CREDIT SUISSE

11 March 2014
Asia Pacific/Australia
Equity Research
Oil & Gas Exploration & Production (Oil & Gas (AU))

Santos

(STO.AX / STO AU)

COMMENT

The seven-year itch?

Rating	**UNDERPERFORM***
Price (11 Mar 14, A$)	14.00
Target price (A$)	12.95[1]
Market cap. (A$mn)	13,583.92
Yr avg. mthly trading (A$mn)	927
Last month's trading (A$mn)	988
Projected return:	
Capital gain (%)	-7.5
Dividend yield (net %)	2.3
Total return (%)	-5.2
52-week price range	15.7 - 11.4

** Stock ratings are relative to the relevant country benchmark.*
[1]Target price is for 12 months.

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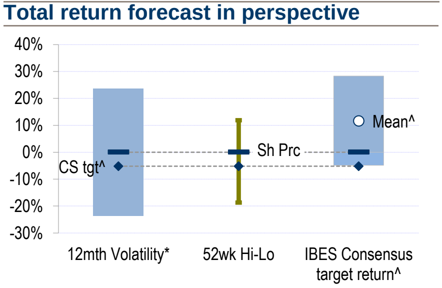
- **What will Santos look like seven years after GLNG marriage?** The seven-year itch, as it is referred to by psychologists, points to the fact that happiness in a relationship dwindles after around seven years (the average marriage is~7.2 years in the US). We take a look at what GLNG, and Santos, might look like seven years after GLNG took FID in 2011, when it finally hits peak production. Have the vows been honoured, or should the itch be scratched earlier?
- **What will GLNG deliver the blushing bride?** FID saw a US$16bn budget, 2P reserves of ~8,000PJ promised by 2015 and a ~12-month ramp-up for Train 2, all giving an 11-14% IRR. Now we face ~A$22.4bn of capex (including 'non-project' capex), <6,000PJ of 2P reserves, third party gas uncertainty, 2-3-year ramp-up for Train 2 and a <7% IRR. Santos believes GLNG has added value – we get a gross portfolio IRR of only 9.7% from GLNG capex (8.7% if use 50% third party gas). Downside still exists too: 1) 50% third party gas takes off A$0.80/sh; 2) applying BG sustaining capex range wipes $0.55-1.48/sh; and 3) no volumes above contracts wipes A$0.25/sh.
- **Where does the marriage go from here?** We must also consider the reinvestment risks and opportunities for Santos. PNG and east coast gas opportunities clearly exist. However, holistically at the A$2.86/sh we carry for unsanctioned resources, assuming US$5/boe NPV, net 500mmboe needs to be commercialised. Hard with gearing at 40% at end-2015.
- **It's not you, it's me….** Dusting off Credit Suisse's 2011 Santos model saw 2018F OCF of $3.332bn. We now forecast $2.715bn (same fx and oil price). Working with our UK team, we look at case studies of where consensus NPVs have got ahead of themselves – BG's production is now forecast to increase ~50% from 2010 to 2017, Tullow's doubles, yet consensus TPs for BG are >15% lower than three years ago (~30% below peaks) and TLW's >20% lower. Is Santos really at the discount to NPV the bulls believe?

Total return forecast in perspective



Performance Over	1M	3M	12M
Absolute (%)	2.3	-1.6	3.4
Relative (%)	-2.4	-7.7	-1.8

*Relative performance versus S&P ASX 200.See Reference Appendix for a description of the chart. Source: Credit Suisse estimates, * Consensus, mean range from Thomson Reuters*

Financial and valuation metrics

Year	12/13A	12/14E	12/15E	12/16E
Production (mmboe)	50.9	54.9	66.5	73.3
Revenue (A$mn)	3,602.0	4,451.7	5,526.9	6,209.0
EBITDAX (A$mn)	1,926.0	2,227.6	3,227.2	3,550.0
EBIT (A$mn)	846.0	981.5	1,856.7	1,969.5
Net income (A$mn)	504.0	542.0	984.3	946.4
EPS (CS adj.) (Ac)	51.82	55.15	99.02	94.15
Change from previous EPS (%)	n.a.	—	—	—
Consensus EPS (Ac)	n.a.	63.50	97.70	115.90
EPS growth (%)	-18.0	6.4	79.6	-4.9
P/E (x)	27.0	25.4	14.1	14.9
Dividend (Ac)	30.00	30.00	41.33	42.10
Dividend yield (%)	2.1	2.1	3.0	3.0
EV/EBITDAX	9.7	8.4	5.8	5.3
Net debt/equity (%)	50.2	68.4	71.3	64.3

*Source: Company data, ASX, Credit Suisse estimates, * Adj. for goodwill, notional interest and unusual items. Relative P/E against ASX/S&P200 based on pre GW in AUD. Company PE calculation is based on displayed EPS Currency*

Figure 1: Santos Financial Summary

Santos Ltd (STO) — Year ending 31 Dec

Share Price: A$14.00		11/03/2014 17:05
Rating		UNDERPERFORM
Target Price	A$	12.95
vs Share price	*%*	*-7.50*
DCF	A$	12.94

Santos is an oil and gas exploration and production company. It has exploration and development projects across Australia, as well as in PNG, Indonesia and Bangladesh. Key assets include being operator of the Cooper Basin Joint Venture.

Profit & Loss	12/12A	12/13A	12/14E	12/15E	12/16E
Sales revenue	**3,223.0**	**3,602.0**	**4,451.7**	**5,526.9**	**6,209.0**
EBITDA	**1,690.0**	**1,734.0**	**2,027.6**	**3,077.2**	**3,400.0**
Depr. & Amort.	(773.0)	(888.0)	(1,046.0)	(1,220.5)	(1,430.4)
EBIT	**917.0**	**846.0**	**981.5**	**1,856.7**	**1,969.5**
Associates	0.0	0.0	0.0	0.0	0.0
Net interest Exp.	79.0	(17.0)	(100.3)	(227.4)	(294.8)
Other	16.0	28.0	34.0	34.0	34.0
Profit before tax	**1,012.0**	**857.0**	**915.2**	**1,663.3**	**1,708.8**
Income tax	(406.0)	(353.0)	(373.2)	(679.0)	(762.4)
Profit after tax	**606.0**	**504.0**	**542.0**	**984.3**	**946.4**
Minorities	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Preferred dividends	0.0	0.0	0.0	0.0	0.0
Associates & Other	0.0	0.0	0.0	0.0	0.0
Normalised NPAT	**606.0**	**504.0**	**542.0**	**984.3**	**946.4**
Unusual item after tax	(87.0)	12.0	0.0	0.0	0.0
Reported NPAT	**519.0**	**516.0**	**542.0**	**984.3**	**946.4**

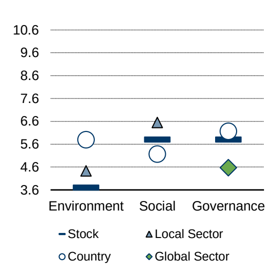
Balance Sheet	12/12A	12/13A	12/14E	12/15E	12/16E
Cash & equivalents	2,151.0	644.0	273.5	330.6	361.0
Inventories	321.0	419.0	541.2	582.8	571.9
Receivables	514.0	793.0	815.9	1,056.4	1,089.6
Other current assets	272.0	222.0	222.0	222.0	222.0
Current assets	**3,258.0**	**2,078.0**	**1,852.6**	**2,191.7**	**2,244.5**
Property, plant & equip.	268.0	259.0	305.0	351.0	397.0
Intangibles	0.0	0.0	0.0	0.0	0.0
Other non-current assets	13,509.0	18,272.0	21,064.1	22,553.2	22,856.3
Non-current assets	**13,777.0**	**18,531.0**	**21,369.1**	**22,904.2**	**23,253.3**
Total assets	**17,035.0**	**20,609.0**	**23,221.7**	**25,095.9**	**25,497.8**
Payables	950.0	1,235.0	1,708.9	1,795.5	1,919.6
Interest bearing debt	3,704.0	5,771.0	7,521.0	8,404.0	8,064.0
Other liabilities	3,016.0	3,391.0	3,397.4	3,578.6	3,534.9
Total liabilities	**7,670.0**	**10,397.0**	**12,627.3**	**13,778.1**	**13,518.5**
Net assets	**9,365.0**	**10,212.0**	**10,594.4**	**11,317.8**	**11,979.4**
Ordinary equity	9,370.0	10,216.0	10,598.4	11,321.8	11,983.4
Minority interests	-5.0	-4.0	-4.0	-4.0	-4.0
Preferred capital	0.0	0.0	0.0	0.0	0.0
Total shareholder funds	**9,365.0**	**10,212.0**	**10,594.4**	**11,317.8**	**11,979.4**
Net debt	**1,553.0**	**5,127.0**	**7,247.5**	**8,073.4**	**7,703.0**

