

6 March 2018

Energy & Petrochemicals | Exploration & Production

GSS Energy

Buy

Ideal Proxy To The Tech Boom And Oil Price Recovery

With new projects in the auto and consumer space, we expect FY18 to be even better for GSS. Trading at 9x FY18F ex-cash P/E, valuations just account for the PE business. With oil & gas discovery affirmed in Dec 2017, 1P reserves already conservatively estimated at SGD0.29/share, and oil & gas revenue to come in 1H18, we think GSS is significantly undervalued and provides a unique opportunity for investors to ride on the manufacturing boom and oil price recovery. As a result, we initiate coverage with a BUY and with an SOP TP of SGD0.25 (56% upside).

GSS Energy's (GSS) precision engineering (PE) segment to continue strong growth on new projects. We expect new projects in the automotive and consumer space to fuel more growth into FY18. There have been ongoing trials with a new customer in the consumer space, and GSS expects to start full scale production by 1H18 (which can contribute 15% topline growth for the segment in FY18F). However, we understand that this project's margins will be lower. All in all, we expect the outlook to still be positive for its PE arm in FY18.

Revenue from oil & gas to be expected in 1H18 and 4Q18 respectively. On 13 Dec 2017, GSS made a hydrocarbon discovery in its Trembul Operating Area. Management has stated that it expects production of gas in 4Q18. GSS is re-entering a makeover well and we expect it to start producing 200 barrels of oil a day by 1H18 – and to enjoy better margins and profitability if the oil price continue to rise.

Mistakes learned – vital change in operation cooperation agreement. GSS is now the main party to the contract with state-owned PT Pertamina, to assist it in the production of petroleum in the Trembul Operation Area. Payment is made to Pertamina directly (not through a middle party like before), reducing the risk of payment defaults.

There is also a cost recovery scheme in place that allows GSS to recover opex and capex incurred through 80% of sales. This is a huge positive as it can then replenish cash flow, allowing it to drill more wells to increase production capacity at a faster pace.

Potential upcoming dividend policy to show confidence as to incoming oil revenue. With the oil & gas business likely to start producing revenue in 2H18, along with the already profitable PE business – as well as a net cash balance sheet – we expect the company to start distributing dividends, representing 20% of PATMI in FY18F. This would result in a potential dividend yield of 2% for 2018F, gradually increasing to 2.5% in 2019F.

Initiate coverage with a BUY, with the oil & gas business absolutely free. We think GSS is significantly undervalued and provides a unique opportunity for investors to ride on the manufacturing boom and oil price recovery. As a result, we initiate coverage with a BUY and an SOP TP of SGD0.25.

Target Price: SGD0.25
Price: SGD0.16
Market Cap: USD60.1m
Bloomberg Ticker: GSSE SP

Share Data

Avg Daily Turnover (SGD/USD) 1.00m/0.75m
52-wk Price low/high (SGD) 0.14 - 0.19
Free Float (%) 57
Shares outstanding (m) 496
Estimated Return 56%

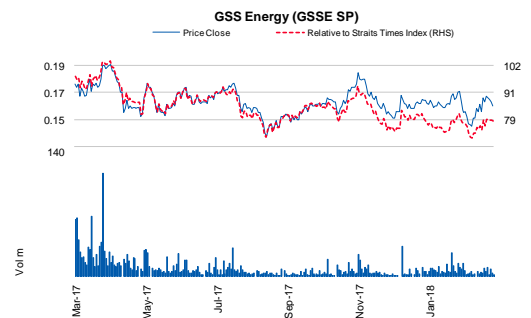
Shareholders (%)

Roots Capital Asia Limited 18.0
Sundan Pacific Limited 13.4

Share Performance (%)

	YTD	1m	3m	6m	12m
Absolute	(1.2)	(2.4)	3.9	3.9	5.3
Relative	(2.2)	(1.1)	3.9	(1.9)	(4.8)

Source: Bloomberg



Source: Bloomberg

Forecasts and Valuations	Dec-16	Dec-17	Dec-18F	Dec-19F	Dec-20F
Total turnover (SGDm)	76	94	121	138	153
Reported net profit (SGDm)	13.6	4.2	7.9	10.1	12.1
Recurring net profit (SGDm)	5.1	3.3	7.9	10.1	12.1
Recurring net profit growth (%)	0.0	(35.3)	137.8	29.1	19.0
Recurring EPS (SGD)	0.01	0.01	0.02	0.02	0.02
DPS (SGD)	na	na	0.003	0.004	0.005
Recurring P/E (x)	15.2	24.0	10.1	7.8	6.6
P/B (x)	2.09	1.84	1.60	1.38	1.18
P/CF (x)	na	45.5	39.9	7.4	6.0
Dividend Yield (%)	na	na	2.0	2.5	3.0
EV/EBITDA (x)	8.4	11.1	5.8	4.5	3.5
Return on average equity (%)	53.1	10.4	17.0	18.9	19.3
Net debt to equity	net cash	net cash	net cash	net cash	net cash
Our vs consensus EPS (adjusted)					

Source: Company data, RHB

Analyst

Jarick Seet
+65 6232 3891
jarick.seet@rhbgroup.com



Lee Cai Ling
+65 6232 3892
lee.cai.ling@rhbgroup.com



Financial Exhibits

Financial model updated on : 2018-03-02.

Asia	Financial summary	Dec-16	Dec-17	Dec-18F	Dec-19F	Dec-20F
Singapore	Recurring EPS (SGD)	0.01	0.01	0.02	0.02	0.02
Energy & Petrochemicals	EPS (SGD)	0.03	0.01	0.02	0.02	0.02
GSS Energy	DPS (SGD)	0.000	0.000	0.003	0.004	0.005
Bloomberg GSSE SP	BVPS (SGD)	0.08	0.09	0.10	0.12	0.14
Buy	Weighted avg adjusted shares (m)	484	496	496	496	496
Valuation basis	Valuation metrics	Dec-16	Dec-17	Dec-18F	Dec-19F	Dec-20F
SOP of SGD0.25 backed by DCF	Recurring P/E (x)	15.2	24.0	10.1	7.8	6.6
Key drivers	P/E (x)	5.7	18.8	10.1	7.8	6.6
i. Undervalued oil & gas business segment;	P/B (x)	2.09	1.84	1.60	1.38	1.18
ii. Growth in the precision engineering (PE) business segment.	FCF Yield (%)	(15.0)	(15.9)	(9.7)	1.3	4.4
Key risks	Dividend Yield (%)	0.0	0.0	2.0	2.5	3.0
i. Foreign currency risk;	EV/EBITDA (x)	8.4	11.1	5.8	4.5	3.5
ii. Vulnerable to slowdown in the manufacturing industry;	EV/EBIT (x)	10.7	15.1	7.3	5.4	4.1
iii. Oil & gas sale prices risk.	Income statement (SGDm)	Dec-16	Dec-17	Dec-18F	Dec-19F	Dec-20F
Company Profile	Total turnover	75.7	94.3	120.5	137.6	153.3
GSS Energy (GSS) has two core operating businesses: oil & gas and precision engineering (PE).	Gross profit	17.9	19.1	24.2	30.3	33.6
Previously known as Giken Sakata (S) Limited (Giken) which operated the PE business division, the company was listed on the Singapore Stock Exchange in Feb 1993. The listing status was transferred to GSS with effect from 12 Feb 2015 and Giken became a wholly-owned operating subsidiary of GSS.	EBITDA	7.1	6.2	12.9	16.0	18.6
In 2014, GSS ventured into the energy business, and today it is operating a twin business model – PE and oil & gas – to build greater resilience to meet the increasing uncertainties in the business environment and global economy.	Depreciation and amortisation	(1.6)	(1.6)	(2.7)	(2.7)	(2.7)
	Operating profit	5.5	4.5	10.3	13.3	15.9
	Net interest	0.2	0.2	0.2	0.2	0.2
	Income from associates & JVs	(0.0)	0.0	0.0	0.0	0.0
	Exceptional income - net	0.2	0.0	0.0	0.0	0.0
	Pre-tax profit	15.2	6.0	10.5	13.5	16.1
	Taxation	(1.6)	(1.8)	(2.6)	(3.4)	(4.0)
	Recurring net profit	5.1	3.3	7.9	10.1	12.1
	Cash flow (SGDm)	Dec-16	Dec-17	Dec-18F	Dec-19F	Dec-20F
	Change in working capital	(2.6)	(0.2)	(7.1)	(2.8)	(2.2)
	Cash flow from operations	(6.2)	1.7	2.0	10.8	13.2
	Capex	(5.5)	(14.4)	(9.7)	(9.7)	(9.7)
	Cash flow from investing activities	(5.8)	(16.4)	(6.6)	(6.2)	(4.3)
	Proceeds from issue of shares	7.9	0.1	0.0	0.0	0.0
	Dividends paid	0.0	0.0	(1.6)	(2.0)	(2.4)
	Cash flow from financing activities	6.8	1.8	0.4	(2.0)	(2.4)
	Cash at beginning of period	10.2	14.9	4.7	0.6	3.1
	Net change in cash	(5.1)	(12.8)	(4.1)	2.5	6.4
	Ending balance cash	5.5	3.0	0.8	3.1	9.5
	Balance sheet (SGDm)	Dec-16	Dec-17	Dec-18F	Dec-19F	Dec-20F
	Total cash and equivalents	18.9	13.8	9.6	12.1	18.6
	Tangible fixed assets	12.2	24.2	29.8	33.4	35.0
	Intangible assets	0.1	0.2	0.2	0.2	0.2
	Total investments	0.0	0.0	0.0	0.0	0.0
	Total assets	57.5	75.0	86.2	98.3	112.2
	Short-term debt	0.1	2.9	4.9	4.9	4.9
	Other liabilities	1.3	1.4	1.4	1.4	1.4
	Total liabilities	19.6	31.8	36.8	40.8	45.0
	Shareholders' equity	38.0	43.2	49.5	57.6	67.3
	Minority interests	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
	Total equity	37.9	43.1	49.4	57.6	67.2
	Net debt	(18.8)	(10.9)	(4.7)	(7.2)	(13.7)
	Total liabilities & equity	57.5	75.0	86.3	98.3	112.2
	Key metrics	Dec-16	Dec-17	Dec-18F	Dec-19F	Dec-20F
	Revenue growth (%)	(19.3)	24.6	27.8	14.2	11.3
	Recurrent EPS growth (%)	0.0	(36.8)	137.8	29.1	19.0
	Gross margin (%)	23.6	20.2	20.1	22.0	21.9
	Operating EBITDA margin (%)	9.3	6.5	10.7	11.6	12.1
	Net profit margin (%)	18.0	4.5	6.5	7.4	7.9
	Capex/sales (%)	7.2	15.3	8.0	7.0	6.3
	Interest cover (x)	367	215			

Source: Company data, RHB

Investment Merits

Tech manufacturer with a free oil production business. The stock is trading at 2018F P/E of 11x, which is still lower compared to the peer average of 12.6x. However, if we take a closer look, the company has minimal debt – and has amassed a reasonable net cash pile of SGD5.38m despite spending the capex to drill wells and explorations for its oil & gas arm. Its precision engineering arm is riding on the manufacturing boom (along with its listed peers), and has generated SGD7.3m of profits as of 9M17. Management also expects new customers and projects to fuel more growth into FY18F. Meanwhile, its oil & gas arm has announced hydrocarbon discovery in its Trembul operating area. GSS would continue to drill more wells, aiming to harvest, produce and sell oil by 1H18 and gas by 4Q18.

USD110m of 1P oil & gas reserves vs market cap of SGD79m. GSS' total estimated 1P reserves totals 18.36 million barrels of oil. We assume an oil price of USD60.00/bbl and apply a 15% risk discount to the oil price, as well as a 50% discount to its 1P (proved reserves) reserves to be more conservative. The total value of the oil reserves, after accounting for the GSS entitlement split of 23.5%, would still be worth about USD110m, or rather SGD0.29 per share, much higher than its current share price of SGD0.16. Investors are thus actually getting the oil & gas production business and its oil and gas reserves for free, while at the same time buying the manufacturing business at valuations lower than that of listed peers.

All in, the stock is trades at an effective ex-cash 2018F P/E of 9.4x, which is much lower than the peer average of 12.6x.

Looking to monetise a portion of their old field. GSS management plans to look into monetising a portion of their old field through either selling a stake in the oil field or by selling part of the oil field away. This would enable it to substantiate the value of the asset immediately and also for it to recognise a sizeable one-off gain and boost its cash pile significantly. This could then be used to further expand the business or reward shareholders with an attractive one-off dividend.

Figure 1: Oil & gas assets valuation

Oil Price (USD)	60
Discount to oil price	15%
1P Recoverable Reserves (MMBO)	18.36
Discount rate for 1P Reserves	50%
Total Value of 1P Reserves	468.18
GSS Entitlement split	23.50%
GSS Entitlement (USDm)	110.0223
No of Shares	496.16
USD/SGD	1.31
Value per share (SGD)	0.29

Source: RHB

Cost recovery model, which would boost cash flow and production capacity. This means that PT Sarana GSS Trembul (SGT, which is GSS' subsidiary) would be able to recover all its approved operating costs (opex and capex) from the petroleum produced. On top of that, PT SGT is entitled to 23.5% of the petroleum and 31.4% of the natural gas produced in the area after cost recovery. It would be beneficial for GSS to drill as many wells as it can, to increase total production output per day. This is because these costs would be recoverable from up to 80% of the sales revenue of the oil produced, and GSS would be able to produce and generate more income from oil at a much faster pace. As a result, we think the company would likely aim to drill 2-3 wells a year and capitalise on this model to its benefit.

