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 Valuation of Golar LNG

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Executive Summary

Golar LNG is a company engaged in the LNG shipping business. The company fleet has grown from 6 vessels in 2001 to today's fleet of 13 vessels, and a further 13 vessels due to be delivered from Q3 2013. The company is currently engaged in acquisition, ownership, operations and chartering of LNG carriers, FSRU vessels. It has also recently signed a conditional agreement for developing its first FLNG vessels, with the aim of launching three converted vessels within mid 2015.

This thesis has an analytical approach, emphasizing detailed valuation of the individual vessels. The valuation is supported by a strategic external analysis (Porter's five forces model), but the cash flow calculations are given the highest focus, and they are also based upon some reasoned assumptions not being highlighted in the strategic analysis.

The estimated share value is evaluated by use of comparative analysis, and is also made subject to a sensitivity analysis of the individual model-parameters.

Golar LNG is trading at higher multiples than its peer group, and the share price is exposed to changes in charter rates due to many vessels are not committed to charter contracts.

The thesis concludes that Golar LNG is currently fairly valued at NASDAQ, albeit the market value is 8-10% less than my estimated share value. Given the short term uncertainties surrounding carrier charter rates, and the company's low contract coverage in the carrier business segment, a 'HOLD' strategy is recommended until some downside risk is removed. However, in the long run, it is expected that the stock will be a good investment, even at current share price levels.

Acknowledgements

The thesis is written as part of a master's degree at the University of Stavanger.

Applying subjects and theories in practice has provided me with insight and curiosity for further knowledge. An important lesson has been that as one has to simplify and make assumptions to align reality and theory, any company valuation is subject to great uncertainty, and has many pitfalls. As such, highlighting the degree of uncertainty is as important as the valuation itself – the two aspects are complementary.

It has also been very interesting to learn about the natural gas industry and LNG in particular. In writing this thesis I have gained knowledge beyond what I had imagined on the outset, even on subjects not directly relevant.

I would like to thank everyone that has encouraged me along the way, the lecturers at UiS, and also my counselor, Klaus Mohn, for his quick feedback and suggestions.

Stavanger, May 2013.

Rolv Martin Hagen

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1 Introduction.

1.1 Choice of Topic

The calculated valuation of an asset depends on the future estimated cash flow generated by the asset within an anticipated period of operations. Theoretically, the cash flow can be derived from an infinite future, thus causing any estimate to contain large elements of uncertainty. Any valuation will be flawed by forecasting errors, and no method for valuation will be better than the accuracy of the assumptions and the projections forming basis for the valuation. The accuracy of cash flow projections however, tend to vary quite a bit between asset classes, and also much so even within any asset class. Cash flow estimates for stocks will typically be subject to larger forecasting errors than real estate etc. Also, stocks are far from uniform in their earnings volatility, and some stocks will tend to experience more volatile earnings than others. The shipping business has a history of volatility, and as freight rates spike or collapse, the valuation of shipping companies tend to follow suit.

By means of oversimplification, one can argue that freight rate levels are derived from market supply and demand. In the long run the market will fluctuate around a state of equilibrium where vessel supply equals vessel demand, but there will inevitably be periods of under- and overcapacity respectively. Increasing demand for tonnage in any shipping segment will either stem from longer sailing routes, higher goods volume or both. To some extent these variations in demand can be anticipated, but far from always. Demand shocks (as well as supply shocks) will occur from time to time, unsettling the shipping market.

The sudden occurrence of regional supply or demand of a commodity can initiate such shocks, as has been the case time and time again through history. In several places natural gas is emerging as a commodity abundant in supply, most notably in North America but also potentially in several other regions around the world. In part, the increased availability of natural gas is due to new extraction technology, turning unconventional plays previously thought uneconomical, into economically sound extraction projects. With natural gas expected to make up for some of the projected relative decline in fossil fuels as share of the world's total primary energy demand (TPED) (Statoil ASA, 2012), Liquefied natural gas (LNG) carriers and LNG mid- stream vessels seem to be an interesting sector in the shipping business. As one of the world's largest players in LNG transportation at sea, with over 30 years of experience, and a strategic objective to become an integrated mid- stream player in the LNG industry, Golar LNG looks to be an interesting valuation case.