Cashflow	12/12A	12/13A	12/14E	12/15E	12/16E
EBIT	917.0	846.0	981.5	1,856.7	1,969.5
Net interest	136.0	54.0	-100.3	-227.4	-294.8
Depr & Amort	773.0	888.0	1,046.0	1,220.5	1,430.4
Tax paid	-50.0	-214.0	-304.7	-384.4	-624.7
Working capital	292.0	-92.0	328.8	-195.4	101.7
Other	-410.0	146.0	-28.0	-79.4	-147.4
Operating cashflow	**1,658.0**	**1,628.0**	**1,923.3**	**2,190.6**	**2,434.8**
Capex	-3,179.0	-4,008.6	-3,677.5	-2,600.1	-1,679.0
Capex - expansionary	-2,769.3	-3,471.8	-3,114.0	-1,860.0	-929.6
Capex - maintenance	-409.7	-536.8	-563.6	-740.1	-749.4
Acquisitions & Invest	-120.0	-205.0	0.0	0.0	0.0
Asset sale proceeds	153.0	38.0	0.0	0.0	0.0
Other	-173.0	-215.0	-206.6	-155.5	-100.6
Investing cashflow	**-3,319.0**	**-4,390.6**	**-3,884.1**	**-2,755.6**	**-1,779.6**
Dividends paid	-159.0	-157.0	-292.1	-393.5	-417.3
Equity raised	88.0	9.0	132.5	132.5	132.5
Net borrowings	437.0	1,410.0	1,750.0	1,217.0	-340.0
Other	0.0	0.0	0.0	0.0	0.0
Financing cashflow	**366.0**	**1,262.0**	**1,590.4**	**956.0**	**-624.8**
Total cashflow	**-1,295.0**	**-1,500.6**	**-370.5**	**391.1**	**30.4**
Adjustments	-7.0	26.0	0.0	0.0	0.0
Net change in cash	-1,302.0	-1,474.6	-370.5	391.1	30.4

In AUDmn, unless otherwise stated

Earnings		12/12A	12/13A	12/14E	12/15E	12/16E
Equiv. FPO (period avg.)	*mn*	*958.9*	*972.5*	*982.9*	*994.1*	*1,005.2*
EPS (Normalised)	c	63.2	51.8	55.1	99.0	94.1
EPS Growth	%		-18.0	6.4	79.6	-4.9
EBITDA Margin	%	52.4	48.1	45.5	55.7	54.8
DPS	c	30.0	30.0	30.0	41.3	42.1
Payout	%	47.5	57.9	54.4	41.7	44.7
Franking	%	100.0	100.0	100.0	100.0	100.0
Free CFPS	c	130.2	112.2	138.3	145.9	167.7
Effective tax rate	%	43.3	40.6	40.8	40.8	44.6
Valuation						
P/E	x	22.2	27.0	25.4	14.1	14.9
PEG	x	0.9	-1.5	4.0	0.2	-3.0
EV/EBIT	x	16.5	22.1	21.2	11.7	10.8
EV/EBITDA	x	9.0	10.8	10.3	7.0	6.3
Dividend Yield	%	2.1	2.1	2.1	3.0	3.0
FCF Yield	%	9.3	8.0	9.9	10.4	12.0
Price to Book	x	1.4	1.3	1.3	1.2	1.2
Returns						
Return on Equity	%	6.5	4.9	5.1	8.7	7.9
Profit Margin	%	18.8	14.0	12.2	17.8	15.2
Asset Turnover	x	0.2	0.2	0.2	0.2	0.2
Equity Multiplier	x	1.8	2.0	2.2	2.2	2.1
Return on Assets	%	3.6	2.4	2.3	3.9	3.7
Return on Invested Cap.	%	6.2	3.9	4.0	6.6	6.9
Gearing						
Net Debt to Net debt + Equity	%	14.2	33.4	40.6	41.6	39.1
Net Debt to EBITDA	x	0.9	3.0	3.6	2.6	2.3
Int Cover (EBITDA/Net Int.)	x	-21.4	102.0	20.2	13.5	11.5
Int Cover (EBIT/Net Int.)	x	-11.6	49.8	9.8	8.2	6.7
Capex to Sales	%	98.6	111.3	82.6	47.0	27.0
Capex to Depreciation	%	411.3	451.4	351.6	213.0	117.4

MSCI IVA (ESG) Rating A — Credit Suisse View



TP ESG Risk (%): -2

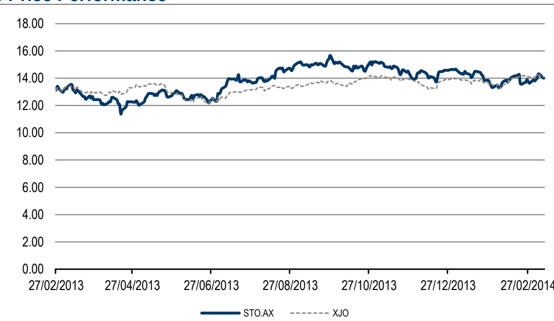
TP Risk Comment: We apply a 2% ESG discount to our DCF for the following reasons: 1) While GLNG is 100% likely to go ahead, there is risk associated with STO's need to gain government approval for the additional 6,100 CSG wells required for GLNG production beyond 2020. 2) The Narrabri CSG project faces significant community opposition in NSW.

MSCI IVA Risk: Neutral

MSCI IVA Risk Comment: We agree with MSCI's A rating for STO. While Narrabri is a concern, STO remains committed to the project and is slowly attempting to gain community support.

Source: MSCI ESG Research

Share Price Performance



	1 Month	3 Month	12 Month
Absolute	2.3%	-1.6%	3.4%
Relative	-2.4%	-7.7%	-1.8%

Source: Reuters 52 week trading range: 11.38-15.66

Source: Company data, Credit Suisse estimates

You've changed

You would most likely only have to go back seven weeks, not seven years, to see the errors in much of our work. This note is not intended to be critical of the situation that Santos, and particularly GLNG, finds itself in, nor to criticise the change in costs, reserves etc.

What we hope to achieve is a clearer understanding of three things – 1) how much the project has changed and why valuations should reflect more caution; 2) what we can learn from the past when looking at the reinvestment opportunities and risks for Santos; and 3) what we can learn from some of the international E&Ps who have gone through similarly transformational production growth and how the market has valued/assessed them.

Three years is a long time in CSM-LNG

Much has changed for the CSM-LNG projects since FID was taken on GLNG on 13 January 2011. The six-year engagement period, from 2005 when Santos took its first major step into CSM, was full of spicy and exciting activities, up and downs. However, as we highlight in Figure 2, very few of the estimates/forecasts for key factors look as rosy now as they did either pre-FID or at FID.