Figure 2: Recoverable Cost Schedule oil

	FY16	FY17	FY18F	FY19F	FY20F	FY21F	FY22F
Opening Balance	0.00	-0.83	-11.69	-14.24	-14.78	-13.42	-10.00
Capex	-0.83	-9.01	-4.00	-4.00	-4.00	-4.00	-4.00
Other receivables & deposit	0.00	-1.85	-0.66	-1.57	-2.44	-3.37	-3.80
Cost recovered	0.00	0.00	2.10	5.03	7.80	10.79	12.16
Ending Balance	-0.83	-11.69	-14.24	-14.78	-13.42	-10.00	-5.64

Source: RHB

Mistakes learned – vital change in operation cooperation agreement. Back in Nov 2016, GSS announced its subsidiary, PT Sarana GSS Trembul (PT SGT), had entered into an operation cooperation agreement with PT Pertamina EP for petroleum production. The key terms to the agreement are listed in the table below:

Figure 3: Key terms

Area	47.6 sq km	Initial Commitment	3 years
Depth	No Limit	Capital Committed	USD7.9m
Location	Bloral Regency in Central Java Province, Indonesia	Min. level of production	No min. level of production required
2P Reserves:	24.3m barrels (up to 800m)	Interest:	Crude 23.5%, natural gas 31.4%
Off-Taker:	PT Pertamina EP	Contract validity	15 years

Source: Company data, RHB

This current operations cooperation (*kerja sama operasi* or KSO) agreement is completely different from the agreement that GSS entered into back in Sep 2014. Under this scheme, GSS is the main party to the contract with Pertamina, to assist the state-owned oil and gas company in the production of petroleum, including oil and gas, in the Trembul Operation Area.

In comparison with the previous arrangement, Cepu Sakti Energy (CSE) (a business unit of GSS) was a service provider to the village cooperative (KUD), which was the contracted party in the agreement with Pertamina. Pertamina has terminated its contract with the KUD. In turn, Cepu Sakti's contract with the KUD for production services was cancelled. This resulted in GSS writing down SGD33m on its investment in CSE. With GSS directly supplying to Pertamina and payment from Pertamina directly, the risk of default or non-payment would be lowered significantly, placing GSS in a much better position as compared to before.

Revenue from oil & gas to be expected in 2Q18 and 4Q18 respectively. On 13 Dec 2017, GSS Energy made a hydrocarbon discovery in its Trembul Operating Area. Z Well SGT-01 discovered eight columns of hydrocarbon bearing sandstone reservoir, with 37 metres of total net payzone. Pertamina has agreed to commence commercialisation of two of the eight zones at a depth of 863-869 metres and 910-915 metres respectively within the lower Ngrayong formation. An estimated 1.5 mmscfd of sweet gas (91% CH₄ with no H₂S and a negligible amount of CO₂) plateau production can be expected for 14 years. Management has stated that it expects production of gas to come in 4Q18.

The group would be exploring additional production of oil by commencing workover programmes in some selected potential wells previously drilled by Nederlandsche Koloniale Petroleum Maatschappij (known as Stanvac). From 1935 to 1942 before these oil fields were abandoned, the wells delivered up to 640 bopd.

The data obtained from Well SGT-01 has opened up uncovered perspective for Well P1, an exploration well previously drilled by Pertamina in 2005, in which three potential zones were left unrecognised at that time. This was due to inconclusive low resistivity wireline readings, which are now supported by discoveries of hydrocarbon at SGT-01. GSS intends to re-enter Well P1 with a dedicated workover program to maximise the commercialisation of the potential oil zones.

We expect the group to start producing at least 200 bopd by 1H18, which would generate up to SGD4.38m a year in revenue – in which it could obtain the majority of the revenue due to the cost recovery scheme as agreed with Pertamina. This would add to its cash pile and enable drilling of more wells to further increase production capacity.

Management aims to drill 2-3 wells a year. We conservatively estimate for production to increase to 310 barrels in 2019 and 340 barrels in 2020.

Figure 4: Estimated oil production schedule

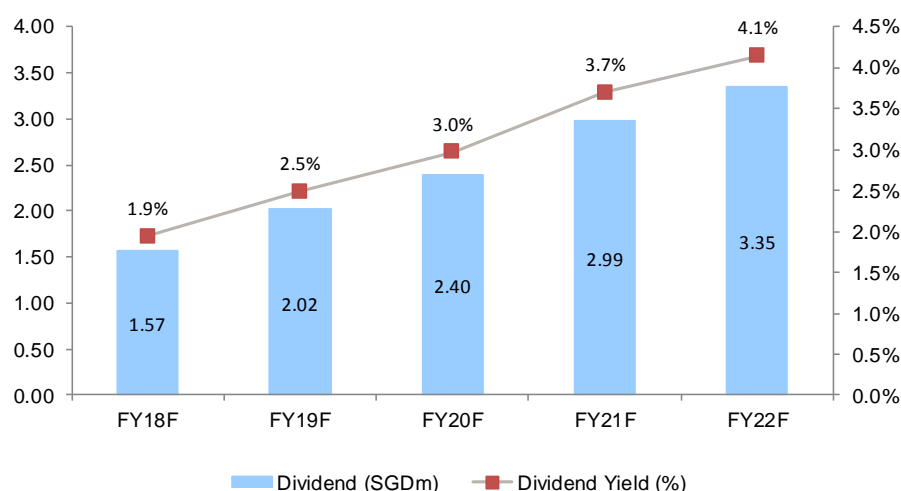
Oil (Target to drill 15 wells)		FY17	FY18F	FY19F	FY20F	FY21F	FY22F
SGT-01*		0	0	0	0	100	100
P1 (Workover well #1)	bopd	0	100	100	100	100	100
P2 (Workover well #2)	bopd	0	0	50	50	50	50
TRB-03	bopd	0	70	70	70	70	70
TRB-06	bopd	0	30	30	30	30	30
SGT-02*	bopd	0	0	30	30	30	30
SGT-03*	bopd	0	0	0	0	0	0
SGT-04*	bopd	0	0	30	30	30	30
SGT-05*	bopd				30	30	30
SGT-06*	bopd					30	30
SGT-07*	bopd						30
SGT-08*	bopd						30
Total barrel of oil per year	mmbbo		0.03	0.08	0.12	0.17	0.19
Price per barrel	USD		60	60	60	60	60
SGDm	USD/SGD = 1.31		2.6	6.3	9.8	13.5	15.2

Note: *estimated assumption of barrels

Source: RHB

Potential upcoming dividend policy to indicate confidence as to incoming oil revenue. The oil & gas business would likely start producing revenue in 2H18 and generating income. Along with the already profitable PE business – as well as a healthy balance sheet with net cash of SGD10.7m – we could expect the company to start distributing dividends as soon as in FY18F. This could result in a potential dividend yield of 2% for 2018F and 2.5% for 2019F. As the group continues to grow both its PE and oil & gas business segments, we believed such dividends would grow correspondingly, eventually reaching a dividend yield of about 3.8% in FY2022F. We believe a dividend policy would be a strong positive statement by management as to the future profitability of the business and also as a reward its shareholders.

Figure 5: Estimated dividends and yield



Source: RHB

Strong insider buying from management. Management has been buying shares from the open market in separate occasions throughout 2017. The last two purchases were done at SGD0.171 and SGD0.175 per share, which is higher than the current market price. We believe this shows a strong vote of confidence by management with regards to the fundamentals and outlook for GSS.

Figure 6: Insider share purchases

Insider Share Purchases				
Date	Name of Substantial Shareholder	Number of shares	Price per share (SGD)	Total Amount (SGD)
12/1/2017	Roots Capital Asia Limited	2,000,000	0.085	170,000
12/1/2017	Sundan Pacific Limited	19,000,000	0.079	1,501,000
17/1/2017	Roots Capital Asia Limited	2,000,000	0.084	168,000
25/1/2017	Roots Capital Asia Limited	2,000,000	0.086	172,000
1/3/2017	Roots Capital Asia Limited	2,000,000	0.086	172,000
10/3/2017	Roots Capital Asia Limited	4,000,000	0.135	540,000
21/3/2017	Roots Capital Asia Limited	2,000,000	0.171	342,000
12/4/2017	Roots Capital Asia Limited	1,400,000	0.175	245,000
Total		35,400,000	0.103	3,657,000

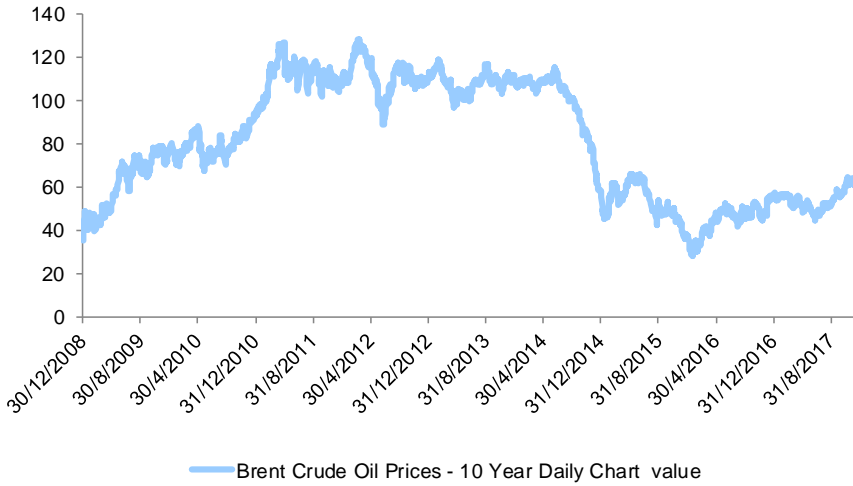
Source: RHB

Proxy to higher oil price – higher profits and better margins. After the crash in oil prices in 2014, oil prices have rebounded strongly from their lows and now comfortably sit around the USD60.00 per barrel region.

The crude oil markets are also fundamentally stronger as a result of the production cut. OPEC and other crude-producing nations led by Russia agreed to extend the production cut to the end of 2018. Under the current deal, OPEC members are cutting supply by 1.2 mbpd and participating non-OPEC producing countries are cutting supply by 0.6 mbpd. This deal would keep 1.8 mbpd off the market until the end of 2018. Another factor to look out for is the Saudi Aramco IPO. The oil giant would want to see a high oil price as this would enable the company to have a higher valuation upon listing – hence we think that the OPEC cuts in production would likely continue. This would then add further upward pressure on the oil price.

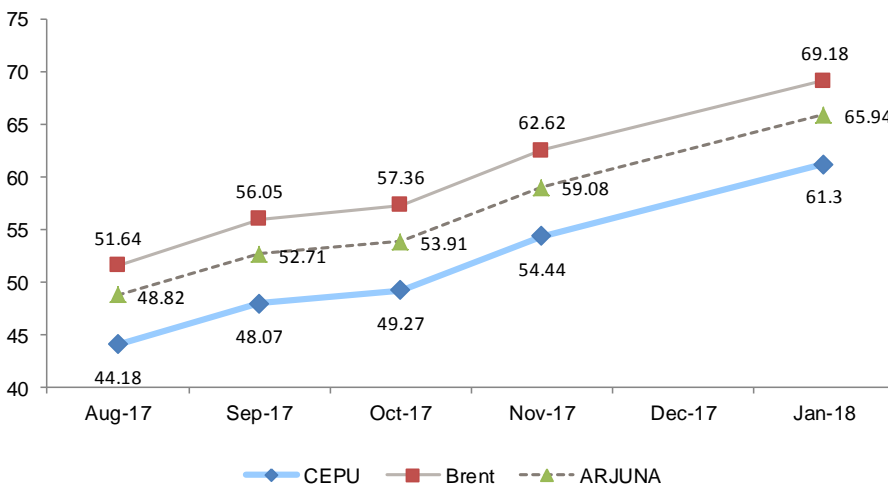
GSS would be a key beneficiary of a rise in oil price, as its lifting cost is only estimated to be around USD12-15.00 per barrel. It would sell to Pertamina at the prevailing oil price based on the Indonesia Crude Oil Price (ICP). This also means that a higher ICP price would translate to better margins and profits for GSS. According to management, the sale price of oil follows closely to the Cepu ICP. The ICP is determined by Ditjen Migas (Directorate General of Oil and Gas) and Pertamina would pay the company using ICP published by the Ministry within the first week of the subsequent month upon the deposition of oil into the Pertamina depot. Cepu ICP is calculated on the basis of the ICP formula, in that it tracks one of the eight internationally traded Indonesia crudes, Arjuna. Cepu is priced at a discount of USD4.64 per bbl of Arjuna, and Arjuna is priced at a discount to Brent Crude.

Figure 7: Brent Crude oil prices – 10-year daily chart value



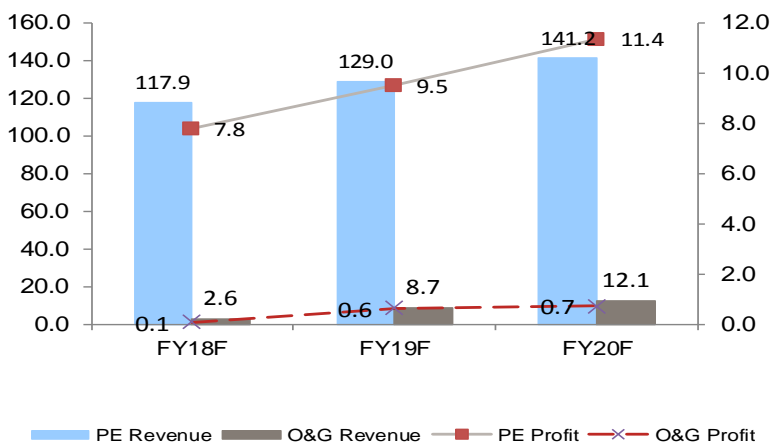
Source: [Macrotrends](#), RHB

Figure 8: Historical crude oil prices



Source: [Directorate General of Oil and Gas, Indonesia \(Ditjen Migas\)](#), RHB

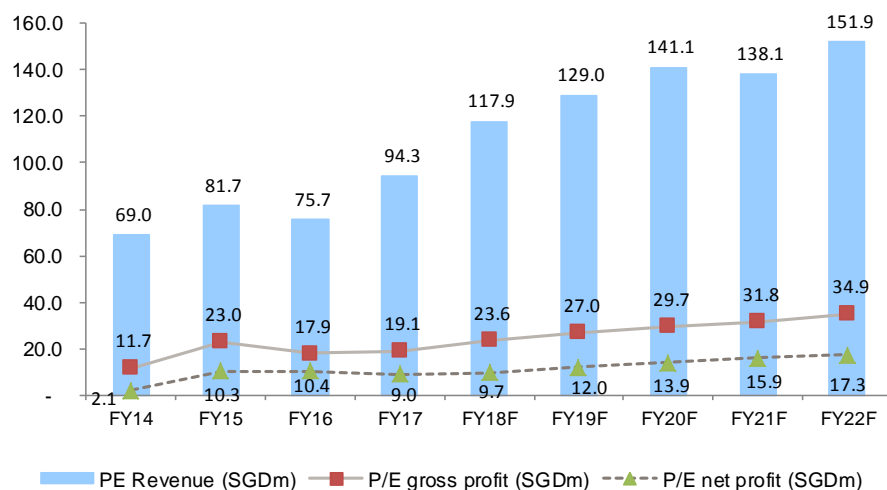
Figure 9: Revenue/profit by segment



Source: RHB

Precision engineering (PE) segment to maintain strong growth from new projects.