1.2 Problem area

As mentioned, the valuation of an asset will depend on the future estimated cash flow generated by the asset. The cash flow depends on revenues and expenses, as illustrated by the following formula (nominal terms):

$$CF = p \times y - w \times x$$

Where,

  p   = Price (rate proceeds etc)

  y   = Output volumes (ships on charter etc)

  w   = input prices (E.g. wages, bunker etc.)

  x   = input volumes (E.g. personnel, bunker consumption etc.)

In the shipping business the cash flow will mainly be determined by carrier charter rate levels, on charter time and operating costs. However, given Golar LNG's strategy to become a mid-stream player in the LNG industry, they will also derive an increasing amount of their income from the activities generated by their Floating Storage and Regasification Units (FSRU) and perhaps most notably their plans to introduce Floating Liquefaction (FLNG) vessels. Whilst FSRU and FLNG may be frontrunners in any region's early stage as importer/ exporter respectively, the vessels may also serve a purpose in exploiting arbitrage opportunities. Such opportunities exist whenever there is a divergence in regional prices (including transportation costs) for a commodity, which has been the case for natural gas prices the latest years:

"World gas price developments in 2011 and 2012 brought fresh evidence that a unified global gas market with price differences reflecting only transportation cost differences will not be a reality anytime soon. While Asian LNG import prices in early May 2012 hovered just below 18 USD/ MMBtu, European spot prices were in the 9- 9.50 USD/MMBtu range. The US Henry Hub reference price dipped below even 2 USD/MMBtu in early 2012 before staging a modest recovery to around 2.50 USD/MMBtu in May". (Statoil ASA, 2012)

The regional LNG price differences clearly constitute an arbitrage opportunity, which may be exploited by increased regional production of gas, or by use of LNG Carriers.

1.2.1 Problem statement

Estimate the value of Golar LNG, and by comparing multiples with peer group companies to evaluate if the estimated market value possibly reflects potential added value from mid-stream LNG strategy compared to down- stream strategy.

1.3 Limitations

I have chosen to use fundamental valuation/ DCF in this thesis, with the supplementation of comparative valuation. The supplemental valuation method may indicate if Golar LNG is offering a premium value to investors, compared to that offered by down- stream peers, thus supporting the possibility that the mid- stream player strategy provides perceived added value (e.g. that the market believes there will be higher growth/ earnings for FSRU- / FLNG vessels than for carriers). Due to the complexity of the ownership structure of Golar's fleet, and lack of detailed information regarding historical financial measures for the individual vessels I have had to make quite a few assumptions. My assumptions are explained and justified in chapters 5, 6 and 7. Most assumptions will be conservative rather than liberal. Also, available sources for information on charter rate forecasts tend to have limited and ageing info as opposed to what can be reviewed on pay-per-view web pages. I have opted to emphasize rate forecasts/ -assumptions as suggested by Golar LNG, as they are in line with the view of respected analysts. Obviously, these projections may well turn out to be biased – as may all forecasts.

2 Golar LNG – the company and its operating environment.

2.1 History & Strategy

As the name indicates, Golar LNG is a LNG shipping company. It was formed in May 2001 from its predecessor Osprey Maritime Ltd, but can trace its roots all the way back to 1946 when Gotaas-Larsen Shipping Corporation was founded. Gotaas Larsen entered the LNG shipping arena in 1970 by ordering its first LNG carrier – "Hilli", which is still a part of the fleet. Osprey Maritime Ltd acquired Gotaas Larsen in 1997 and was later taken over itself by World Shipholding Ltd, a company indirectly controlled by John Fredriksen and his family. The company was listed on Oslo Stock Exchange (OSE) in July 2001 under its current name and on NASDAQ in December 2002. Recently the stock was delisted from OSE but can still be traded in Norway through its subsequent OTC listing. The company fleet has grown from 6 vessels in 2001 to today's fleet of 13 vessels, and a further 13 vessels due to be delivered from Q3 2013. The company is currently engaged in acquisition, ownership, operations and chartering of LNG carriers, FSRU vessels and has also recently signed a conditional agreement for developing its first FLNG vessels, with the aim of launching three converted vessels within mid 2015. The three remaining 1st generation carrier vessels in the company's existing fleet have been earmarked for conversion. As the company in 2005 ordered the first ever conversion of an existing LNG carrier into a FSRU vessel, the news of FLNG vessel conversion ties in nicely with Golar's strategic objective of becoming an integrated mid-stream player in the LNG industry. (Golar LNG, 2012)

It is worth mentioning that Golar LNG has embarked on a business model where they "drop down" vessels to a limited partnership, Golar LNG Partners (GLMP). This is a way of financing growth by raising funds from selling the vessels to the limited partnership at fair value and using the proceeds to finance further fleet growth. This also means that Golar LNG's share of the time charter cash flow, generated by the "dropped down" vessels, will be reduced to match the company's rate of ownership in Golar LNG Partners. At the time their ownership is 54,1% (of which 2% is as general partner, giving Golar LNG management right to legal control of the partnership). There are provisions where the ratio of cash flows to Golar LNG from the partnership will be in excess of Golar LNG's stake, and that is if the cash available for distribution will exceed a pre- defined amount, giving Golar LNG (as holder of IDRs) a progressively larger share of available cash.