Figure 2: **GLNG guidance/expectations evolution**

	Santos guidance/comments at FID	Now (Santos and CS view)	2018?
Capex	US$16bn, including US$2bn contingencies. Predominantly fixed price contracts.	Project capex of US$18.5bn (assuming A$/US$ 87c, although fx was ~98c at time of FID)	Capex focus will be on sustaining capex
		Non-project capex of ~US$2.5bn	On BG's numbers (up to gross US$2bn/yr for ~7.5mt/yr of equity supply) sustaining capex is A$3.05-4.40/GJ
		Little clarity on sustaining capex: 200-300 wells/yr, but no clarity on 3rd party gas assumptions	At 35% 3rd party gas this would equal gross ~$1.4bn sustaining capex
Reserves/Third party gas	2P reserves of 5,005PJ	2P reserves of 5,406PJ	By end 2018 GLNG will have produced ~500PJ gross, will they add any more 2P pre-production?
	2C resource of 3,732PJ	2C resource of 1,374PJ	With 2C resource down ~65% from FID, can they reverse the decline?
	Forecast of 2P to rise to ~8,000PJ by 2015	3rd party gas contracts now total ~1,300PJ	We model for 35% of lifecycle gas to come from third parties, risks are this could be higher
	750PJ 3rd party gas contract signed with Santos from Cooper Basin No mention of incremental 3rd party gas needs	Will buy more 3rd party gas 'if the deal makes sense'	
Train 2 ramp-up	"contracts allow for 12-18 months, but hope is to do it much quicker"	Ramp-up is 2-3 years	Will the CSM-LNG projects ever run at nameplate capacity consistently?
Project economics	'Attractive IRR of 11-14%' CS had 13.8% IRR	CS forecast project IRR <7% (with gross sustaining capex at $700m)	At 50% third party gas project IRR CS forecast drops to 6% (with gross sustaining capex at $700m)
Credit Suisse modelled 2018 GLNG FCF (A$)	$1,161m	$794m	$710m at 50% third party gas

Source: Company data, Credit Suisse estimates

We have cracked open our Santos model from 2011 to see what our expectations were at the time. Unsurprisingly, given what has transpired, our views were somewhat more optimistic. Our target price on the day after FID was sitting at $18, we modelled for a

13.8% GLNG stand-alone IRR and in 2018 we were expecting A$1,161mn of FCF generation from the project. Today we sit here with a $12.95 target price, a 6.9% GLNG IRR and just A$794mn of FCF generation in 2018.

Will things keep changing?

The question the market must ask, with such a huge change in project assumptions, is if the evolution is complete. For us there are three key areas where there is scope for further surprises:

- **Third party gas requirements:** At present, on the basis of the contracts already signed, GLNG will get ~27% of volumes from third parties in 2018 (dropping to 19% in 2020 once the latest Origin contract expires). Santos has clearly stated that GLNG will do more third party deals if they make sense – we believe the urge will be somewhat more pressing than that. We currently assume 35% of gas comes from third parties over the life of the project, but there are those who see that number rising to 50%. **If we assumed 50% of gas from third parties our GLNG valuation would fall a further ~$0.80/sh**.
- **Sustaining capex uncertainties:** We remain somewhat baffled by the lack of clarity that is being provided on sustaining capex, both in terms of AUD spend and how much equity gas that capex will provide. Looking at the BG sustaining capex guidance, it is suggesting that its 73.75% share will be A$1-1.3bn a year (gross this equates to A$1.4-2bn) on the assumption of 95% equity gas at plateau. In other words **sustaining capex is $3.05-4.40/GJ for equity gas at QCLNG**. It is still entirely unclear if this is a fair comp to GLNG (it is hard to see how it can be profoundly different, but Santos at this stage is unwilling to provide a numerical guidance). However, running through comparable sustaining capex on equity gas versus the $700m gross we currently model, would see our **NPV falling by $0.55-1.48/sh for GLNG**.
- **Annual plateau production:** The project has nameplate capacity of 7.8mt/yr, with contracts of 7mt/yr. We model for 7.5mt/yr of production at plateau, with the incremental volumes being sold at spot. **If we assumed only contracted volumes were sold then we would wipe ~$0.25/sh off our valuation**.

How do we bring some excitement back into the relationship?

Even the happiest of marriages needs some excitement to keep it going, particularly after such a long and arduous process to get GLNG up to capacity. While we suspect that FCF generation will look rather less appealing than is currently perceived, with the large increase in operating cash flow heading Santos' way we must all ask ourselves what the reinvestment risks and opportunities are.

Has GLNG been a good investment?

With our current project lifecycle IRR sitting at 6.9%, and falling to 6% if third party gas requirements are 50% (not to mention further downside from potentially higher sustaining capex), quite clearly at face value this has been a materially unappetising project.

On our numbers at the time of FID the project retrospectively has a net NPV of -$1,057mn or -$1.09/sh. This negative number does of course exclude the money raised previously from selling down stakes in GLNG (albeit these earlier payments were made irrespective of FID).

Santos now argues that its aim in GLNG was always as much about raising the domestic gas price, and therefore re-rating large parts of the portfolio outside of GLNG, as it was about the project. Even if this was the case, with the shortage of gas being seen at QCLNG, and APLNG busy feeding itself, we wonder if GLNG was needed to see net back pricing domestically. What is more, with a ~0.8% drag on Australian GDP from every $2/GJ rise in the domestic gas price, this view certainly wouldn't have been terribly popular with politicians who approved the project.

Unfortunately, on our numbers, even across the whole portfolio we cannot get the GLNG capex sunk to stack up. Modelling for the incremental FCF that is derived from east coast gas producing assets, where the effective benefit from GLNG has been to lift the domestic gas price from $5/GJ real to $8/GJ real, we can still only get a 9.7% return across the whole portfolio for Santos off the GLNG capex spent.

Figure 3: **IRR of GLNG capex at project and project + across portfolio benefit**

	IRR
GLNG - current CS assumptions	6.9%
GLNG - assuming 50% 3rd party gas	6.0%
GLNG (CS assumptions) + uplift from domestic price move from $5/GJ real to $8/GJ real	9.7%
GLNG (50% 3rd party gas) + uplift from domestic price move from $5/GJ real to $8/GJ real	8.7%

Source: Company data, Credit Suisse estimates

Perhaps one could argue that we are being a touch unfair here, given there may be some non-producing assets on the east coast (unconventional, NSW etc) that now have a fighting chance of being economic at the higher gas price. While we entirely acknowledge this point, the lack of 2P reserves for Santos over the past five years, despite the rising gas price, might suggest prudence is sensible too.

Value accretive growth possible, but hard to find

Santos is by no means on its own in the struggle to find value-accretive sizeable hydrocarbon projects. In a world where projects are getting more complex, and are dominated by the super majors and NOCs, the industry more and more has to accept utility type returns. Unfortunately these utility type returns are only being garnered with greater and greater project risk.

This is not to say that Santos doesn't have some value-accretive opportunities. Figure 4 shows the $2.86/sh of risk weighted value we give to Santos for its unsanctioned resources/projects.

Figure 4: **Santos exploration and contingent resources and project valuation**

Project	STO share	$Am	A$/sh	Risk Weighting
Narrabri	80%	701	0.72	100%
PNG T3	13.5%	750	0.77	65%
PNG T4	0.0%	0	0.00	0%
Bonaparte FLNG	40%	495	0.51	25%
Crown/Winchester	40%	465	0.48	25%
Shale		253	0.26	25%
Exploration - Other		119	0.12	
Exploration & contingent		**2,783**	**2.86**	

Source: Company data, Credit Suisse estimates

The most obvious value-accretive growth opportunity here, in our minds (and despite not being well promoted by Santos in its presentations), is PNG LNG T3. With brownfield economics giving it a 20%+ return, and new-found impetus for expansion in the project post the Oil Search deal to get into Elk/Antelope.

How it all pans out for Santos, or any of the other players in PNG, remains somewhat of a waiting game. With a 24% stake in the Hides Deep well, and the upside of Trains 4 and beyond from other non-owned gas, their seat at the unitisation table certainly looks attractive.

Elsewhere, the higher domestic gas price on the east coast undoubtedly improves the economics of new projects there (both in NSW and unconventional if the geology works).

That said, the recent environmental issues at Narrabri must raise some serious questions about the political challenges to commercialising that gas which we currently value at A$0.72/sh.

On the west coast, Santos has accumulated positions in reasonable-sized prospects with both Bonaparte LNG and Crown/Winchester. With Bonaparte LNG we find it extremely hard to believe that a business like Santos would, or more importantly should, sanction a FLNG project before Shell have even put Prelude on the water.

Crown/Winchester are potentially appealing assets. That said, there are a number of competing feedstocks that are looking for a home in what is likely to be very little brownfield expansion in the area. As we have seen with an asset like Equus, owned by Hess, the economics of developing even brownfield might be so marginal that a mutually agreeable deal could not be reached with Woodside to feed an expansion at Pluto.

How much should the market pay for these 'growth' assets today?

The question that must always be asked when dealing with prospective, or undeveloped, resources is how much the market should be willing to pay for it now.