The precision engineering arm is riding on the manufacturing boom as experienced across many listed peers, with revenue surging from SGD61.12m in FY14 to SGD94.3m for FY17. In 2018, management also expects new customers and more projects in the automotive and consumer space to fuel more growth. There have been ongoing trials with a new customer in the consumer space, full scale production expected to start by 1H18. We expect this customer to contribute to 15% top-line growth for the PE segment in FY18. However, we understand that the margins for this project would be lower, but still beneficial and profitable for GSS. All in all, we expect the outlook to still be positive for its PE arm and for it to continue contributing positively to GSS' cash board.

Figure 10: PE revenue, gross and net profits (SGDm)

Note: Excluding corporate expenses and assuming no forex fluctuation

Source: RHB

Valuation

Initiating coverage with BUY and TP of SGD0.25

SOP-based TP of SGD0.25. We initiate coverage on GSS Energy Group with an SOP-based TP of SGD0.25 which is further backed by our DCF valuation. Our SOP valuation is based on:

- i. 11x FY2018F net profit;
- ii. Conservative estimate of 1P reserves with 45% discount;
- iii. Extra discount of 50% for country/small cap risk.

Figure 11: SOP valuation

		P/E Multiple (x)	Value (SGDm)
Estimated P/E NPAT for FY18 (SGDm)	7	11	77
Conservative estimated value of P1 reserves			144.1
Discount for country/small cap risk			45%
Total Value of GSS energy (SGDm)			121.6
No of Shares			496.2
Target Value per share (SGD)			0.25

Source: RHB

Sensitivity analysis

Figure 12: Sensitivity analysis

Oil Price per barrel (USD)	40	50	60
Estimated P/E NPAT for FY18 (SGDm)	77	77	77
Conservative estimated value of P1 reserves	96.1	120.1	144.1
Discount for country/small cap risk	45%	45%	45%
Total Value of GSS energy (SGDm)	95.2	108.4	121.6
No of Shares	497.2	498.2	496.2
Target Value per share (SGD)	0.19	0.22	0.25

Source: RHB

Corroborative DCF TP of SGD0.25, assuming:

- i. WACC of 7.5%;
- ii. 0% terminal growth rate.

Figure 13: DCF valuation

	Total (SGDm)	FY18F	FY19F	FY20F	FY21F	FY22F	Terminal Value
EBIT		10.3	13.3	15.9	18.5	20.3	
EBIT(1-T)		7.7	10.0	11.9	13.8	15.2	
Less: Capex		(5.7)	(5.7)	(5.7)	(5.7)	(5.7)	
Add: Depreciation & Amortisation		2.5	2.5	2.5	2.5	2.5	
Less: Change in Non-cash WC		(7.1)	(2.8)	(2.2)	(0.5)	(2.2)	
FCFF		(2.6)	4.0	6.5	10.1	9.8	
Present Value of FCFF		(2.4)	3.5	5.3	7.6	6.8	91.3
Total FCFF	112.0						
Add: Cash (with IPO proceeds)	13.8						
Less: Value of Debt	(2.9)						
Less: Minority Interest	-						
Target Equity Value	122.89						
No. of shares (basic)	496.2						
Intrinsic Share Price (SGD)	0.25						

Source: RHB

Figure 14: Underlying assumption for WACC

Expected market return	9.04
Risk free	2.07
Country risk	30.0
Beta	0.08
	4.95
Small Cap penalty	2.55
WACC (Estimated)	7.50

Source: RHB

Minimal valuation was given to the oil & gas division. GSS' market capitalisation now prices the PE division at around 11x FY18F P/E (excluding net cash of SGD10.7m as at 3Q17). This essentially means that market has yet to give any valuation to its oil & gas division.

An alternate valuation approach would be based on the asset transaction. The market value of the assets can be derived by discounting 10-15% off the market price of oil and multiplied by its 1P reserves, then applying a further 50% discount to the estimated market value of reserves. According to the Qualified Person's Report (QPR), there are the equivalent of 18.36m barrels (low case) in the shallow and deeper reservoirs of the Trembul Operation Area.

We are cautious of the high volatility in the oil & gas sector. Hence, we are very prudent with the assumptions used in our valuation. We assumed a 15% discount to USD60.00 per barrel, multiplying it by the low case (1P) of 18.36 million barrels, and giving the valuation a further discount of 50%, this would give us a market value of USD468.18m.

Bearing in mind of the split between PT SGT and Pertamina, we derived GSS entitlement to the asset value of approximately USD110.02m (SGD144.13m).

In comparison, the market capitalisation currently is about SGD79m, reflecting only the precision engineering business segment.

Figure 15: Oil & gas assets valuation

Oil Price (USD)	60
Discount to oil price	15%
1P Recoverable Reserves (mmbbl)	18.36
Discount rate for 1P Reserves	50%
Total Value of 1P Reserves	468.18
GSS Entitlement split	23.50%
GSS Entitlement (USDm)	110.0223
No of Shares	496.16
USD/SGD	1.31
Value per share (SGD)	0.29

Source: RHB

Figures 18 and Figure 19 show the estimated 1P and 2P (proved + probable reserves) reserves of the oil & gas payzones discovered during the drilling of first well (well SGT-01).

Figure 16: SGT-01 well basis estimates (oil)

Oil Price (USD)	60
Discount to oil price	15%
1P Recoverable Reserves (mmbbl)	2.83
2P Recoverable Reserves (mmbbl)	5.68
Discount rate for 1P Reserves	50%
Discount rate for 2P Reserves	80%
Total Value of 1P Reserves (USDm)	72.165
Total Value of 2P Reserves (USDm)	57.936
GSS Entitlement split	23.50%
GSS Entitlement based on 1P with discount (USDm)	16.958775
No of Shares	496.16
USD/SGD	1.31
Value per share (SGD)	0.04

Source: RHB

Figure 17: SGT-01 well basis estimates (gas)

Gas Price (USD)	3.3
Discount to gas price	10%
1P Recoverable Reserves (bcf)	8.5
2P Recoverable Reserves (bcf)	26.3
Discount rate for 1P Reserves	50%
Discount rate for 2P Reserves	80%
Total Value of 1P Reserves (USDm)	12.62
Total Value of 2P Reserves (USDm)	15.62
GSS Entitlement split	31.37%
GSS Entitlement based on 1P with discount (USDm)	3.96
No of Shares	496.16
USD/SGD	1.31
Value per share (SGD)	0.010

Source: RHB

Peer comparison

By peer comparison, GSS is trading only at a 2018F P/E of 11x, which is still lower compared to the peer average of 12.5x as shown below. In addition, the oil & gas reserves appear also not to have been taken into consideration at all.

Figure 18: PE peers

Company	Last Price	Mkt Cap (\$m)	P/E Ratio	P/B Ratio	EV/EBITDA	Revenue	Gross Margin	Net Margin
GSS ENERGY LTD	0.166	82.36	13.61	1.94	8.72	75.71	23.65	17.78
AEM HOLDINGS LTD	4.95	324.06	14.23	6.42	4.79	70.12	-	6.64
AVI-TECH ELECTRONICS LTD	0.5	85.52	11.76	1.69	6.83	39.98	29.52	17.59
INNOTEK LTD	0.425	95.25	8.03	0.74	0.84	214.74	19.08	5.39
ELLIPSIZ LTD	0.78	130.35	16.29	0.99	6.27	116.67	36.04	7.29
VALUETRONICS HOLDINGS LTD	0.955	409.75	12.95	2.49	7.46	2274.91	15.02	6.77
SUNNINGDALE TECH LTD	1.98	374.63	8.26	1.05	4.25	684.46	13.78	5.71
FU YU CORP LTD	0.197	148.34	19.31	0.91	3.71	198.56	16.33	5.31
SPINDEX INDUSTRIES LTD	1.13	130.36	9.29	1.34	3.00	141.78	22.70	9.90
Average			12.64	1.95	5.10		19.57	9.15
Average (without GSS)			12.52	1.95	4.65		19.06	8.07

Note: Data as at 23 Feb, 2018

Source: RHB

We are not putting any comparison between GSS and peers in the oil & gas sector as:

- i. The oil & gas division has not yet commenced production;
- ii. We believe the market has given zero valuation to its oil & gas business segment.

However, we have compiled a list of the players in the sector for reference:

Figure 19: Oil & gas peers

Company	Mkt Cap (in \$m)	Producti on Vol (bopd)	Reserve s value (US\$m)	Discount to Mkt Cap	EV/EBIT DA (T12M)	Net Debt / (Cash)	Revenue	Gross Profit	EBITDA	Net Profit	Gross Margin	EBITA Margin	Profit Margin
GSS ENERGY LTD	82.36	0	1102	-93%	8.72	-18.759	75.71	17.90	14.38	13.46	23.65	18.99	17.78
RH PETROGAS LTD	71.22	4380	606	-88%	n.a.	24.55	51.97	1.01	4.14	-8.55	1.94	n.a.	-16.46
KRISENERGY LTD	166.82	16136	895	-81%	n.a.	371.17	142.83	-62.06	-96.54	-235.31	-43.45	-55.54	-164.74
INTERRA RESOURCES LTD	35.45	1383.5	283	-87%	127.59	-8.13	15.17	5.56	-0.32	-8.06	36.66	1.36	-53.13
CWX GLOBAL LTD	35.10	588.75	219	-84%	1.63	20.87	8.96	4.67	19.27	12.88	52.10	214.60	143.79
MIRACH ENERGY LTD	14.28	0			n.a.	-4.70	0.60	-0.77	-15.21	-14.25	-129.53	-4747.55	-2390.44
RAMBA ENERGY LTD*	46.56	350	69	-32%	n.a.	-5.77	57.03	25.28	-28.10	-25.31	44.33	-43.61	-44.39

* Ramba's revenues are mainly from the logistics segment

Note: Data as at 23 Feb, 2018

Source: Bloomberg, RHB

Key Risks

Foreign currency risk. The group is exposed to foreign currency risk on transactions and balances. The PE business segment bills its clients in USD and SGD; while the oil & gas business segment is billing in USD. It holds the majority of its assets in USD terms, and any weakening of USD against SGD would result in a foreign exchange loss.

Precision Engineering division

Failure to innovate and keep up with technology advancement. Innovation has been identified as one of the main drivers of growth, and technological advancement is one of the key factors to remain competitive in the industry, going forward. As we enter industry 4.0, manufacturing companies have to innovate and invest in the development of advanced manufacturing technologies to produce higher-value products and services to stay relevant and increase their competitiveness. If GSS is not able to adapt to change, it may lose its competitive edge and long-standing partnerships with its clients.

Vulnerable to manufacturing slowdown. Currently, GSS' profitability is entirely dependent on the PE business, and the manufacturing sector is sensitive to business cycles and economic conditions. Hence, its business is exposed to economic swings, which may affect its financial position.

Growing cost concern in China. Labour costs in China have risen at a rapid rate in the 2000s. Manufacturing labour compensation rose by an average of 11.9% annually from 2003-2015. GSS generates nearly 15% of its revenue in China and has manufacturing facilities in Changzhou, a city in Jiangsu province of China. The wages in Jiangsu city are higher than the average wage within the manufacturing sector. With the rapid increase in cost, we would expect GSS margins to narrow.

Oil & Gas division

Oil & gas sale prices risk. Earnings for companies operating in the oil & gas industry are heavily impacted by falling oil prices. Numerous factors cause oil prices to fluctuate. In the near term, we should keep an eye on factors such as geopolitical risks, US shale production, and the Saudi Aramco listing. As for geopolitical risks, these include – but not limited to – tension in the Middle East, US and North Korea, as well as in Iran. Any downward pressure on oil prices would have a negative impact on oil & gas companies' profitability. The terms of GSS subsidiary PT SGT's sales agreement with Pertamina state that Pertamina will purchase from PT SGT at market price, using the ICP index. The ICP index price is about 8-10% away from the price of Brent crude.

Operational risks. Operational challenges with extraction, cost containment issues and ensuring safe conditions through the drilling process represent major risks throughout the whole production process. Any of the above would not only affect the group's reputation and profitability, but also future contracts with Pertamina.

Exposure to government regulations. GSS' oil & gas business is highly exposed to the rules and regulations set by the Government of Indonesia, due to its operation cooperation agreement with Pertamina subsidiary PT Pertamina EP for the production of petroleum, including oil and gas, in the Trembul Operation Area. For example, an abrupt change in policy, such as in tax rates, could impact GSS' profitability.

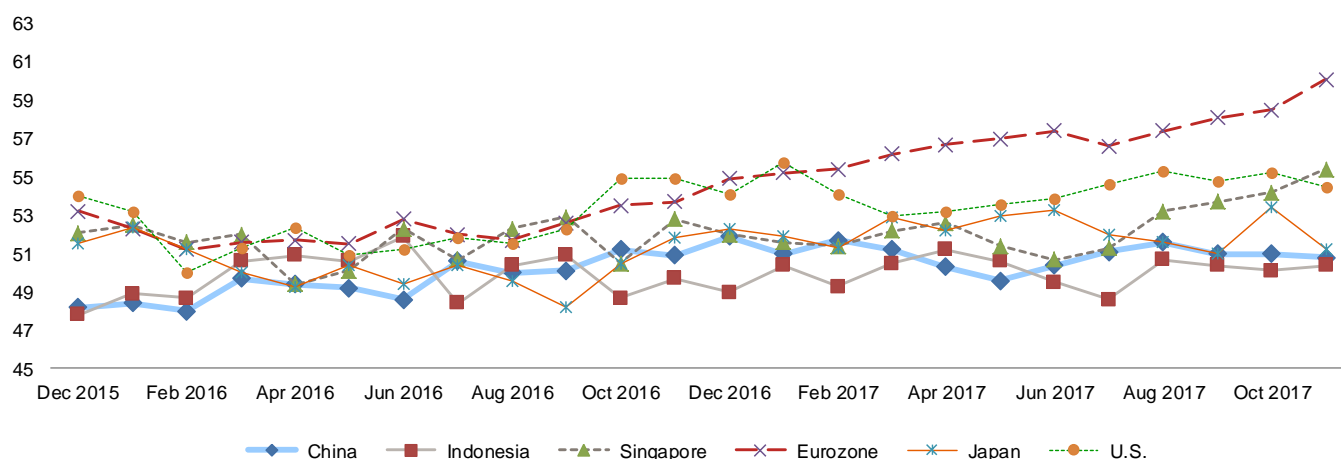
Industry Outlook

Precision engineering

The Purchasing Managers' Index (PMI) of its client base charts is on an improving trend. The PMI is an indicator of the economic health of the manufacturing sector. Based on Markit and Haver Analytics data, the PMIs of the advanced economies have stayed consistently above 50 (from Feb 2016 to currently).