	Total Quarterly Distribution Target Amount	Marginal Percentage Interest in Distributions		
		Unitholders	General Partner	Holders of IDRs
Minimum Quarterly Distribution	$0.3850	98.0%	2.0%	0%
First Target Distribution	up to $0.4428	98.0%	2.0%	0%
Second Target Distribution	above $0.4428 up to $0.4813	85.0%	2.0%	13.0%
Third Target Distribution	above $0.4813 up to $0.5775	75.0%	2.0%	23.0%
Thereafter	above $0.5775	50.0%	2.0%	48.0%

Figure 1 Available cash distribution ratios from Golar LNG Partners to limited partners (unitholders), general partners and holders of IDRs (Quarterly distribution amount is in USD per share). (Golar LNG Partners, 2013)

The vessels that are being sold to Golar LNG Partners are all on long term charters, with current average contract duration of 9 + years, and the strategy is to continue to drop down suitable vessels on long term charters. (Golar LNG Partners, 2012)

When the partnership strategy was announced, analysts were mostly positive. A common view is that Limited Partnerships (In this case Golar Limited Partners) are trading at high EBITDA multiples and premiums to underlying asset value. The valuation premium gives the partnership a lower cost of capital, making it an efficient way to grow and access capital. (Marine Money Group, 2011). Critics have voiced their opinion that the partnership strategy is nothing more than a Ponzi scheme, but this claim receives little support, as that would label all Limited Partnerships fraudulent (Norhona, 2012). To further support the credibility of the partnership, Golar LNG has recently relinquished legal control of the partnership to the board of GLMP.

2.2 About Golar LNG

The Company's head office is and will remain in Bermuda (Golar LNG, 2007). It currently resides in Hamilton, Bermuda. As is customary in the shipping industry, the company owns, leases and operates its vessels (and new builds while under construction) through separate subsidiaries and also through the limited partnership. As of Q3 2012, Golar LNG states its target as "finance new build program and continue dividend growth without additional equity raising or realizing […] investment in Golar Partners" (Golar LNG, 2012). In the following, by referring to Golar's fleet; this includes the vessels owned by Golar LNG Partners.

2.3 Operations

Golar currently operates 2 types of vessels (LNG Carriers and FSRUs) with concept plans launched for introducing a 3rd class (FLNGs). 13 vessels are in operation, with an additional 13 vessels on order for delivery in 2013-2015.

- FLNG vessels cools natural gas until it liquefies (LNG) and become suitable for transport in LNG carriers from one port to another.
- LNG carriers are high spec tankers, able to keep LNG in its liquefied form during transport by maintaining suitable temperature regime (cold).
- FSRU vessels are designed to transfer LNG from carriers to its own tanks, and to store it until discharge to land or to smaller vessels, regasifying the LNG in the process.