In Figure 5 we look at this conundrum in a slightly different way. At present we carry a valuation of A$2.86/sh, or A$2,783mn, for these assets (as shown in Figure 4). Rather than assessing the viability of each individual asset, let's look at it holistically.

A good hydrocarbon project might give you US$5/boe NPV (a great one like PNG LNG brownfield expansion might give you closer to $8-9/boe, but they are rare).

We run scenarios across various NPV/boe and at US$5/boe, to justify our current valuation you would need to commercialise ~500mmboe (in gas equivalent that is ~3TCF net).

Figure 5: **Sensitivity of Santos required reserves to justify CS valuation (at 90c A$/US$)**

NPV/boe (US$)	Reserves for A$2.86/sh exploration and contingent resource value (mmboe)
$3.00	835
$4.00	626
$5.00	501
$6.00	417
$7.00	358
$8.00	313

Source: Credit Suisse estimates

Is this beyond the realms of possibility from its current asset base? No. Is it challenging? When one considers that GLNG will deliver a negative ~$2/boe, it would seem fair to suggest that some caution is warranted.

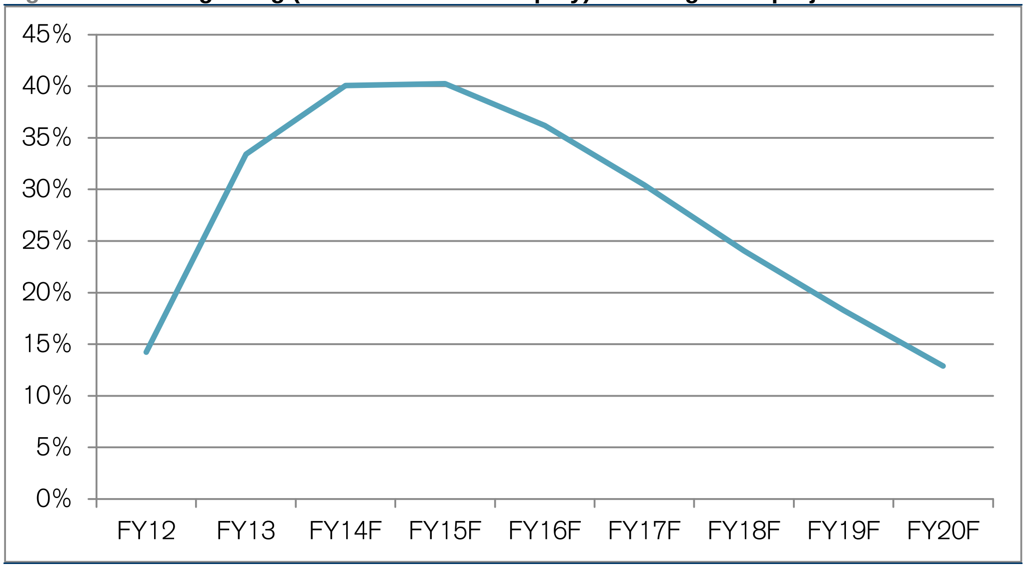
Funding further projects, and the promised higher dividend, challenging

Of course, even if the necessary growth projects are there, they need to be funded. The funding of new projects can be challenging enough, let alone with a market baying for capital to be given back to them, not reinvested when they have been waiting so long for these mega projects to start producing.

Figure 6 shows that, on our numbers, Santos will be rolling off the end of GLNG construction with gearing at ~40%. From there forward, on the assumption of no capital committed to any of the potential growth projects, and a less than 40% dividend payout policy is implemented, it is still not until 2019 that gearing hits 20%.

All in all this suggests that there is little leeway for a material increase in the dividend policy for Santos post GLNG. There is much talk about the cash flow inflection point for the business. However, while operating cash flow should double for Santos, we believe that free cash flow has the potential to materially disappoint.

Figure 6: **Santos gearing (Net debt/Net debt+equity) ex new growth projects**



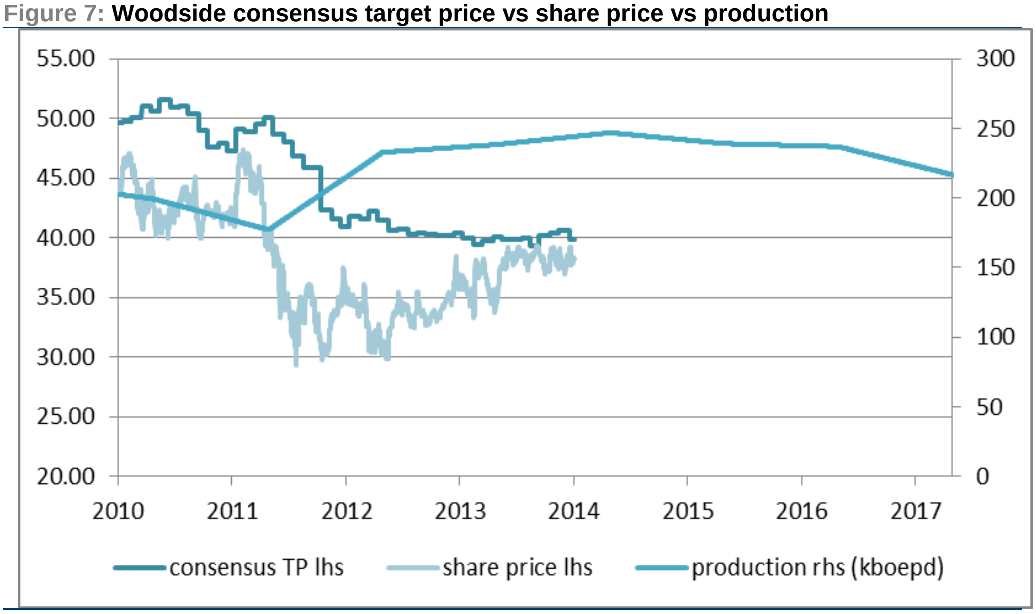
Source: Credit Suisse estimates

How did the Woodside/Pluto marriage look?

For the Australian market, with the huge inflection points in production we are seeing from both Santos and Oil Search, the natural inclination is perhaps to look at Woodside as the analogue.

While there is the perception that first gas at Pluto brought with it a meaningful share price bounce, as can be seen in Figure 7 it was after a more material fall in both the share price and the consensus target price.

Figure 7: **Woodside consensus target price vs share price vs production**

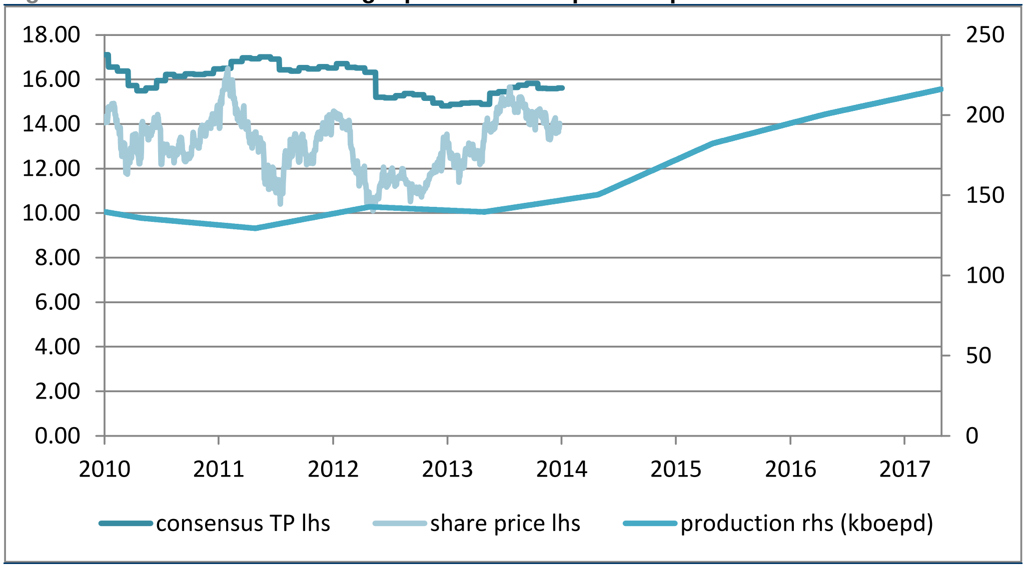


Source: Credit Suisse estimates, IBES Consensus

It is extremely important to note that with all of the companies looked at in this sector, no material contribution from the changes has come from changes to fx or commodity prices. To a large extent, for both us and consensus, the past few years have seen great stability on macro assumptions.