With reference to data provided by Markit, the PMIs for Japan, Europe and US – where GSS' client base (electronics manufacturers) is located – reflect positive economic activity since the start of 2017. GSS' China and Singapore have also demonstrated an expanding manufacturing sector.

Figure 20: Markit Manufacturing PMIs



Source: Bloomberg

The group's PE business serves mainly electronic giants in Japan, Europe, and the US. Based on forecasts provided by Trading Economics in Mar 2018, the manufacturing sector looks to remain healthy in the near term, with PMI forecast in these regions staying above 50 throughout the quarters to 4Q18.

Demand for electronic goods is growing. According to the facts and figures released by the German Electrical and Electronic Manufacturers' Association (ZVEI) in Jul 2017, the global electrical and electronics market reached EUR4tn in 2015, with expected growth of 4% annually in 2017 and 2018.

With the rise of digitalisation – and especially the skyrocketing interest in cryptocurrencies – more electronic products are needed to fulfil the need in this area. As technology advances, newer and more sophisticated products are brought to the market to meet consumer appetites. Hence, we expect the demand for electronic goods to continue to grow at a very fast pace.

Improvements expected for Indonesia's manufacturing industry. The manufacturing industry used to be a significant growth engine for the country's economy, once contributing 30% of Indonesia's GDP (prior to the Asian Financial Crisis). It has slipped to around 18%, on the back of de-industrialisation and lack of infrastructure development, which makes Indonesia less appealing compared to other developing countries. In 2018, the Indonesian Government is expecting an improvement to the manufacturing industry against the backdrop of the following growing sectors: food & beverage, chemicals, pharmaceuticals & traditional medicines, and metal goods, electronics & electrical equipment. In an effort to boost the industry, the Government would also be providing tax incentives.

China's manufacturing industry is expected to rise. Real GDP is likely to achieve 6.8% YoY growth in 2017 and is forecast to grow at 6.5% and 6.2% in 2018 and 2019 respectively. Industrial output is also expected to rise about 6.5% in 2017. This would be the first gain in the growth rate since 2010.

Figure 21: China – economic forecasts

Indicator	2010	2011	2012	2013	2014	2015	2016	2017F	2018F	2019F
Real GDP (YoY%)	10.6	9.5	7.9	7.8	7.3	6.9	6.7	6.8	6.5	6.2
Industrial Production (YoY%)	14.5	13.8	9.9	9.7	8.2	6	6.2	6.5	6	5.5

Source: RHB

Industry Transformation Programme. Closer to home, the Singapore Government had announced the SGD4.5m Industry Transformation Programme during the 2016 Budget. Following this announcement, the Precision Engineering Industry Transformation Map led by the Singapore Economic Development Board (EDB) was introduced to strengthen the PE industry within the manufacturing sector.

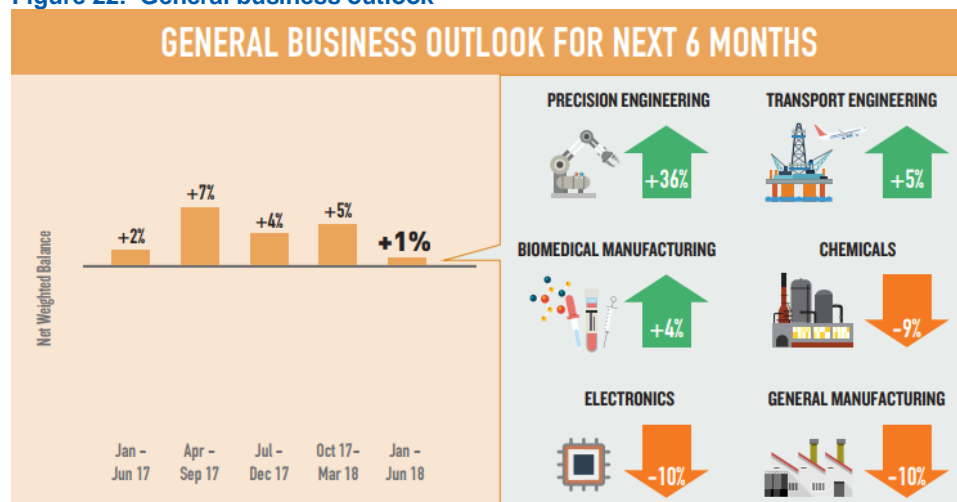
A key strategy layout in the roadmap is to shift the PE industry into new growth segments by transforming companies through digital manufacturing. This programme helps companies to shift from traditional manufacturing into higher value-added activities. Under the Research, Innovation and Enterprise (RIE) 2020 plan, the Government aims to grow output in this sector from SGD32bn today to SGD42bn in 2020.

According to the Dec 2017 monthly manufacturing performance report provided by the EDB, Singapore manufacturing output rose 10.1% in 2017 over 2016. Output for the PE cluster increased 17.8% in 2017 compared to 2016.

For Dec 2017 manufacturing data, the precision modules & components segment posted robust growth of 39%, on the back of higher production in optical products and metal precision components. The machinery & systems segment grew 7.5% with higher export demand for semiconductor equipment.

Overall, Singapore has seen a steady growth in its economy, with GDP growth of 3.5% YoY – more than double that initially forecast by the Government. Based on the survey done by the EDB in the manufacturing sector, 75% of the participating firms expect the business situation for the next six months (Jan to Jun 2018) to remain similar to a quarter earlier, with 13% of them anticipating business conditions to improve.

Figure 22: General business outlook

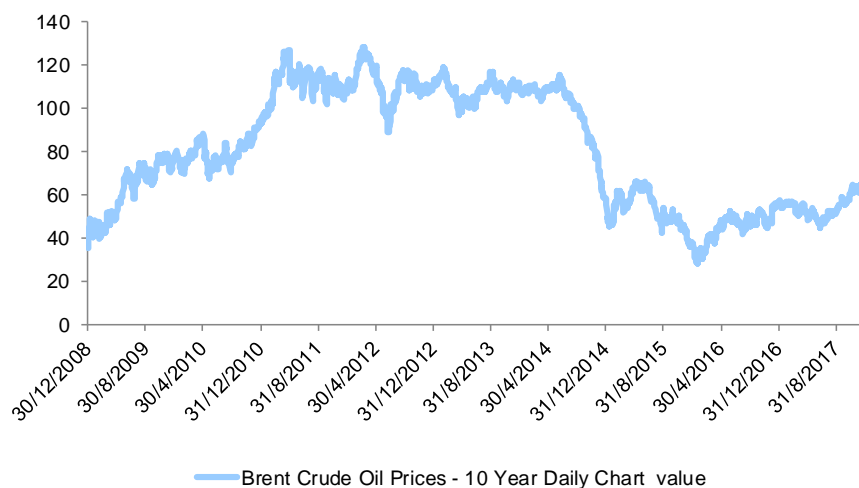


Source: The [Singapore Economic Development Board](#) (EDB)

Oil & gas

A rebound in oil price. The crude oil markets are fundamentally stronger as a result of the production cut. To recap, OPEC and other crude-producing nations led by Russia agreed to extend the production cut to the end of 2018. Under the current deal, OPEC members are cutting supply by 1.2 mbpd and participating non-OPEC producing countries are cutting supply by 0.6 mbpd. This deal would keep 1.8 mbpd off the market until end-2018. However, we believe that if no proper controls are in place beyond 2018, an oversupply situation may arise again.

Figure 23: Brent crude oil prices – 10-year daily chart value



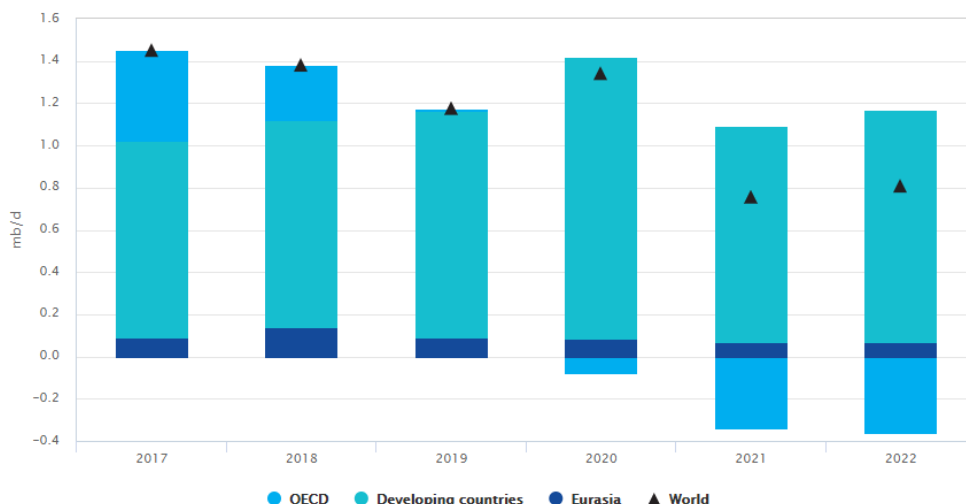
Source: [Macrotrends](#), RHB

Near-term factors that may affect the movement of oil prices. We have seen positive momentum in the oil price since 2016. If the upward trend continues (>USD70.00/bbl), higher cost producers may re-enter the market as it would then become profitable for them to produce at oil price level. Another factor to look out for is the Saudi Aramco IPO. The oil giant would want to see a high oil price, as this would enable the company to have a higher valuation upon listing. Besides the above, geopolitics could also play a significant role in the oil price volatility.

Demand for oil to increase in the medium to long term, though demand growth to decline. Based on 2017 World Oil Outlook figures provided by OPEC, the medium term (period 2016-2022) outlook for oil demand shows an increase of 6.9 mbpd, rising from 95.4 mbpd to 102.3 mbpd. This corresponds to a healthy average annual increase of almost 1.2 mbpd, with strong demand from the developing countries.

Figure 24: Global oil demand growth in the medium term in the reference case

Figure 3.1 - Global oil demand growth in the medium-term in the Reference Case

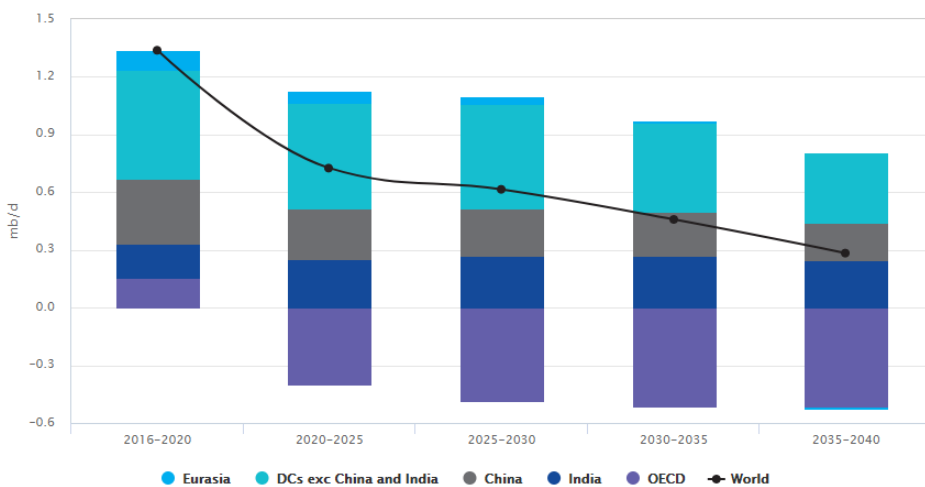


Source: [World Oil Outlook](#)

Long-term global oil demand is expected to increase by 15.8 mbpd – rising from 95.4 mbpd in 2016 to 111.1 mbpd in 2040. The highest demand comes from the developing countries. The demand for oil the region is expected to increase by almost 24 mbpd. In contrast, the Organisation for Economic Co-operation and Development (OECD) region is anticipated to show a significant demand decline of 8.9 mbpd between 2016 and 2040.

Figure 25: Average annual oil demand growth in the reference case

Figure 3.6 - Average annual oil demand growth in the Reference Case



Source: [World Oil Outlook](#)

Although the demand is expected to increase, global oil demand growth is projected to decelerate steadily, falling from an annual average of around 1.3 mbpd during the 2016-2020 period to only 0.3 mbpd every year between 2035 and 2040.

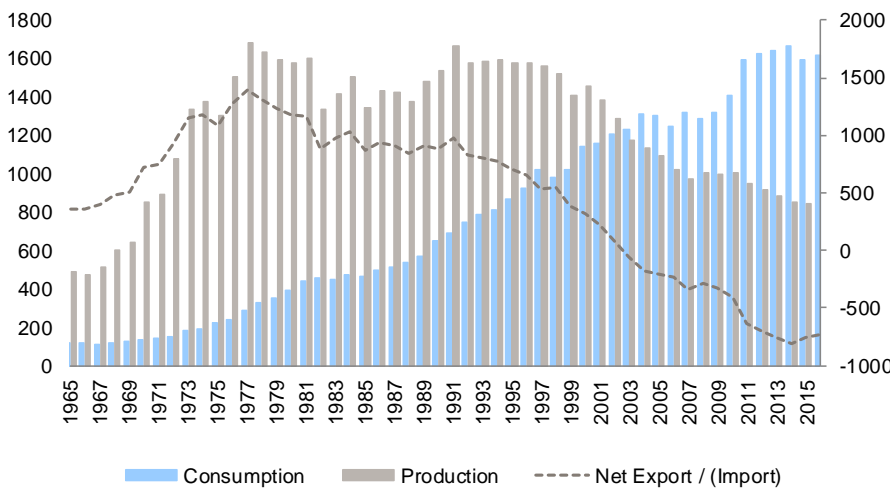
This deceleration is a result of a couple of factors, including:

- i. Slowing GDP growth,
- ii. Assumed increases in oil prices increase;
- iii. A structural shift of economies towards being more service-oriented;
- iv. Efficiency improvements as a result of tightening energy efficiency policies and/or technological improvements;
- v. Oil facing strong competition from other energy sources.