The following three illustrations show Golar's operational area in the gas industry, and provide an up-to-date fleet status (including new builds).
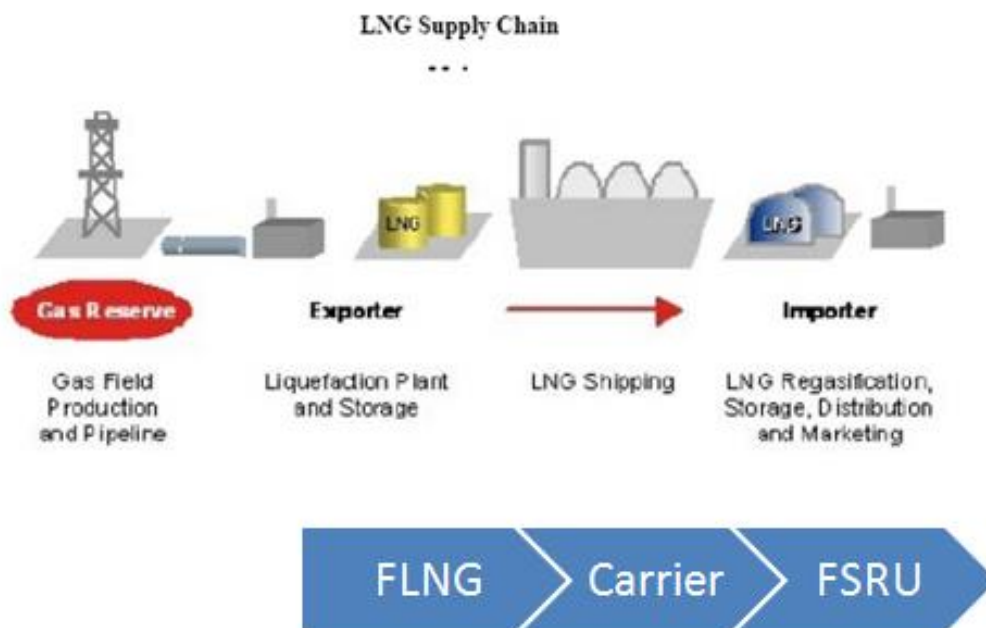
Figure 2 The three segments of operation for Golar (Golar LNG, 2012)

Vessels on long term charters are sold to GLMP, the others are being operated by GLNG.
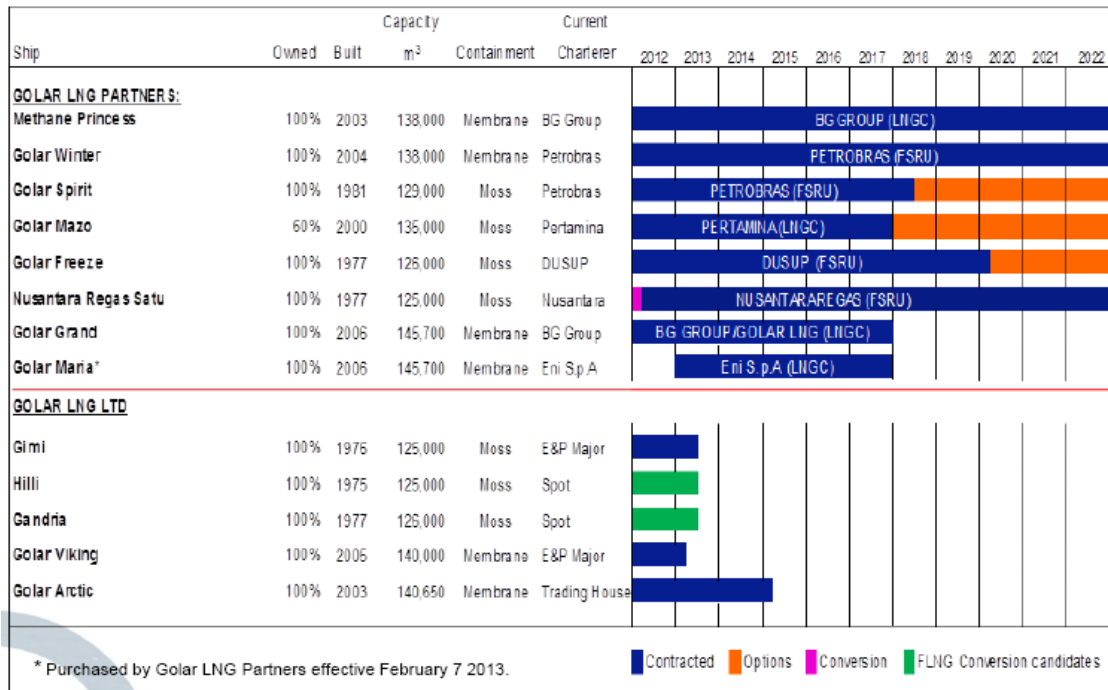
Figure 3 Current Operating Asset portfolio (Golar LNG, 2012)