Looking at Figure 8 it is clear that Santos has not seen the same degradation in consensus target prices that Woodside saw in the run up to Pluto. Intuitively this could be for a few reasons: 1) the market has done a far better job of accurately modelling Santos; 2) modelling mistakes at GLNG have been offset by the addition of incremental value accretive projects; and 3) the market has yet to factor in the economic reality of GLNG and the broader portfolio.

Figure 8: Santos consensus target price vs share price vs production



Source: Credit Suisse estimates, IBES Consensus

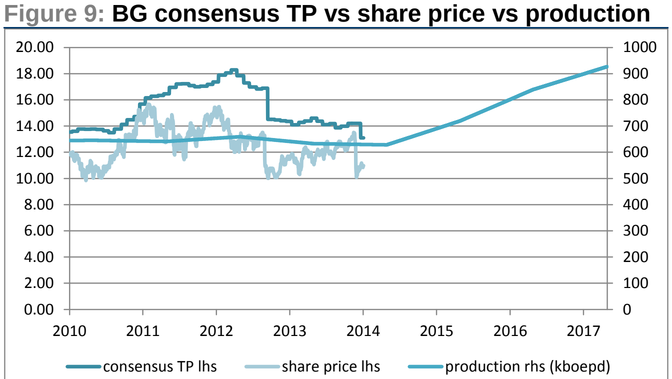
In our minds, by far the most likely reason for the lack of move down in the consensus Santos target price is factor 3. In other words, consensus estimates do not capture the higher costs, lower FCF, potentially too generous value ascribed to unsanctioned projects etc.

Offshore marriages give some tones of caution too

At this stage we believe that it is a very worthwhile exercise to look at how other large-cap E&Ps have traded (both in terms of consensus target prices and share prices) as they head into the realisation of material production growth.

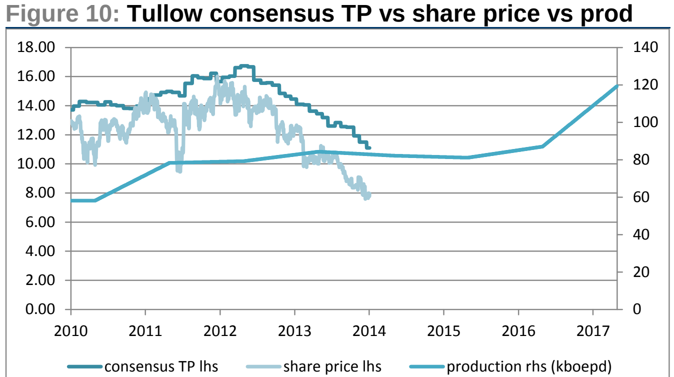
To this extent we have asked our European analyst, Thomas Adolff, to talk through what has happened with two such examples in the shape of BG and Tullow Oil. As can be seen in Figure 9 and Figure 10, both have suffered material share price falls (against rising markets) and 25%+ cuts to consensus target prices as the production ramp has grown closer.

Figure 9: BG consensus TP vs share price vs production



Source: Credit Suisse estimates, IBES Consensus

Figure 10: Tullow consensus TP vs share price vs prod



Source: Credit Suisse estimates, IBES Consensus

Some comments from Thomas on both stocks follow:

BG Group – Numerous guidance cuts against a cultural history of optimism

In the words of Daniel Kahneman in *Thinking Fast and Slow,* "*Organisations face the challenge of controlling the tendency of executives competing for resources to present overly optimistic plans. A well-run organisation will reward planners for precise execution and penalise them for failing to anticipate difficulties, and for failing to allow for difficulties that they could not have anticipated – the 'unknown unknowns'*".

There have been numerous 'red flags' at BG, many of which we would not even call 'unknown unknowns', and can be partially explained by the culture of optimism previously embedded within the organisation, which is not so easy to change. It is not so easy as evident by the numerous cuts to guidance in the recent past. BG has failed to deliver significant growth since 2006 despite expectations of superior growth. Growth is only expected to materialise (finally) from 2015 after numerous rebasing to expectations.

We highlight BG's targets and changes over the past few years:

- BG's 2007 strategy update targeted production of 760-980kbd (or a mid-point of 870kbd) by 2012. BG delivered ~660kbd in 2012 or a 24% miss to the mid-point of the target set in 2007 with production declining in 2013 and guided to in 2014 before growth returns in 2015 with production guided to deliver 710-750kbd. In other words, it is still not delivering on the target it set out in 2007 for 2012 in 2015.
  - Part of this miss in 2012 (relative to the target set in 2007) is explained by PSC effects from a higher-than-expected oil price, while Phase III at Karachaganak – included in BG's target to 2012 – has yet to materialise (i.e., no firm plan yet for this). There have been other disappointments to its portfolio as well, including the UK.
- The downwards revision to guidance continued. As recent as in 2012, BG sill expected to produce >1mbd by 2015 (latest target is for 730kbd) prior to the CNOOC deal for a share of QCLNG (production impact of ~40kbd), but after it first revised its view on the US onshore gas activity. Its target for 2020 at the time stood at 1.4mbd (mid-point of the guidance range), which assumed >600kbd of production from Brazil.
  - In May 2013, when it presented the new Strategy Update under the new CEO, it revised downwards its production expectation to 775-825kbd (or 800kbd taking the mid-point), not accounting for potential portfolio changes. Average production from base assets in 2013-15 was guided to 530-580kbd, and it removed its 2020 production guidance stating that the absolute production level will be an outcome of the active portfolio management rather than a target (value over volume). That said, it lowered its production expectation for Brazil to 500kbd, down from >600kbd, as it decided to align its view with that of the operator.
  - In September 2013, while it maintained its 2015 production guidance, it guided to some slippages to production in 2014 related to (**a**) Egypt (bigger reservoir declines than expected after it previously had to guide down on Egypt), (**b**) Norway (delays) and (**c**) further reduction in the US.
  - In January 2014, it had another downgrade to production guidance, which demonstrates BG's lack of contingency planning and the imperfect information flow between mid-level and top-level management. It lowered its guidance for 2015 to 710-750kbd (or 730kbd at the mid-point) from 775-825kbd (or 800kbd at the mid-point), and guided to production of only 590-630kbd for 2014. Some items should have been known to management before, such as PSC effects in T&T (in 2014) and Kazakhstan (in 2015) and the general challenges in the UK and Egypt.

Bottom line, BG now believes it finally has a better grip over asset performance/production for the next two years. Any guidance beyond clearly is more difficult to believe in if recent history is any guide. We generally believe that BG still has no proper contingency planning in light of its guidance and commentary on Australia and Brazil versus its peers. In Brazil, BG's view on P50 (6bn boe) is almost 50% higher than that guided by the operator PBR adjusted for BG's equity (at ~4.2bn boe). In Australia, one of its European peers exposed to the CBM-LNG play takes a much more conservative view on third party gas than BG. BG's guidance assumes perfect execution and no additional third party gas requirements.

Tullow Oil – When previous success makes life hard

Tullow Oil's fall from grace (from mid-2012) can be explained by two factors, namely (**a**) elevated expectations for exploration success and the upside expectation to already bullish pre-drill estimates, and (**b**) the US shale phenomenon. The two elements are to a degree connected – if the prime offshore explorer globally starts to have a questionable (offshore) exploration track record, market perception for offshore explorer is impacted. Particularly, the lack of 'commercial' (not technical) success in the Late Cretaceous turbidites outside of Ghana, thought to prove up significant resources from Tullow Oil's portfolio, has significantly reduced the option value in the way the market valued Tullow Oil. With this, the historical premium that it has traded over core NAV started to diminish.