The oil & gas sector in Indonesia. Oil production in Indonesia has declined over the last decade. The GDP contribution by the sector has dropped to 3% from 6% five years ago. Combined with increasing demand, Indonesia became a net importer of oil since 2004, and subsequently terminated its long-term membership in OPEC. In Nov 2016, Indonesia again suspended its membership with the OPEC, less than a year after re-joining, as it could not agree to the production cut established by the organisation. The target is to cut production by about 37 kbpd (about 4.1% of its output).

Due to lack of investment and exploration in the oil & gas sector, coupled with factors such as an expanding economy, a growing population, and an expanding middle class, net oil imports rose 314% from 177.5 kbpd in 2004 to 733.97 kbpd in 2016. In 2016, Indonesia produced 881 kbpd and consumed 1,614.97 kbpd.

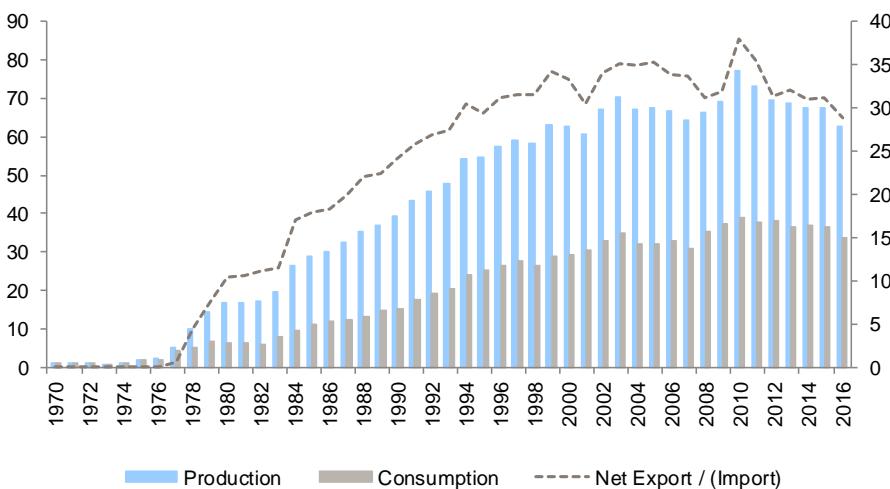
Figure 26: BP Statistical Review – Indonesia crude oil (thousand bpd)



Source: Bloomberg

Natural gas production stood at 62.72m tonnes of oil equivalent (toe) in 2016 and the nation consumed 33.9m toe of natural gas. Despite the fact that Indonesia is currently producing twice as much natural gas as it consumes, around half of the total gas production is being exported, as the nation's gas production is dominated by foreign companies, such as BP, Exxon Mobil, and ConocoPhillips. They account for approximately 87% of Indonesia's natural gas production, with 13% being produced by Pertamina. This results in a shortage of gas for domestic consumption.

Figure 27: BP Statistical Review – Indonesia natural gas (m toe)



Source: Bloomberg

According to Indonesian government data, investment for exploration in Indonesia shrank to USD100m in 2016 (2012: USD1.3bn). The situation may turn around, in our view, as the Government aims to attract USD200bn in investment into the oil & gas industry over the next decade. To reverse the decline in its crude oil production, it plans to offer incentives such as tax-free import of drilling equipment and simpler cost recovery. It is also revising the tax structure, as mentioned during an Apr 2017 *Bloomberg* interview with Indonesia's Energy and Mineral Resources Minister, Mr Ignasius Jonan. In addition, PT Pertamina plans to invest USD5.5bn in 2018, with USD3.32bn devoted to upstream capex.

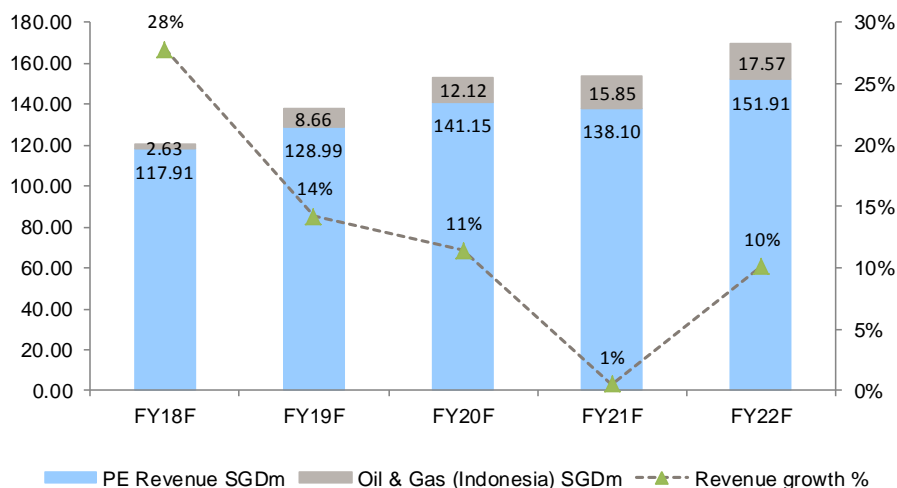
Pertamina's recent financial results show that oil and gas production increased 8% to 692 thousand barrels of oil equivalent per day (kboepd) in 1H17. The Indonesian state oil company aims to increase crude oil production by 17% to 400 kboepd (2017: 342 kboepd) and increase gas output by 52% to 3,069 million cubic ft per day (mmcfd) (2017 estimate: 2,015 mmcfd).

Financial Forecasts

We have forecasted revenue to increase 27.8% to SGD120.54m in FY18F from an estimated revenue of SGD94.33m in FY17. The increase is mainly due to a 3-year consignment manufacturing contract that was signed in 2H17.

We expect gross and net profits to grow steadily over the next few years, on the back of higher sales projected from the PE business segment and the kick-start of oil & gas production. A dip in revenue forecast for FY21 reflects the end of a 3-year consignment manufacturing contract, which would boost the group's revenue from the start of FY18F to FY20F.

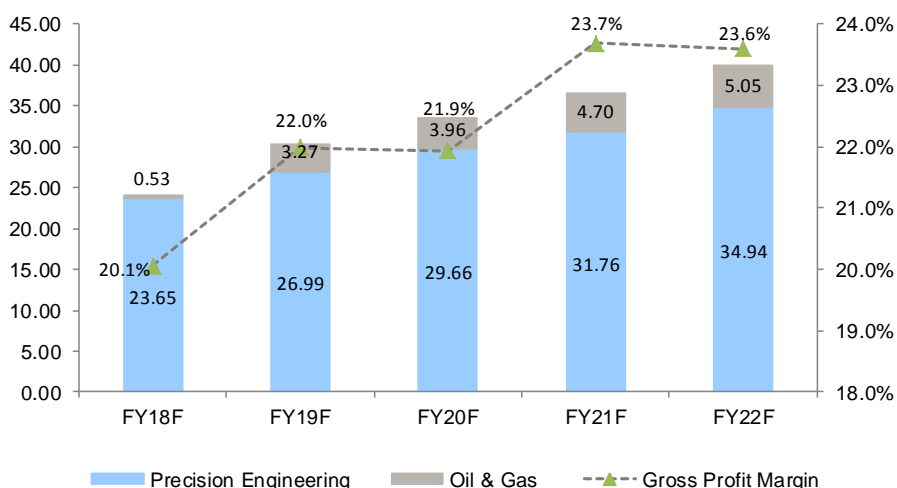
Figure 28: Breakdown of revenue forecast



Source: RHB

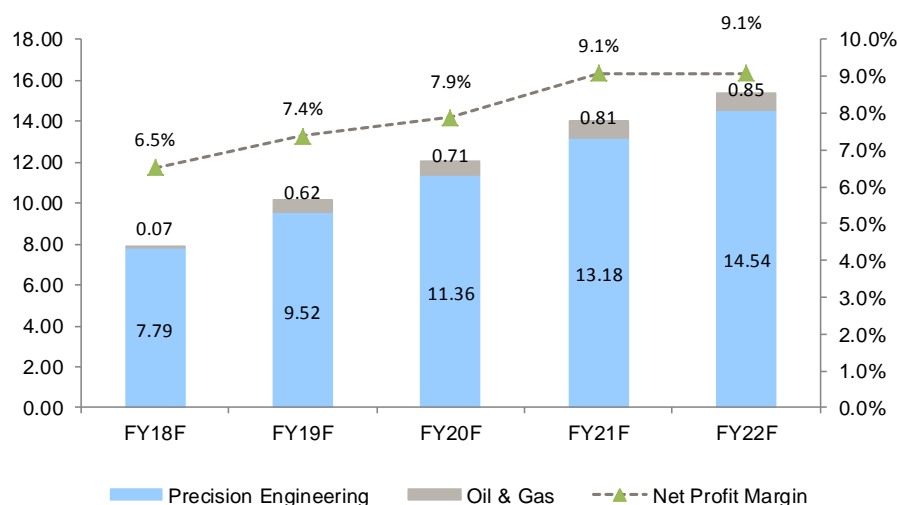
Gross and net profit are estimated to increase steadily over the next few years. We do expect margins to be slightly squeezed, due to the one-off 3-year consignment manufacturing contract that has narrower profit margins. The margins are likely to improve starting from FY21F.

Figure 29: Breakdown of gross profit forecasts



Source: RHB

Figure 30: Breakdown of net profit forecasts



Source: RHB

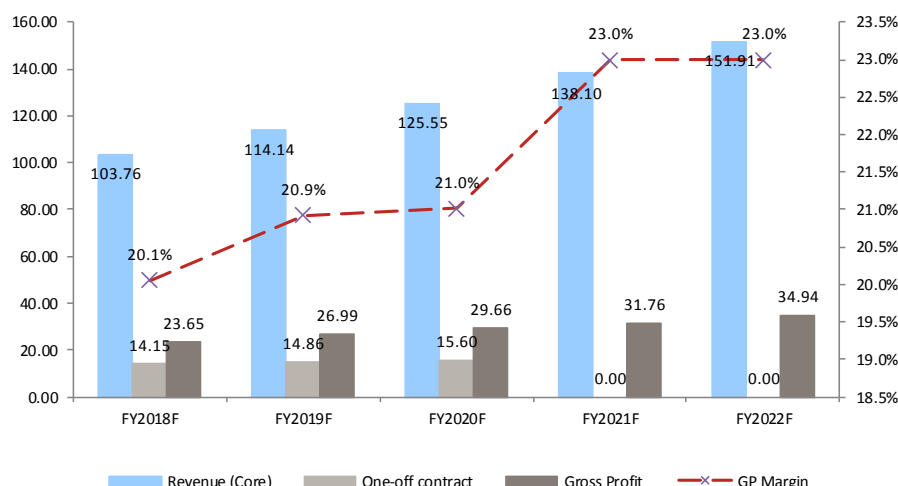
Precision engineering – revenue and profit forecasts

With the positive outlook of the manufacturing sector and management’s confidence to fill up the additional capacity with orders, we believe the PE division is set to grow. We project revenue growth at 10% pa for the company’s core PE business between 2018 and 2022.

This is a prudent assumption, given the fact that revenue has grown more than 20% YoY quarterly in FY17 and the group continues to receive increased orders from customers of its factory in Batam, Indonesia.

Our forecasts also include a one-off consignment manufacturing contract which contributed a 15% increase to its revenue for a period of three years. The project, which started at the end of 2017, will end in 2020. Due to a lower gross margin from the consignment manufacturing project, we have lowered our GPM expectation for the 3-year period before returning to the pre-existing level.

Figure 31: PE business segment financial forecast

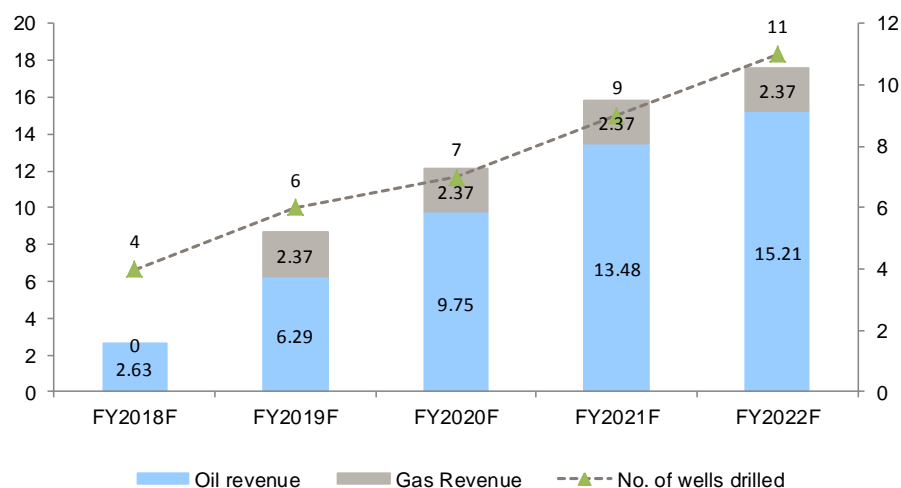


Source: RHB

Oil & gas – revenue and profit forecasts

New revenue stream. The production of oil and gas would add a new revenue stream to GSS' existing business. We expect to see this unit adding SGD3.6m to the group's topline in the first year of production. Based on our key model drivers, we have projected CAGR to be 50% (FY18F-22F), with revenue likely to reach SGD18.35m in 2022.

