57	143.28
Price per Sales per Share (PSR)	0.41	0.35	0.29	0.19	0.19	0.15	0.14	0.14
Price Earning Ratio (PER)	37.61	-	31.46	19.90	61.67	6.77	7.81	6.83
Price Per Cash Flow (PCF)	5.31	(2.60)	(2.70)	4.68	4.23	4.38	4.49	4.38
Price to Book Value (PBR)	2.69	1.85	1.48	1.38	1.35	1.12	0.98	0.86
<b>Profitability</b>								
Gross Profit Margin	3.48%	-0.38%	4.49%	4.83%	3.04%	5.25%	4.45%	4.46%
Operating Profit Margins	0.68%	1.01%	0.94%	0.95%	1.01%	0.85%	0.85%	0.85%
EBITDA Margins	3.27%	-1.15%	3.64%	3.96%	2.66%	4.97%	4.18%	4.20%
EBIT Margins	5.09%	0.00%	4.90%	5.85%	5.16%	5.91%	5.15%	5.19%
Pre- Tax Margins	1.68%	-3.25%	1.43%	1.48%	0.48%	3.32%	2.82%	3.16%
Net Profit Margins	1.10%	-3.52%	0.93%	0.96%	0.31%	2.16%	1.83%	2.06%
Return On Equity (ROE)	7.14%	-18.85%	4.69%	6.91%	2.24%	16.96%	14.07%	14.95%
Return On Assets (ROA)	1.77%	-4.47%	1.46%	1.71%	0.58%	4.37%	3.82%	4.25%
Return On Com Stockholders Eq (ROCE)	7.14%	-18.85%	4.69%	6.91%	2.18%	16.57%	12.57%	12.57%
Dividend Payout	41.51%	0.00%	0.00%	40.00%	0.00%	60.00%	60.00%	60.00%
Retention Rate	58.49%	100.00%	100.00%	60.00%	100.00%	40.00%	40.00%	40.00%
Asset Turnover	161.27%	126.81%	157.24%	177.61%	184.52%	202.13%	208.62%	207.03%
<b>Liquidity</b>								
Current Ratio	1.07	1.01	1.05	1.01	0.96	1.00	1.02	1.09
Acid Test Ratio	0.48	0.34	0.21	0.32	0.26	0.28	0.27	0.32
Days' R/B	1.01	4.77	1.95	1.98	2.17	2.29	2.37	2.45
Days' Inventories	79.59	97.77	79.36	80.57	82.83	82.35	80.63	79.24
Days' Payables	117.44	139.80	96.36	97.83	100.50	99.88	97.77	96.05
<b>Solvency</b>								
Debt to Total Assets	0.18	0.10	0.25	0.17	0.13	0.08	0.07	0.07
Total Debt to Equity	0.73	0.43	0.82	0.69	0.51	0.32	0.24	0.23
Long Term Debt to Equity	0.51	0.36	0.70	0.46	0.28	0.07	-	-
Net Debt to Equity	0.08	0.13	0.70	0.53	0.47	0.19	0.07	(0.07)
Interest Coverage Ratio	2.06	(0.55)	1.65	1.60	1.22	3.02	3.06	4.06
Asset to Equity	4.03	4.22	3.21	4.04	3.88	3.88	3.68	3.51
<b>Others</b>								
Net Debt (PRs'000)	229,431	487,305	3,730,373	3,063,840	2,695,939	1,317,261	529,869	(560,188)
Market Value of Equity (PRs'000)	7,409,802	6,690,375	7,881,298	7,881,298	7,881,298	7,881,298	7,881,298	7,881,298
Enterprise Value (EV) (PRs'000)	7,639,233	7,177,680	11,611,671	10,945,138	10,577,238	9,198,559	8,411,167	7,321,111
EV/ EBITDA	8.37	8,231.28	8.79	4.55	5.02	2.89	2.96	2.51
EV/ Barrel of Sales (PRs)	-	-	1,231.93	791.99	731.94	901.95	849.31	819.92
EV/Barrel in (US\$)	-	-	20.09	12.77	11.67	14.23	13.25	12.65
EV/ Share (PRs)	19.48	18.31	29.61	27.91	26.98	23.46	21.45	18.67
EV/ Barrel of Attainable Capacity (PRs)	1,286.07	1,208.36	1,689.46	1,105.57	1,050.89	696.86	637.21	554.63
EV/Barrel in (US\$)	21.48	19.93	27.55	17.83	16.76	10.99	9.94	8.56
EV/Barrel of production (PRs)	1,588.86	1,416.55	1,817.86	1,105.57	1,050.89	696.86	637.21	554.63
EV/barrel in (US\$)	26.54	23.36	29.65	17.83	16.76	10.99	9.94	8.56
Average cost of debt	12%	13%	13%	21%	23%	29%	34%	60%
Gross Price per barrel (PRs)	-	-	5,122	5,050	4,923	4,955	5,063	5,156
Net price per barrel (PRs)	-	-	4,327	4,266	4,158	4,185	4,277	4,355
Gross refining margin per barrel (PRs)	260.98	78.94	314.07	309.34	301.55	303.81	310.78	316.78
Gross refining margin in US\$/bbl	4.36	1.30	5.12	4.99	4.81	4.79	4.85	4.89
CGS per barrel (PRs)	-	-	4,132	4,060	4,032	3,966	4,087	4,161
CGM per barrel (PRs)	-	-	4,143	4,112	4,034	4,000	4,087	4,161
Working Capital (PRs'000)	506,129	53,809	346,789	85,774	(539,345)	(2,874)	373,661	1,537,601
Change in Working Capital (PRs'000)	472,164	(452,320)	292,980	(261,016)	(625,119)	536,472	376,535	1,163,940
Capital Expenditure (PRs'000)	445,126	2,668,212	2,689,125	(299,943)	(570,325)	15,314	17,777	21,702

## Glossary

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ATRL	Attock Refinery Limited
BCL	Bosicor Corporation Limited
BCPL	Bosicor Chemicals Pakistan Limited
BOSI	Bosicor Pakistan Limited
BOPL	Bosicor Oil Pakistan Limited
bpd	barrels per day
BPL	Bosicor Pakistan Limited
FO	Furnace Oil
FOTCO	Fauji Oil Terminal Company Limited
GRM	Gross Refining Margin
HDIP	Hydrocarbon Development Institute of Pakistan
HSD	High Speed Diesel
LDO	Light Diesel Oil
mntpa	million tons per annum
MS	Motor Spirit
NRL	National Refinery Limited
OCAC	Oil Companies Advisory Committee
POL	Petroleum, Oil & Lubricants
PRL	Pakistan Refinery Limited
PSO	Pakistan State Oil

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We, Shayan Hasan Jafry and Sarah Junejo, hereby certify that the views expressed in this research report accurately reflect our personal views about the subject, securities and issuers. We also certify that no part of our compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this research report.

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