- **Elevated expectations,** and this is Tullow Oil's own making. After its success offshore Ghana, where resource estimates had continued to move upwards, the market had given Tullow Oil significant option value from its portfolio after the Equatorial Margin in West Africa was de-risked, according to Tullow Oil, from Sierra Leone down to Ghana. The company holds a dominant acreage position. This was complemented by the 'huge' potential, according to Tullow Oil, on the other side of the Atlantic basin in French Guiana after a discovery was made with the Zaedyus prospect.
    - After the Zaedyus discovery, TLW stated that it was looking to chase at least a further six turbidite fan prospects, which were expected to yield similar results. Since then, on both sides of the Atlantic Margin, many follow-on prospects proved unsuccessful commercially. Instead of becoming significantly more resource rich (in a commercial sense), the Late Cretaceous turbidite fans have proven much more variable, and since the commercial discovery in Ghana, nothing commercial has thus far been proven in this play type.
- **US shale phenomenon**: To put the facts right, the offshore plays that Tullow Oil is chasing are frontier/emerging plays with relatively low CoS (10-15%). For global investors looking at E&Ps, an important question may be to determine what are the chances that the next (big) offshore (frontier) well comes in (10-15%) versus the chances that the Permian/Bakken/Niobrara looks better in a year's time (50-60%). And often offshore stories become less interesting once they go into development, bugged down by cost overruns and delays. With the US shale phenomenon, the market has also taken a view that the world has become much more resource rich, and for those that looked at E&Ps as potential M&A targets, the premium associated to this has also diminished.

Bottom line, fortunately, TLW is thus far successful in onshore plays in East Africa, though for the stock to re-rate, exploration success in the offshore is needed as well.

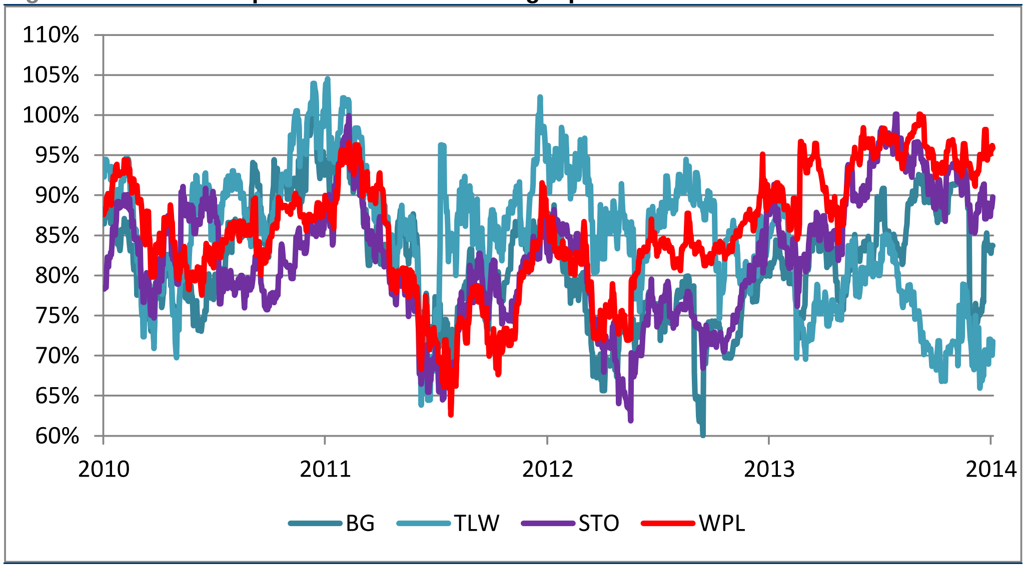
What can we take for Santos from this all?

Perhaps Santos can buck the trend of these global peers. It is certainly fair to say that for the likes of Oil Search we believe it can for the foreseeable future with its fate so much in the hands of one project (where ongoing sustaining capex is so low it is hard for expectations to change dramatically).

However, the evidence to date of changes in expectations as show in Figure 2, the continued lack of disclosure from the company on third party gas requirements and sustaining capex at GLNG (particularly in light of BG's sustaining capex guidance) and an unflattering history in reserve replacement and project sanctioning suggest that they may be approaching the table somewhat snookered behind the 8-ball.

Another very important point to note, and arguably entirely justifiably so (proving the market is far smarter than sell-side analysts), is that these stocks always trade at a discount to consensus target price. Indeed, perhaps alarmingly for Australian investors, both Woodside and Santos trade far closer to consensus valuations than their UK peers. This is particularly interesting to note when considering that for BG for example our target price is set at almost a 25% discount to our NPV calculation.

Figure 11: **E&P share prices vs consensus target prices**



Source: IBES Consensus, Credit Suisse estimates

Stock likely to remain volatile, but trend down

There will doubtless be pockets of time where there is no new news and the market will reward the silence with a bounce. It also appears likely, particularly with GLNG, that it will be many years before we get a clearer picture of on-going costs and third party gas needs.

However, we firmly believe that looking at both Santos in isolation, and against the context of the challenges besetting the broader industry, that the trend in the Santos share price will be down.

What does HOLT® say?

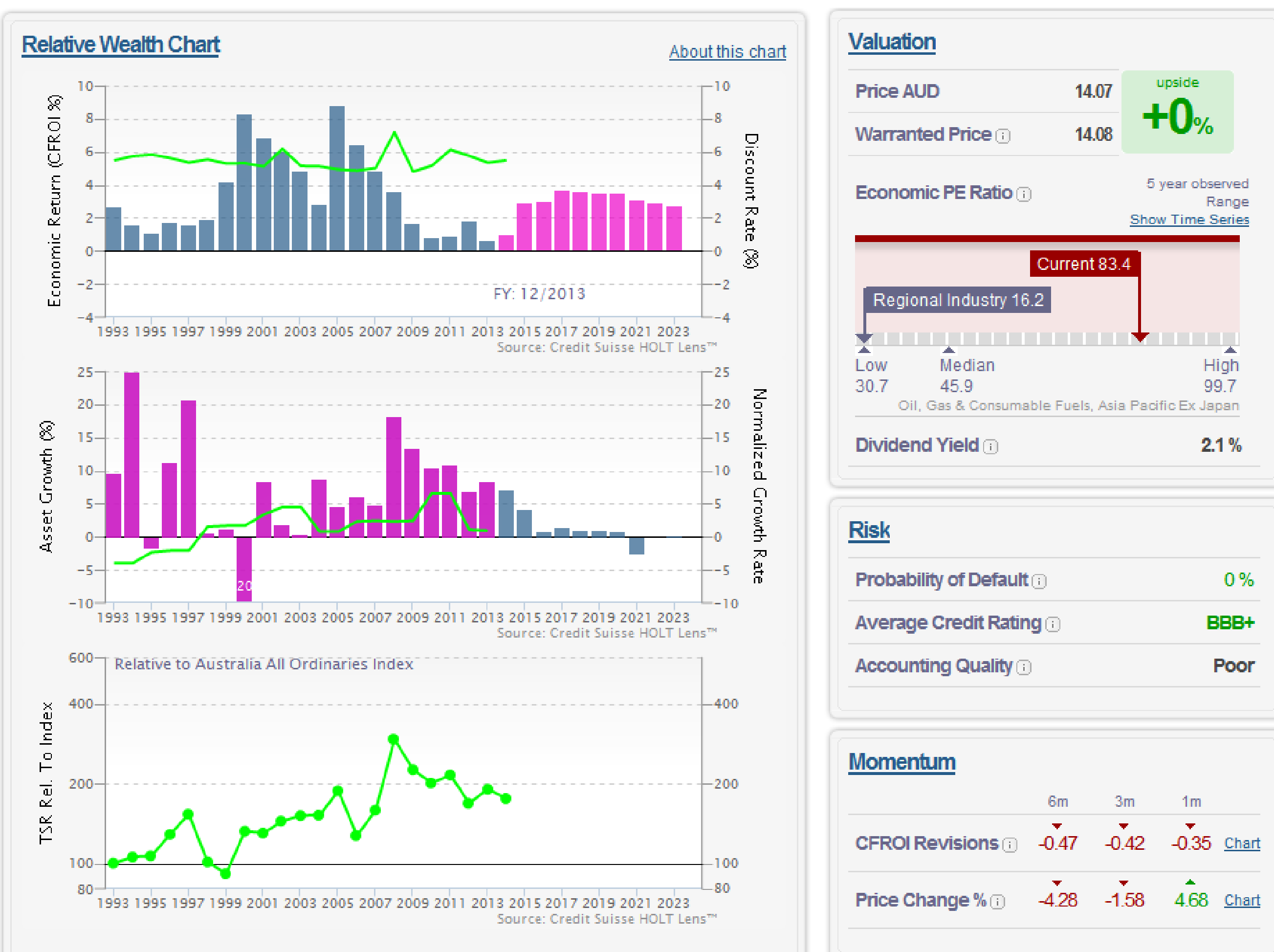
Applying key Credit Suisse Research estimates through our HOLT® framework results in a A$14.08 valuation. This valuation initially uses 10 years of key estimates to drive CFROI® forecasts, before proprietary algorithms determine the "rate of fade" towards the long-run average CFROI (~6%).