Figure 32: Oil & gas revenue, number of wells drilled



Source: RHB

Figure 33: Key model drivers for oil & gas business

Capex / well	SGD2m				
Price	Oil USD60/barrel, Gas USD3.30/mmbtu				
Lifting cost	Oil US15/barrel, Gas USD0.50/mmbtu				
Non-recoverable cost	5%				
Year	2018	2019	2020	2021	2022
No. of oil producing wells	3	5	7	9	11
Oil - bopd	200.00	310.00	340.00	470.00	530.00
Gas - mmscfd	1.50	1.50	1.50	1.50	1.50

Oil Production

Revenue	2.63	6.29	9.75	13.48	15.21
COGS	-0.66	-1.57	-2.44	-3.37	-3.80
Cost recovery	-1.45	-3.46	-5.36	-7.42	-8.36
Profit	0.53	1.26	1.95	2.70	3.04
(a) GSS interest (23.5294%)	0.12	0.30	0.46	0.63	0.72

Gas Production

Revenue	-	2.37	2.37	2.37	2.37
COGS	-	-0.36	-0.36	-0.36	-0.36
Profit	0.00	2.01	2.01	2.01	2.01
(b) GSS interest (31.3725%)	0.00	0.63	0.63	0.63	0.63

(c) Non-cost recoverable items	-0.03	-0.10	-0.14	-0.19	-0.21
EBIT (a) + (b) + (c)	0.09	0.83	0.95	1.08	1.14

Source: RHB

Our key assumptions for the GSS Trembul Operation Area are:

- i. Oil sales price fixed at USD60.00 per bbl and gas sales price fixed at USD3.30 per mmbtu, translating into c.SGD78.60 per bbl and c.SGD4.32 per mmbtu respectively at USD/SGD of 1.31;
- ii. We assume no price fluctuation through to 2022F;
- iii. Lifting cost is fixed at USD15.00 per bbl for oil and USD0.50 per mmbtu for gas;
- iv. New oil well drilling cost is estimated to be SGD2m per well;
- v. We assume for three wells (P1, TRB-03 and TRB-06) to produce oil in 2018 and subsequently adding two wells per year;
- vi. To apply 80% of the revenue to the recovery pool;
- vii. Conservatively assume 30 bopd production for each new well (SGT-02 to SGT-08);
- viii. Cost for the production of gas to be borne by the buyer;
- ix. Accounting for PT SGT as a subsidiary of the group with 89% of economic interest.

Cost recovery model. The KSO scheme works on a cost-recovery model. This essentially means that GSS subsidiary PT SGT would be able to recover all its approved operating costs (opex & capex) from the petroleum produced. On top of that, PT SGT is entitled to 23.5% of the petroleum and 31.4% of the natural gas produced in the area after cost recovery.

We have included the cost recovery metric into our financial model. According to management, up to 80% of the sales revenue to Pertamina can be applied to the cost recovery pool. It should also be applied to the current approved expenses before offsetting approved expenses incurred previously. Prepaid costs are accounted under the balance sheet items, "Exploration and evaluation assets" and "Other receivables and deposits". Until previous costs have been fully recovered, the maximum gross profit margin for GSS remains at 20%.

Figure 34: Recoverable Cost Schedule oil

	FY16	FY17	FY18F	FY19F	FY20F	FY21F	FY22F
Opening Balance	0.00	-0.83	-11.69	-14.24	-14.78	-13.42	-10.00
Capex	-0.83	-9.01	-4.00	-4.00	-4.00	-4.00	-4.00
Other receivables & deposit	0.00	-1.85	-0.66	-1.57	-2.44	-3.37	-3.80
Cost recovered	0.00	0.00	2.10	5.03	7.80	10.79	12.16
Ending Balance	-0.83	-11.69	-14.24	-14.78	-13.42	-10.00	-5.64

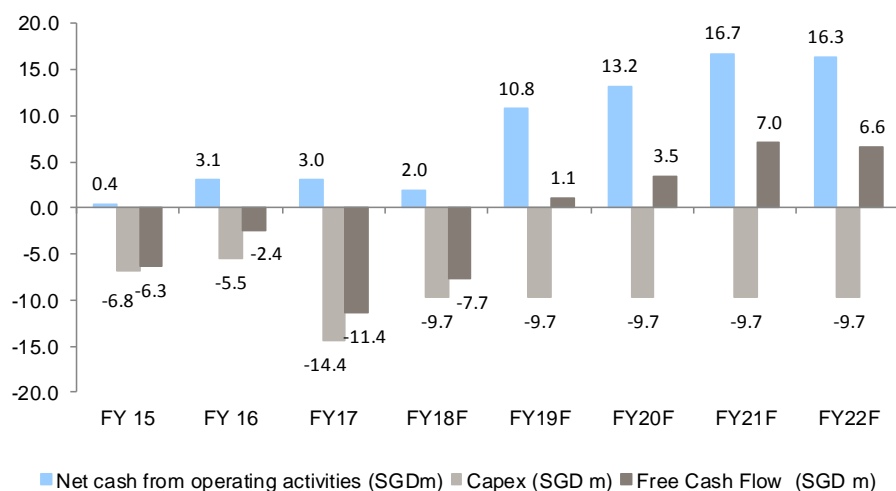
Source: RHB

Cash flow and capex forecast

Precision Engineering business segment. As the group embarks on its expansion plan, we expect to see high capex in the near term. In our cash flow projection, we have budgeted SGD8.5m for its new Batam factory and SGD4m each year for FY18 and FY19 for its current expansion projects (ie the upcoming Batam factory and new China factory). In addition, we have budgeted SGD4m subsequently for further enhancement or expansion plans that may arise.

Oil & Gas business segment. We project the oil & gas segment to incur approximately SGD4m per year for FY18-22 due to the drilling of oil wells. These amounts are recoverable from Pertamina. However, these costs have to be paid by GSS before receiving reimbursement from the state-owned company. We have thus included this in our cash flow forecast. Even with that, we expect free cash flow to turn positive in FY19.

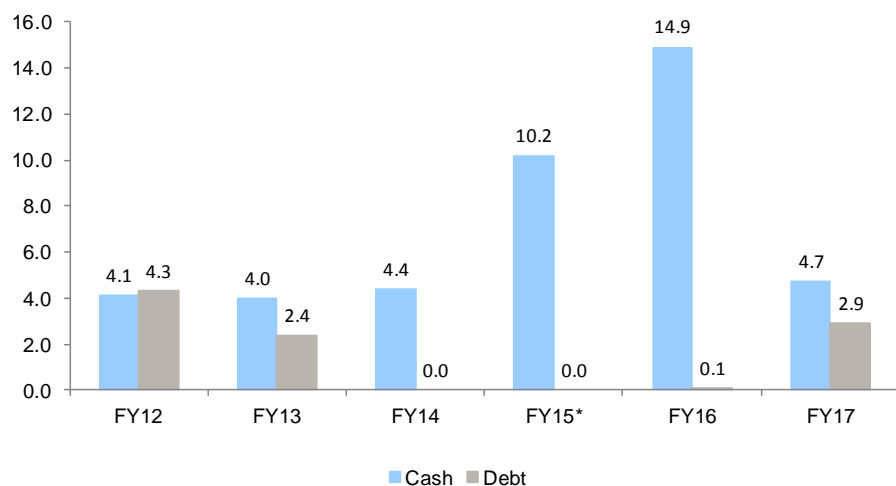
Figure 35: Free cash flow forecast



Source: RHB

Strong cash position with negligible debt. In FY17, the group had utilised SGD9.01m for expenditure on construction of infrastructure facilities for an oil well in the Trembul Operation Area and approximately SGD3.36m on the construction of a factory in Changzhou, China, as well as to expand the production area in Batam. GSS also incurred SGD1.63m to acquire machinery and equipment for its China and Batam operations. Its strong cash position enables it to operate the twin business model efficiently, without having to split its resources.

Figure 36: Cash and debt position



Note: *FY15 starts from 1 Sep 2014 to 31 Dec 2015, a period of 16 months due to a change in FY.

Source: Company data, RHB

Company Background

GSS Energy has two core operating businesses: oil & gas and precision engineering (PE).

Previously known as Giken Sakata (S) Limited (Giken), the company was listed on the Singapore Stock Exchange in Feb 1993. The listing status was transferred to GSS with effect from 12 Feb 2015 and Giken became a wholly-owned operating subsidiary of GSS.

The PE business segment, which started in 1979, now comprises electronic manufacturing services in Indonesia, and precision shafts and machining businesses in both China and Singapore. The group has a diversified customer base, operating in a spectrum of industries such as automobiles, healthcare, banking, vending, electronics, motors, communications, aerospace and others. Its clients include multinational companies such as Panasonic, Philips, Canon and Mitsubishi.

Under the electronic manufacturing services, GSS produces a range of high precision components, such as plastic injection moulding parts and printed circuit board (PCB) assembly. As for precision shafts, the group delivers a full range of precision turned-parts, including motor shafts and customised turned components for various industries. Its machining business unit specialises in producing high precision machining parts of all kinds.

In 2014, GSS ventured into the energy business. Today, GSS is operating a twin business model (PE and oil & gas), which has allowed the company to be more resilient to meet the increasing uncertainty in the business environment and global economy.

Figure 37: Key milestones

Year	Events
2017 January	Establishment of Changzhou Giken Technology Co, Ltd
2016 August	Establishment of Giken Precision Engineering (S) Pte Ltd
2015 February	Completed restructuring by way of a scheme of arrangement. Listing status transferred to GSS Energy Ltd
2014 September	Diversified into oil & gas business
1994 September	Establishment of Changzhou Giken Precision Co, Ltd
1993 February	Changed name to Giken Sakata (S) Ltd / Listed on SESDAQ
1992 July	Relocated headquarters from Japan to Singapore
1991 July	Establishment of PT Giken Precision Indonesia in Batam
1979 December	Incorporation of Giken Sakata (S) Pte Ltd in Singapore

Source: Company data

Oil & Gas Business

Onshore Oil & Gas Exploration (West Jambi), South Sumatra, Indonesia

GSS entered into an investment agreement with Ramba Energy in 2015 to conduct oil & gas exploration in the West Jambi Block. RISC Operations Pte Ltd, an international consultancy firm, has identified the Block to contain approximately 426m barrels of potential oil reserves.

The West Jambi field is operated by Ramba Energy, who holds the direct concession with Pertamina. GSS has made a commitment of USD6m for the drilling of two wells and can convert this amount into equity in the field upon completion. At this stage, drilling has been done on one well and Ramba Energy is in discussion with Pertamina on the drilling of the second well.

Onshore Oil & Gas Production (Trembul), Blora Regency in Central Java Province, Indonesia

GSS subsidiary PT SGT entered into a KSO with PT Pertamina for the joint operation for production of oil & gas for the Trembul Operation Area in Indonesia.

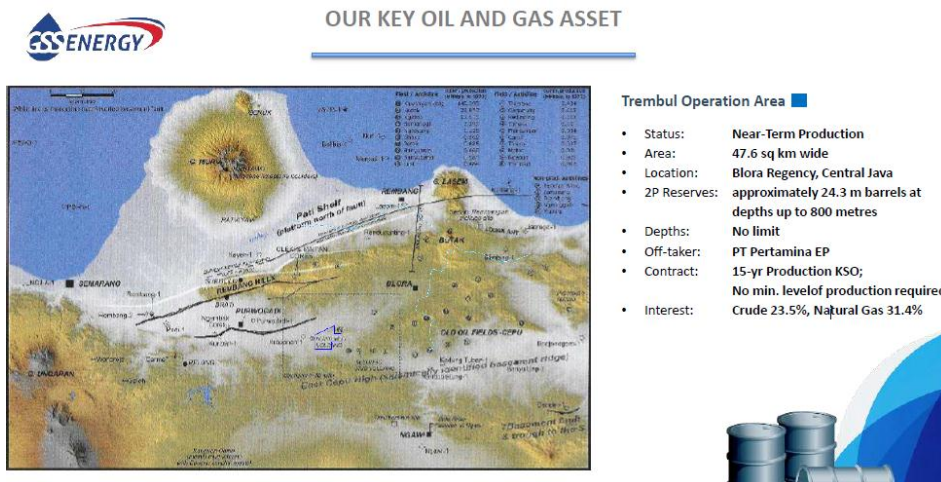
The key terms of the agreement are to assist Pertamina in the production of petroleum (including mineral oil and gas) in the Trembul Operation Area for a period of 15 years with no minimum level of production required. PT SGT has committed a work programme for the initial commitment period of three years, with committed capital of USD7.858m

Under the joint operation, PT SGT will get recovery over all the operating cost from the petroleum produced and sold from the Operation Area, under the regulation governing cost recovery for production sharing contracts in Indonesia. PT SGT shall be entitled to receive 23.5294% of petroleum produced and 31.3725% of the natural gas produced.

Under the arrangement, Pertamina will purchase oil from PT SGT at market price based on the ICP. To recap, ICP is calculated based on a moving average spot price of a basket of eight internationally traded Indonesia crudes. The Brent and ICP have a slight price differential of between 8% and 10%.

According to QPR conducted in 2015, the area is 47.6 sq km wide and is estimated to have approximately 24.3m stock tank barrels of contingent resources at depths up to 800 metres (2P).

Figure 38: Oil & gas assets



Source: Company data

Precision Engineering Business

Under this segment, GSS is involved in:

- i. Electronic manufacturing services;
- ii. Precision shafts;
- iii. Machining.

Electronic manufacturing services in Batam, Indonesia

GSS offers one-stop shop production, with advanced engineering capabilities to produce a wide range of high precision components, such as plastic injection moulding parts, assembly and as well as PCB assembly.

PT Giken Precision Indonesia (GPI)

Capabilities include:

- i. **Plastic Injection Moulding.** 56 units of machine 7T-530T (Sumitomo/Sodick/Nissei), in-house tool design & fabrication (single to multi-cavity tools);
- ii. **Class 100k Cleanroom (ISO 13485 certified).** 24 electric injection machines (maximum is up to 32 machines);
- iii. **Assembly of products** such as endoscopes, ice makers, circuit breakers, game consoles, and device chargers. Its capabilities include incoming and outgoing inspection, reliability testing, in-house production jig preparation, packaging & shipping arrangements;
- iv. PCB assembly with specifications such as:
 - Mount Capacity: Chip 200 million point
Radial 3.6 million point
Axial 18 million point
 - Mount Parts: SOP/PLCC/QFP/BGA/CSP/connectors, etc.
 - Technology: Print pitch 0.30mm
Chip mount 0402
 - Reflow: Air reflow/PB Free
 - Backend Inspection: ICT, AOI, FCT, X Ray machines
 - MI: Spray fluxer and auto wave soldering;
- v. **Other capabilities**, such as low pressure moulding, which is to encapsulate and protect electronics components against moisture, dust, dirt and vibration.