The portfolio is well positioned to capture the market, given persisting or increased high freight rate levels.
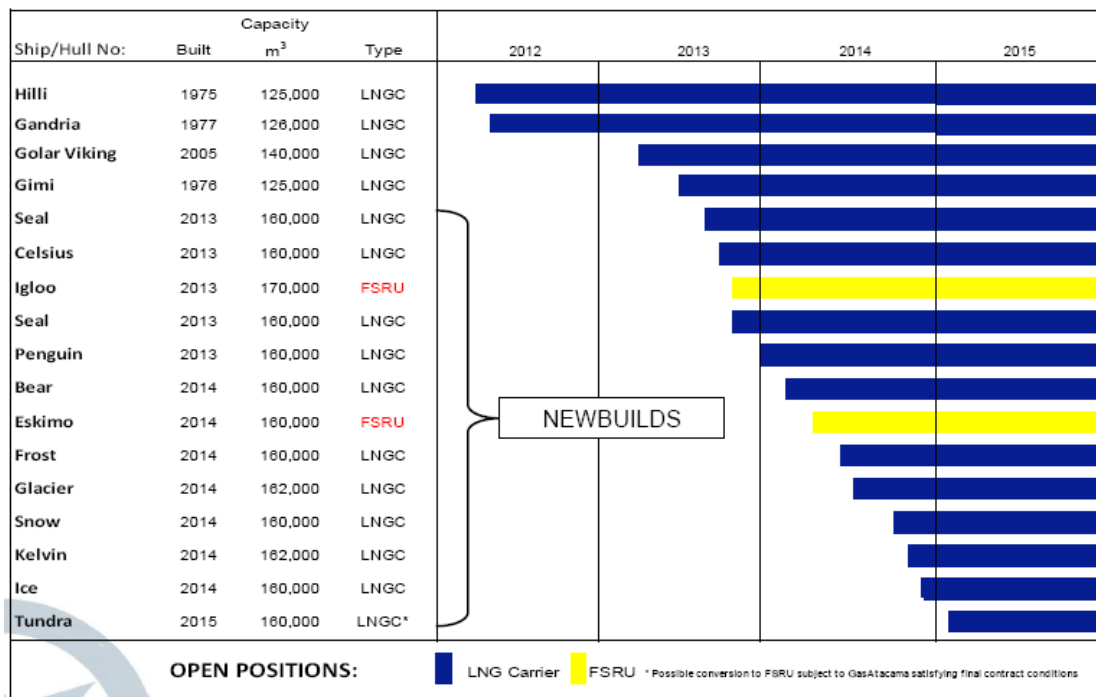
Figure 4 Open positions in market. Operating vessels and new builds (Golar LNG, 2012).

In the period from 2013-2015 the company has 17 vessels coming off contract or entering the market from the new build program. The open positions are expected to generate an increase in earnings, as was demonstrated with the recent 5 year contract for the carrier "Golar Maria" (Golar LNG, 2012). As will be discussed further in chapter 4, the many open positions present a challenge as well. With the first vessels becoming available this year, it is imperative that Golar is able to secure charters for the vessels, and fast. However, with the planned conversion of the last three 1st generation carriers (of which two are already in lay- up pending commencement of FLNG conversion work) the company's available fleet will consist only of the newest and most attractive vessels the market has to offer.

2.4   Shareholders and Share price.

LARGEST SHAREHOLDERS AS OF 1.10.12

Shareholder	Number of Shares	Ownership (%)
World Shipholding Limited	36755080	45,71%
Bank of New York	5674254	7,06%
Morgan LLC	3823148	4,75%
SSB Trust	3693535	4,59%
Goldman	3362131	4,18%
JP Morgan Bank	3282072	4,08%
Northern Trust	3073681	3,82%
First Clear	1595889	1,98%
Pershing	1576276	1,96%
Morgan Stanley	1551973	1,93%
ML SFKPG	1445505	1,80%
CHS Schwab	1325973	1,65%
National Financial Services LLC	1236888	1,54%
UBS Finance	841811	1,05%
US Bank Corp	706493	0,88%
TD Ameritrans	583056	0,73%
Credit Suisse	475816	0,59%
BNP Paribas	307606	0,38%
Int. Broker	225307	0,28%
Others	8870573	11,03%
Total	80407067	100,00%

Figure 5 Shareholders in Golar LNG (Golar LNG, 2012)

The largest shareholder is World Shipholding Ltd, a company indirectly controlled by John Fredriksen and his family. John Fredriksen controlled companies have a history of paying high dividends to its shareholders, and as high yield stocks are quite popular in the US, a number of US based financial institutions can be found amongst the largest shareholders.

The share price has risen significantly since the slump during the financial crisis in 2008-09, and has seen an increase exceeding 700% in the last 4 years. The last 12 months the share price has been relatively stable at around USD 35-40 per share.

3   Valuation theory.

This chapter is a review of models traditionally used for valuation of companies, followed by my reasoning for choosing specific methods over the others. The main source for information used in this theoretical chapter is (Penman, 2010) and (Bodie, Kane, & Marcus, Investments, eighth edition, 2009).