From the fundamental side of things we think the way people model these businesses mean that they will get flattered by HOLT (though these numbers aren't way off our valuations).

Analysts spent far too little capex in their models (only model the projects they know about), but because a project might be a 5-6 year construction phase it means that you don't really feel the earnings impact of not spending that capital until 5-6 years later. So near term capex is far more understated than the offsetting later year earning benefit would be.

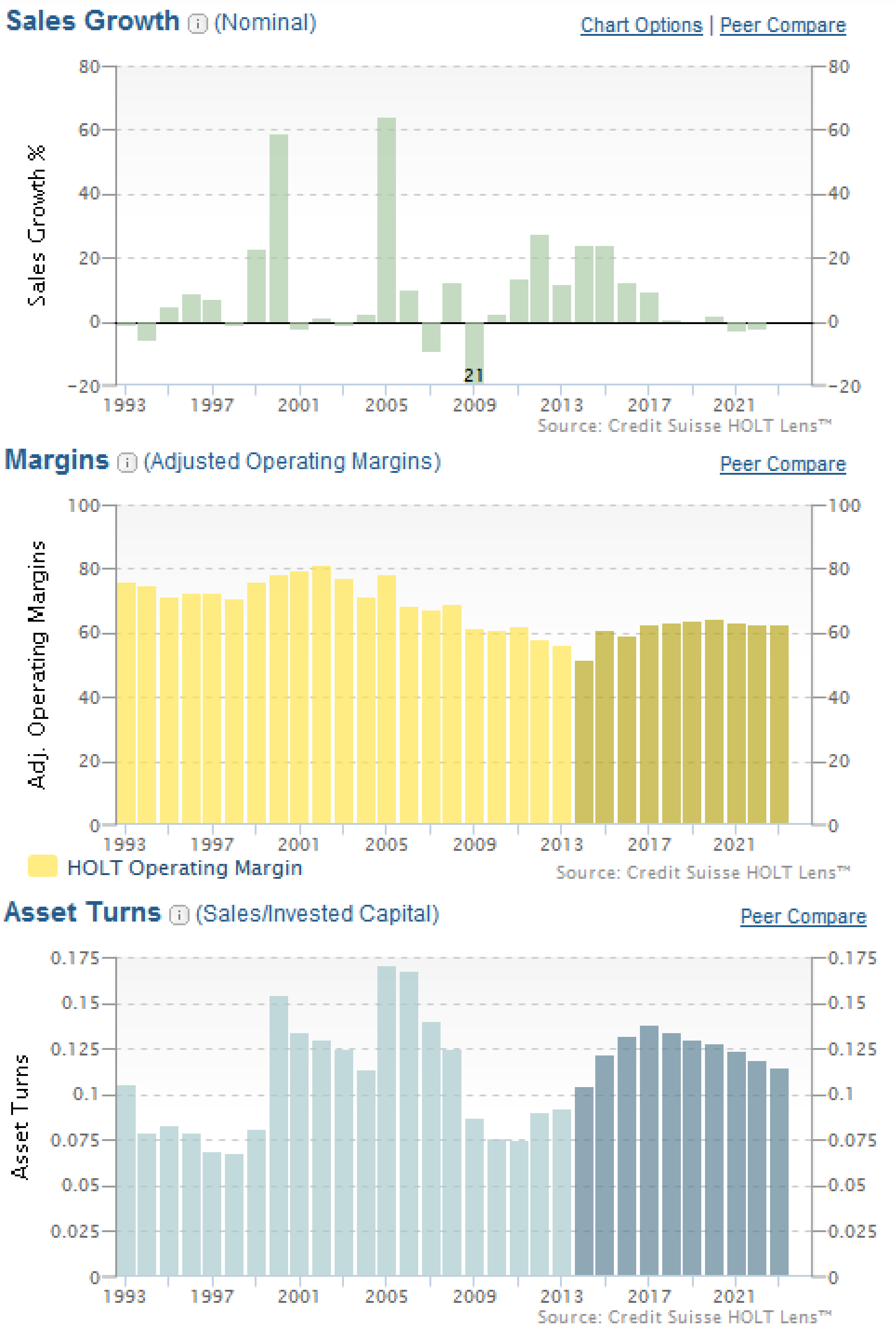
Summary

Link to CS Research estimates based scenario: https://holtlens.credit-suisse.com/dal/TM1HSXD



Source: Credit Suisse HOLT®

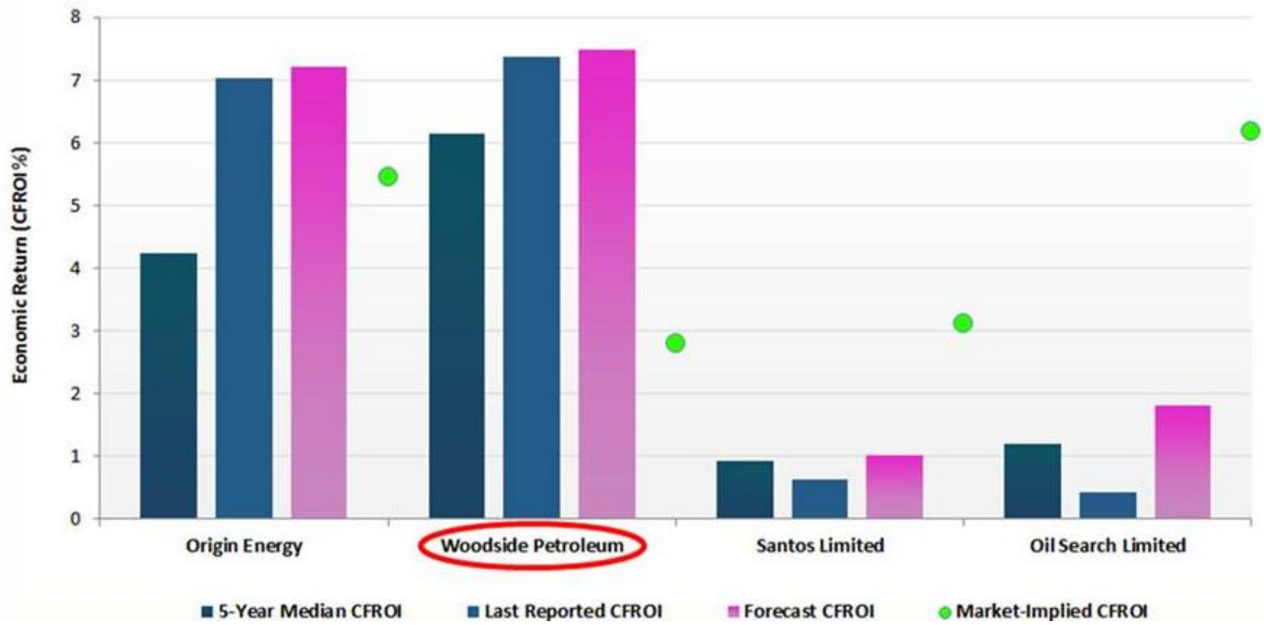
Sales, Margins, Asset Turns



Source: Credit Suisse HOLT®

Peer Analysis – CFROI®

The CFROI of Australia's Energy majors have been depressed in recent years given projects such as APLNG, GLNG, PNG LNG, and Pluto T1/2 are largely capitalised to each company's respective balance sheets at inception. The impact being that the investment base is inflated well before any cash flows associated with these projects are received, thereby reducing CFROI until cash flows begin.