Figure 39: Electronic manufacturing services



Source: Company

Precision shafts business in Ang Mo Kio, Singapore and Changzhou, China

Fully equipped with comprehensive production facilities including Escomatic, CNC auto-lathe, centre-less grinding, in-house heat treatment, CNC machining centre and other value-added special purpose machines to produce a full range of precision turned-parts – including motor shafts and customised turned components for various industries.

Giken Precision Engineering (GPE)

Manufactures precision turning parts and grinding parts, ie OD 0.5-8mm, with length of 0.8-120mm

Capabilities include:

- i. In-house secondary process capability;
- ii. Automation process;
- iii. Sub-micron dimension tolerance;
- iv. Integrated production such as Escomatic;
- v. CNC;
- vi. Quenching;
- vii. Centre-less grinding;
- viii. Knurling & barrel polishing.

Changzhou Giken Precision Co. Ltd (CGP)

Specialises in metals, with OD 1-80mm, and length of 2- 900mm

It has capabilities in:

- i. CNC;
- ii. Machining centre;
- iii. Heat treatment;
- iv. Centre-less grinding, step grinding;
- v. Barrel polishing by in-house integrated process,
- vi. Ferrous metal;
- vii. Free cutting steel;
- viii. Aluminium, brass, chrome molybdenum steel & stain.

Figure 40: Precision shafts business



Source: Company

Machining business in Ang Mo Kio, Singapore, and Changzhou, China

Specialises in producing high precision machining parts of all kinds, making efficient use of CNC auto-lathe, CNC machining centre, high-precision grinding and other precision machines for customers in various industries.

The group has obtained the following certifications: ISO 9001, ISO 13485, ISO 14001 and ISO/TS 16949.

Figure 41: Machining business



Source: Company

Figure 42: Customer base



Source: Company

The revenue from the top three customers of GSS' mechanisms segment (a subdivision of the PE business) represents approximately 61.6% of the group's total revenue.

Experienced board of directors and management team. The group's management consists of an experienced team with many years in the manufacturing and financial industries, in both the public and the private sectors.

Figure 43: Key appointments

Name	Appointment	Background
Mr Kuek Eng Chye, Anthony	Non-Executive Chairman	<p>Mr Kuek Eng Chye, Anthony, is the Non-Executive Chairman of the Company. He was appointed to the Board on 18 Nov 2014, is on the Remuneration Committee and Nominating Committee, and is a member of the Audit Committee.</p> <p>Mr Kuek held several senior positions in his early career with the Singapore public service, followed by a long professional career in a regional development bank. In the latter, he led the bank's engagement with senior public officials and business community in several countries in the region. Upon retirement, he took on several consulting assignments in Indonesia, working closely with ministers and senior officials in various economic ministries.</p>
Mr Sydney Yeung Kin Bond	Executive Director and Group Chief Executive Director	<p>Mr Sydney Yeung Kin Bond is an Executive Director and Group Chief Executive Director of the company. He was appointed to the Board on 31 Oct 2014.</p> <p>Mr Yeung has many years of experience in the financial industry, starting his career in the Institutional Equity Division at Morgan Stanley New York and as the Managing Director of International Trading at Van der Moolen, a US securities specialist firm. Mr Yeung is an active member of the Rotary Club in Singapore.</p>
Mr Suyulianto Badung Tariono	Executive Director	<p>Mr Suyulianto Badung Tariono is an Executive Director of the Company and he is responsible for the corporate and business development of the oil & gas division. He was appointed to the Board on 1 Jul 2015.</p> <p>Mr Tariono has considerable investment experience in extractive industries, with strong exposure to oil & gas and energy infrastructure. He has a strong track record in the highly-regulated financial services environment in Europe and a good understanding of Asian business culture, especially Indonesia.</p>
Mr Ng Say Tiong	Executive Director and Chief Financial Officer cum Company Secretary	<p>Mr Ng Say Tiong is an Executive Director and Group Chief Financial Officer of the company. He was appointed to the Board on 31 Oct 2014.</p> <p>Mr Ng was previously the Vice Chairman of the Marsiling Citizen Consultative Committee and had previously served as the Chairman of the Fuchun Community Club Management Committee. Mr Ng was awarded a Public Service Medal (PBM) by the President of Singapore in the 2012 National Day awards.</p>
Mr Chee Sanford	Independent Director	<p>Mr Chee Sanford is an Independent Director of the company. He was appointed to the Board on 18 Nov 2014. He is also the Chairman of the Audit Committee and a member of the Nominating Committee and Remuneration Committee.</p> <p>Mr Chee was previously the Managing Director at Tiedemann Global Emerging Markets, responsible for equities investment across Asia. Before joining Tiedemann, Mr Chee was an Associate at York Capital Management Asia. Mr Chee had also worked as an investment banker at Lazard, where he specialised in cross-border M&As. Prior to that, he was a consultant at McKinsey and Bain and a portfolio manager at Koeneman Capital Management.</p>
Mr Glenn Fung Kau Lee	Non-Independent Non-Executive Director	<p>Mr Glenn Fung Kau Lee is the Non-Executive Director of the company. He was appointed to the Board on 25 Nov 2016 and is a member of the Audit and Remuneration Committees.</p> <p>Prior to this appointment, Mr Fung was a co-founder and director of Verde Asia Fund, responsible for managing the Asia Long/Short equity fund with emphasis on sustainable investing and corporate social responsibilities. He is also a co-founder of Cinda-Newbridge Investment Management Company Limited and has served as its Managing Director and CEO since May 2015. The company specialises in infrastructure finance across Asia and cross border M&As in partnership with major Asian companies and government-sponsored enterprises.</p>

Source: Company data

Corporate development

GSS has purchased a piece of land from its current landlord to build a 5-hectare factory in Batam, Indonesia. The land and building cost approximately SGD8.5m, and the purchase would be funded by cash through a 5-year instalment plan. It is expected to be completed by the end of 2018. This would add additional capacity for new projects.

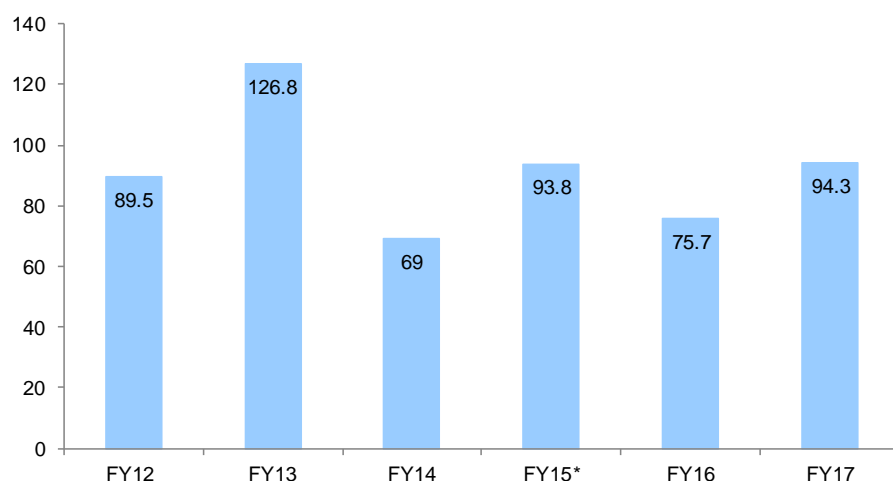
As for its China operations, GSS moved into its newly built factory in Changzhou, China last year (FY17). With the additional capacity, the group plans to boost its factory utilisation rate by replicating its PE business in Indonesia. It plans to add its product offerings – such as plastic injection moulding, to its existing manufacturing activities.

Business Analysis

Revenue from precision engineering

Steady revenue growth. Revenue for both FY16 and the current 9M17 were entirely contributed by the PE business segment. This segment continues to deliver strong results and has proven its resiliency. Benefitting from higher demand, businesses in the manufacturing sector flourished in 2017. With great potential in the emerging markets, coupled with a recovery economy in the US, the majority of the companies in the manufacturing sector are optimistic about growth in the next 6-12 months. GSS' FY17 revenue grew by SGD18.6m (+24.59% YoY) to SGD 94.3m, as compared to FY16 revenue of SGD 75.7m.

Figure 44: Total revenue (SGDm)

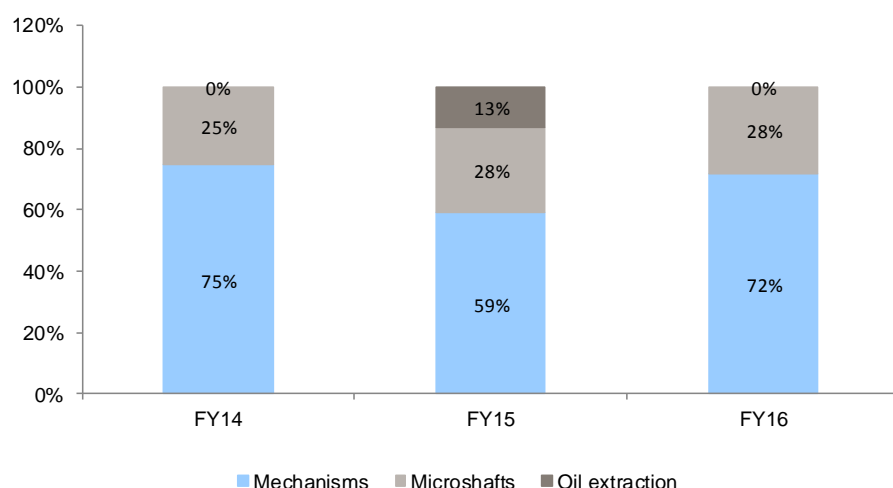


Note: *FY15 started from 1 Sep 2014 to 31 Dec 2015, a period of 16 months, due to a change in FY.

The oil & gas business contributed SGD4.7m of revenue in 1HFY15 and has since halted production following the termination of the cooperation agreement with Koperasi Unit Desa Sumber Pangan on 24 Jul 2015. FY12-14, FY16 and 9M17 revenue was entirely contributed by the PE business.

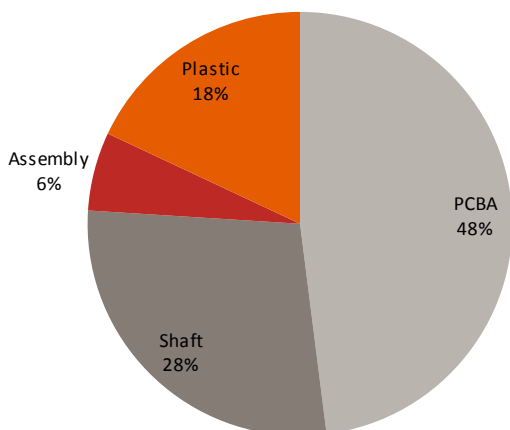
Source: RHB

Figure 45: Revenue breakdown



Source: RHB

Figure 46: FY17 revenue breakdown (estimates)



Source: RHB

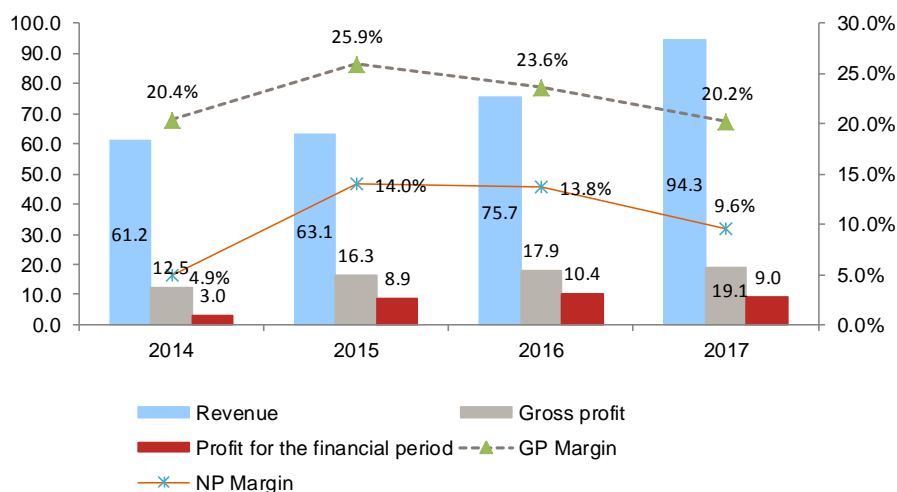
Gross profit, net profit and margins

Gross profit has increased over the years, with higher sales volume, continuing production automation and value engineering effort. GSS recorded gross profits of SGD12.5m, SGD16.3m, SGD17.9m, and SGD19.1m in FY14, 12M15, FY16 and FY17 respectively. It achieved a GPM of 20.2% for FY17 as compared to 23.6% in FY 2016, due to product mix and changes in pricing of certain products.

Earnings were SGD3m, SGD8.9m, SGD10.4m and SGD9m for FY14, 12M15, FY16 and FY17 respectively.

The PE division’s FY17 NPAT, excluding the net land compensation, was SGD6.74m, a decrease of SGD1.28m from SGD8.02 in FY16. The decrease in FY17 earnings was due mainly to net exchange losses of SGD1.24m.

Figure 47: Financial results (PE division only)

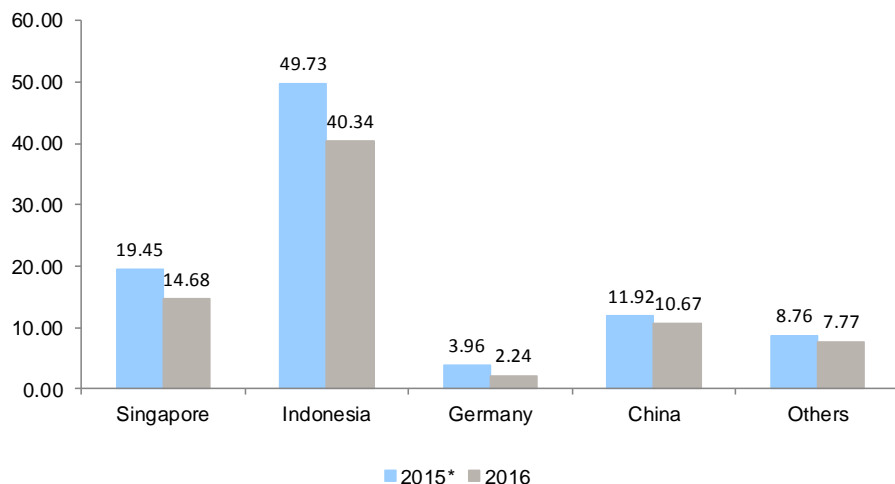


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 Source: RHB

Geographical activities breakdown

The company has customers located in various countries. Revenue is broken down by the locations of the customers. 53.3% of FY16 revenue was generated from customers located in Indonesia, followed by 19.4% from Singapore and 14.1% from China. These are also the locations in which its factories are located. Although the clients are based in different countries, revenue generated from the customers is denominated either in SGD or USD.