Source: Credit Suisse HOLT®

Reference Appendix

Our new "**Total return forecast in perspective**" chart helps visualize Credit Suisse and consensus views of a company's 12-month return within the context of forecasting risks and its historical trading pattern:

12mth Volatility is calculated as the annualised standard deviation of weekly total return series over the past 12 months. It illustrates variability of stock returns; in other words, risk. The way to think about it is that one would rather take 10% forecast return from a stock that has 20% volatility, than from the stock that has 40% volatility. The shaded area shows the one standard deviation range based on past 12 months volatility. In statistical terms, once you make a number of brave assumptions, there is a 68% probability that the share price will end up inside that range in 12 months time.

52wk Hi-Lo is maximum and minimum daily closing price over the past 52 weeks. It is often handy to know the price momentum especially when the stock is trading close to its highs and lows: Is the stock trading close to its peak? Is the momentum against the stock?

***Consensus is IBES consensus supplied by Thomson Reuters**. IBES is a survey of sell side research analysts, collecting a few dozen data points such as EPS, DPS, Sales, Target Price, ROE and so on. ***Mean is the average of target returns**, while the shaded area around the mean represents the range of estimates from the lowest to the highest estimate. This aids visualisation of a number of important factors such as: the range of analyst estimates; where Credit Suisse's estimates on this stock sit relative to consensus; and where the share price is relative to consensus mean and consensus range target.

Target return is calculated as capital gain plus forecast dividend yield (net) over the next 12 months. For "CS tgt" we have used Credit Suisse's target price and Credit Suisse forecast for 12-month forward dividend, grossed up for franking. For the consensus mean and range, we have used consensus target price and consensus dividend forecasts for 12 month forward.

CREDIT SUISSE

Companies Mentioned *(Price as of 11-Mar-2014)*

BG Group plc (BG.L, 1087.5p)
Oil Search (OSH.AX, A$8.82)
Origin Energy (ORG.AX, A$14.71)
Royal Dutch Shell plc (RDSa.L, 2193.0p)
Santos Ltd (STO.AX, A$14.0, UNDERPERFORM, TP A$12.95)
Tullow Oil (TLW.L, 804.0p)
Woodside Petroleum (WPL.AX, A$38.64)

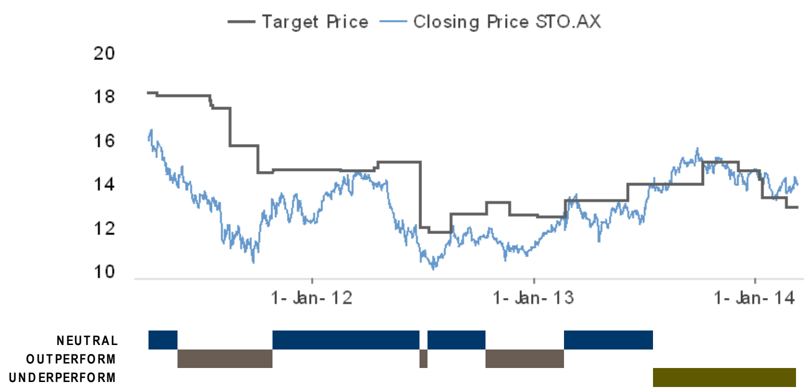
Disclosure Appendix

Important Global Disclosures

Mark Samter, David Hewitt and Thomas Adolff each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

3-Year Price and Rating History for Santos Ltd (STO.AX)

STO.AX Date	Closing Price (A$)	Target Price (A$)	Rating
06-Apr-11	16.00	18.20	N
20-Apr-11	15.63	18.05	
24-May-11	13.97	18.05	O
16-Jul-11	13.23	17.85	
18-Jul-11	12.74	17.60	
21-Jul-11	13.31	17.50	
19-Aug-11	11.07	15.75	
04-Oct-11	10.88	14.55	
28-Oct-11	13.20	14.65	N
17-Feb-12	13.56	14.60	
01-Mar-12	13.89		*
12-Apr-12	14.00	14.75	N
19-Apr-12	14.04	15.00	
28-Jun-12	10.45	12.00	O
11-Jul-12	10.52	11.80	N
13-Aug-12	11.37		*
17-Aug-12	11.78	12.65	N
15-Oct-12	11.59	13.15	O
22-Nov-12	11.05	12.60	
07-Jan-13	11.24	12.50	
22-Feb-13	12.05	13.25	N
05-Jun-13	12.74	14.00	
19-Jul-13	13.74	14.00	U
09-Sep-13	14.99		*
07-Oct-13	14.94	15.00	U *
07-Oct-13	14.94		*
18-Oct-13	14.75	15.00	U
04-Dec-13	14.41	14.60	
07-Jan-14	14.35	14.20	
12-Jan-14	14.37	13.40	
21-Feb-14	13.59	12.95	



** Asterisk signifies initiation or assumption of coverage.*

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Outperform (O) : The stock's total return is expected to outperform the relevant benchmark*over the next 12 months.

Neutral (N) : The stock's total return is expected to be in line with the relevant benchmark* over the next 12 months.

Underperform (U) : The stock's total return is expected to underperform the relevant benchmark* over the next 12 months.

**Relevant benchmark by region: As of 10th December 2012, Japanese ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. As of 2nd October 2012, U.S. and Canadian as well as European ratings are based on a stock's total return relative to the analyst's coverage universe which consists of all companies covered by the analyst within the relevant sector, with Outperforms representing the most attractive, Neutrals the less attractive, and Underperforms the least attractive investment opportunities. For Latin American and non-Japan Asia stocks, ratings are based on a stock's total return relative to the average total return of the relevant country or regional benchmark; Australia, New Zealand are, and prior to 2nd October 2012 U.S. and Canadian ratings were based on (1) a stock's absolute total return potential to its current share price and (2) the relative attractiveness of a stock's total return potential within an analyst's coverage universe. For Australian and New Zealand stocks, 12-month rolling yield is incorporated in the absolute total return calculation and a 15% and a 7.5% threshold replace the 10-15% level in the Outperform and Underperform stock rating definitions, respectively. The 15% and 7.5% thresholds replace the +10-15% and -10-15% levels in the Neutral stock rating definition, respectively. Prior to 10th December 2012, Japanese ratings were based on a stock's total return relative to the average total return of the relevant country or regional benchmark.*

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Global Ratings Distribution

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Neutral/Hold*	40%	(49% banking clients)
Underperform/Sell*	14%	(43% banking clients)
Restricted	2%	

**For purposes of the NYSE and NASD ratings distribution disclosure requirements, our stock ratings of Outperform, Neutral, and Underperform most closely correspond to Buy, Hold, and Sell, respectively; however, the meanings are not the same, as our stock ratings are determined on a relative basis. (Please refer to definitions above.) An investor's decision to buy or sell a security should be based on investment objectives, current holdings, and other individual factors.*

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Price Target: (12 months) for Santos Ltd (STO.AX)

Method: We set our $12.95/sh Santos target price based on our roll forward DCF valuation of $13.21/sh minus an ESG discount of 2% for environmetal and regulatory risk related to CSG drilling. Oil prices, the critical sector earnings driver, are determined by our Credit Suisse Global Energy team on a quarterly basis taking into consideration global demand-supply pressures. Our oil price forecast is for a long-term real oil price of US$90 from 2018.

Risk: The critical risks associated with our $12.95/sh STO target price, forecasts and valuation relate to commodity price assumptions and delivery issues associated with growth projects, predominantly timing and capex estimates for GLNG. On a lesser level, the sector is experiencing significant upside pressure to operating costs, however, somewhat counter balanced by the upside risk to production numbers and potential new project sanctions.

Please refer to the firm's disclosure website at https://rave.credit-suisse.com/disclosures for the definitions of abbreviations typically used in the target price method and risk sections.

See the Companies Mentioned section for full company names

The subject company (STO.AX) currently is, or was during the 12-month period preceding the date of distribution of this report, a client of Credit Suisse.

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Additional information about the Credit Suisse HOLT methodology is available on request.

The Credit Suisse HOLT methodology does not assign a price target to a security. The default scenario that is produced by the Credit Suisse HOLT valuation model establishes a warranted price for a security, and as the third-party data are updated, the warranted price may also change. The default variable may also be adjusted to produce alternative warranted prices, any of which could occur.

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