Figure 48: Revenue (by the location of the customers)



Note: *FY15 started from 1 Sep 2014 to 31 Dec 2015, a period of 16 months, due to a change in FY.

The oil & gas business contributed SGD4.7m of revenue in 1HFY15 and has since halted production following the termination of the cooperation agreement with Koperasi Unit Desa Sumber Pangan on 24 Jul 2015. FY12-14, FY16 and 9M17 revenue was entirely contributed by the PE business.

Source: RHB

Oil & gas business analysis

Operation cooperation agreement. Back in Nov 2016, GSS announced its subsidiary, PT SGT, had entered into an operation cooperation agreement with PT Pertamina EP for petroleum production. The key terms to the agreement are listed in the table below:

Figure 49: Key terms

Area	47.6 sq km	Initial Commitment	3 years
Depth	No Limit	Capital Committed	USD7.9m
Location	Bloral Regency in Central Java Province, Indonesia	Min. level of production	No min. level of production required
2P Reserves:	24.3m barrels (up to 800m)	Interest:	Crude 23.5%, natural gas 31.4%
Off-Taker:	PT Pertamina EP	Contract validity	15 years

Source: Company data, RHB

This KSO agreement is completely different from the agreement that GSS entered into back in Sep 2014. Under this scheme, GSS is the main party to the contract with Pertamina, to assist the state-owned oil and gas company in the production of petroleum, including oil and gas, in the Trembul Operation Area.

In comparison with the previous arrangement, Cepu Sakti Energy (CSE) (a business unit of GSS) was a service provider to the village cooperative (KUD), which was the contracted party in the agreement with Pertamina. Pertamina has terminated its contract with the KUD. In turn, Cepu Sakti's contract with the KUD for production services was cancelled. This resulted in GSS writing down SGD33m on its investment in CSE.

Trembul Operation Area. The group started spudding Well SGT-01 in late Sep 2017 and had drilled up to 1,255 metres in depth. The drilling results released by GSS show that eight columns of hydrocarbon bearing sandstone reservoirs were discovered, with 37 metres of net payzones. Zones #1 and #2, with total depth of 793 metres, were proven shallow reservoirs. The new finding lies within Zone #3 and Zone #8, with a surprise discovery of sweet gas in Zones #3 and #4.

Figure 50: Well SGT-01 drilling results

No	Depth (m)	Interval	Lithology	Content	Remarks
#1	748-751	3 metre	Calcareous sandstone reservoir with limestone cementation. Good porosity (20-25%) Middle Ngrayong depositional formation	Oil	1.006 psi
#2	791-793	2 metre		Oil	1.064 psi
No	Depth (m)	Interval	Lithology	Content	Remarks
#3	863-869	6 metre		Gas	1.161 psi
#4	910-915	5 metre		Gas	1.224 psi
#5	986-991	5 metre	Calcareous sandstone reservoir with quartz cementation. Good porosity (20-25%) Lower Ngrayong depositional formation	Oil	1.326 psi
#6	1038-1042	4 metre		Oil	1.396 psi
#7	1130-1135	5 metre		Oil	1.520 psi
#8	1195-1202	7 metre		Oil	1.607 psi

Source: Company data

The preliminary in-house well basis estimates for 1P recoverable reserves for the two gas zones was 8.49 bcf of sweet gas, and estimates of 2.83 mmbbls (million barrels) for the other six oil zones. The 1P reserves value of SGT-01 is estimated to be USD193.35m.

Meanwhile, 2P recoverable reserves for gas stand at 26.27 bcf – and for, oil, 5.68 mmbbls. As such, the estimated 2P reserves are valued at USD429.04m.

Figure 51: Well SGT-01 – estimate of reserve values

Reservoir			Recoverable Oil Reserve (Stock Tank mmbls)			
Sand (Zone)	Top (metre)	Thick (ft)	1P	2P	3P	
Oil	#1	748	3	1.02	1.42	2.9
	#2	791	2	0.09	0.25	0.73
	#5	986	5	0.36	0.96	2.71
	#6	1038	4	0.25	0.62	1.73
	#7	1130	5	0.39	0.97	2.71
	#8	1195	7	0.72	1.46	3.73
	in mmbls			2.83	5.68	14.51
	Reservoir			Recoverable Gas (standard bcf)		
Sand (Zone)	Top (metre)	Thick (ft)	1P	2P	3P	
Gas	#3	861	33	1.4	4.7	8.4
	#4	910	150	7.1	21.6	37.7
in bcf			8.49	26.27	46.08	

Source: Company data, RHB

The gas specification results of Zones #3 and #4 show that more than 90% of the gas is made up of methane, and that gross heating value is high at 1,110.84 btu per standard cubic ft (scf). What the result essentially means is that the gas is clean and commercially feasible and also, the gross heating value determine the price of gas. GSS can look to charge a higher gas price as a result.

Figure 52: Gas specifications, Zone #3 (863-869m) – 1.1 mmscfd

Flow Duration	Well Head						Separator		
	Choke Size	Wellhead Pressure	Wellhead Temp	Flowline Pressurer	Casing Pressure	Static Pressure	Gas Gravity	Gas Temp	Gas Flowrate
hours	/ 64"	psig	°F	psi	psig	psi	air=1	°F	mmscfd
3.0	18	550	68	550	0	10	0.708	68	0.220
3.0	24	250	72	250	0	40	0.708	72	0.744
0.5	48	80	70	80	0	50	0.708	70	2.134
3.0	32	110	76	110	0	50	0.678	76	1.187
6.0 (ext)	24	240	74	240	0	73	0.708	74	1.049

Source: Company data, RHB

Figure 53: Gas specifications, Zone #4 (910-915m) – 1.7 mmscfd

Flow Duration	Well Head						Separator		
	Choke Size	Wellhead Pressure	Wellhead Temp	Flowline Pressurer	Casing Pressure	Static Pressure	Gas Gravity	Gas Temp	Gas Flowrate
hours	/ 64"	psig	°F	psi	psig	psi	air=1	°F	mmscfd
3.0	18	250	74	250	0	60	0.708	74	0.190
3.0	24	200	74	200	0	35	0.708	74	0.950
0.5	48	25	76	25	0	100	0.608	76	3.060
3.0	32	110	76	110	0	50	0.708	74	1.737
6.0 (ext)	24	110	76	110	0	50	0.708	74	1.072

Source: Company data, RHB

Figure 54: Gas analysis results

No	Composition	Unit	Results
1	Nitrogen	% mol	0.17
2	Carbon dioxide	% mol	1.06
3	Methane	% mol	91.43
4	Ethane	% mol	3.45
5	Propane	% mol	1.66
6	i-Butane	% mol	0.8
7	n-Butane	% mol	0.47
8	i-Pentane	% mol	0.27
9	n-Pentane	% mol	0.15
10	Hexane	% mol	0.55
	Total		100
	Gross Heating Value	BTU/SCF	1110.84
	Specific Gravity		0.639
	Compressibility	(Z-factor)	1.00

Source: Company data, RHB

Meanwhile, to accelerate the monetisation for the oil & gas business unit, GSS is working on re-entering Well P1 with a dedicated workover program to maximise the commercialisation of the potential oil zones. Well P1 was an exploration well drilled by Pertamina in 2005. GSS looks to explore the additional production of oil in two selected oil wells (TRB-03 and TRB-06) previously drilled by Stanvac.

GSS would be acquiring an independent 2D seismic survey to assist in PT SGT's plan to drill more wells – such scans would provide PT SGT with enhanced knowledge of the sub-surface in the Trembul Operation Area.

Work Programs committed. The table below shows a 3-year Trembul Work Commitment plan laid out by GSS. With the surprise gas discovery in Well SGT-01, management has revised its plan strategically to shift the drilling of Well SGT-02 to 2019. It is replaced by a workover program (Well P1), which allows the group to monetise its oil & gas business immediately, while working out a plan to harvest the gas in SGT-01.

Figure 55: 3-year Trembul Work Commitment to Pertamina

		Qty	Status
Year 1 (2017)			
1-1	2D Seismic Reprocessing	200km	Completed
1-2	Geological-Geophysical-Reservoir Study	1 package	Completed
1-3	Acquisition & Processing of Passive Seismic	85 points	Completed
1-4	Drilling Well SGT-01	1 well	Completed
1-5	Drilling Well SGT-02	1 well	Exchanged with item (3-3)
Year 2 (2018)			
2-1	2D Seismic Acquisition & Processing (Upside Mapping)	60km	
2-2	Geological-Geophysical-Reservoir Study	1 package	
2-3	Drilling Well SGT-03	1 well	
Year 3 (2019)			
3-1	Drilling Well SGT-04	1 well	
3-2	Drilling Well SGT-05	1 well	
3-3	Workover Well #1	1 well	Exchanged with item (1-5)
3-4	Workover Well #2	1 well	

Source: Company data, RHB

Short-term outlook. With the revised plan approved by Pertamina, GSS would now re-enter Well P1, followed by Wells TRB-03 and TRB-06. Well P1 is located 800m southwest to Well SGT-01. There are three discovered payzones with a depth of 894-899m, 1,091-1,096m and 1,221-1,243m respectively.

SGT-01's drilling result also provided further insights into Well P1. A high correlation of wireline data between these two wells suggests P1 holds a similar property of low resistivity reservoir as proven gas and oil in SGT-01. GSS has to simply perforate and produce the oil by natural lifting. Hence, working on P1 requires very low capital commitment and almost immediate cash flow into the group. The process of removing the cement from P1 would take about 11 days and the group plans to start its oil production in the 1Q18 with a target of 100 bopd.

The subsequent step is to implement the workover for Wells TRB-03 and TRB-06. These two wells are 500m northwest and 600m northeast of Well SGT-01, and were drilled by the Dutch during colonisation days. GSS has planned to enter Wells TRB-03 and TRB-06 in 2Q and 3Q18 respectively, with a production target of 70 bopd and 30 bopd by artificial lifting.

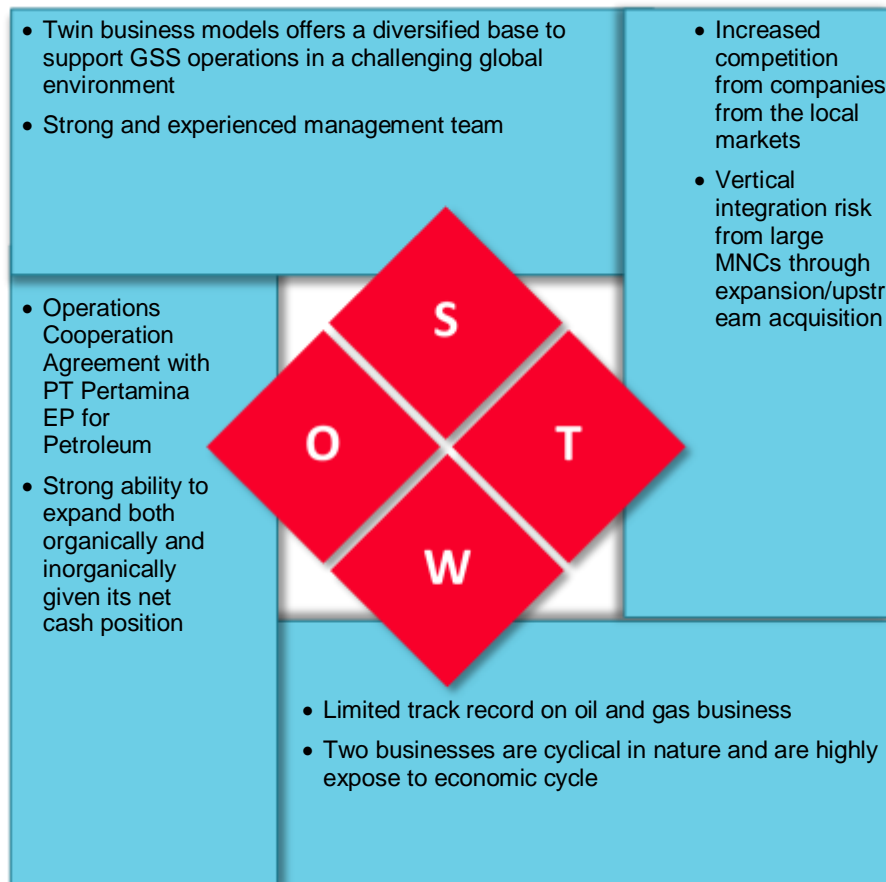
Figure 56: Faster additional hydrocarbon with low capital

Descriptions	Activities					
	Re-Enter Well P1		Workover the TRB-03		Workover the TRB-06	
1 Well Data						
Year Drilled	2005		1918		1924	
Drilled by	Pertamina EP		NKPM		NKPM	
Total Depth	1420m	800m S-W SGT-01	796m	500 m N-W SGT-01	870m	600 m N-E SGT-01
2 Payzones Targeted						
Zone #3 (m)	894-910	Sandstone, Oil Bearing				
Zone #2 (m)	1091-1096	Sandstone, Oil Bearing	640-645	Sandstone IP 40 bopd		
Zone #1 (m)	1275-1286	Sandstone, Oil Bearing	779-792	Sandstone IP 600 bopd	660-675	Sandstone IP 145 bopd
3 Production Estimates						
Zone #3	25 bopd	Natural				
Zone #2	25 bopd	Natural	30 bopd	Artificial Lift		
Zone #1	50 bopd	Natural	40 bopd	Artificial Lift	30 bopd	Artificial Lift

Source: Company data, RHB

Monetisation of the two gas payzones in 2018. Based on the timetable provided by management, we are only likely to see the monetisation of the gas assets in 4Q18. With the surprise discovery of gas, Pertamina has indicated its interest for GSS to produce the gas ahead of the oil. Moreover, due to the high pressure found in these two zones, it would be technically wiser to produce the gas first before drilling deeper, to avoid any blowouts.

SWOT Analysis



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