3.1   Valuation models

There are four basic techniques commonly used for valuation:

- Fundamental valuation
- Comparative valuation
- Option based valuation
- Asset based valuation

3.1.1   Fundamental valuation

The method uses publically accessible information such as financial statements etc in combination with forecasting. Future cash flows are forecasted based on available information and strategic analysis, and are discounted to present value by a reasonable rate of return. Common practice is to estimate explicit cash flows over a period of 5 years and then assume one or more subsequent periods at steady growth rate (-s).The method is best suited for valuing companies that are no longer in the initial growth phase, as earnings for such companies are more predictable and historical information is accessible.

There are two methods to choose from:

- **Value of the firm by discounting FCFF (Free Cash Flows for the firm)**
- **Value of equity by discounting FCFE (Free Cash Flows to equity holders)**

By subtracting and adding debt respectively, both methods can be used to derive the value as estimated by the other, and they should be consistent.

The formulas for the two methods (FCFF and FCFE) are as listed below:

$$\mathbf{FCFF} = EBIT \times (1 - t_c) + Depreciation - Capital\ expenditures - Increase\ in\ NWC$$

And

$$\mathbf{FCFE} = FCFF - Interest\ expense \times (1 - t_c) + Increases\ in\ net\ debt$$

Where

      EBIT   = Earnings before interest and tax

      t_c = Corporate tax rate

      NWC = Net working capital

The value of the firm and equity respectively is calculated as follows:

$$\text{Firm value} = \sum_{t=1}^{T} \frac{FCFF_t}{(1+WACC)^t} + \frac{V_T^F}{(1+WACC)^T}, \text{where } V_T^F = \frac{FCFF_{T+1}}{WACC-g}$$

$$\text{Equity value} = \sum_{t=1}^{T} \frac{FCFE_t}{(1+\rho_E)^t} + \frac{V_T^E}{(1+\rho_E)^T}, \text{where } V_T^E = \frac{FCFE_{T+1}}{\rho_E-g}$$

Where,

      T = Number of years in the explicit period

      V_T = Terminal value to firm (F) and to equity (E) respectively

      g = Terminal growth rate

      ρ_E = Cost of equity

The terminal value is being used to avoid adding present values of an infinite sum of cash flows. In the example above, the terminal value is the present value of a constant growth perpetuity, which can be substituted for multiples of EBIT, book value, earnings etc.

3.1.2 Comparative valuation

As the name implies, this method derives the value of a company by comparing it to information about other companies and their pricing. Comparative valuation is quite easy, not very time consuming to perform and thereby commonly used.

Firstly, one identifies comparable firms, then multiples are calculated from selected accountable financial measures in this peer group, and finally the median/ average of those multiples are applied to the corresponding financial measures for the target firm in order to estimate a market value. One should be aware however that this method is only as accurate as

the companies and financial measures used in the comparison. If for example one or more of the companies are in different phases of the life cycle compared to the target company, the multiples will not be very comparable. Also it can be argued that by choosing to include and /or omit certain financial measures one can easily arrive at a biased valuation. Last but not least, the comparative valuation method does not take into account the state of the markets in general. Erroneously valued markets will cause the target company to be erroneously valued as well.

Commonly used measures are:

- P/B (Price to Book).
  Suggested Company value is found by multiplying its balance sheet equity by a multiple commonly used for the company's group of industry peers. The multiple will not be the same for different industries, and will typically be higher in growth industries than in mature industries.

  $$P/B = \frac{Market\ value\ of\ equity}{Net\ Asset\ Value\ on\ balance\ sheet}$$

- P/E (Price to Earnings).
  Suggested Company value is found by multiplying its current earnings by a multiple reflecting risk- and growth expectations in the industry. This is the most commonly used multiple, and it is often calculated as an average of observed P/E multiples for similar companies in the industry. The multiple will typically be higher in perceived growth industries/ -companies than in a classic blue chip company. It is important to distinguish between P/E ratios calculated on actual or estimated earnings respectively.

  $$P/E = \frac{Market\ value\ of\ equity}{Net\ income\ (EPS\ x\ number\ of\ shares)}$$

- EV/ EBIT (Enterprise value/ Earnings before interest and tax).
  Suggested Company value is calculated by multiplying EBIT with a multiple commonly used for the company's group of industry peers. EBITDA may be used instead of EBIT as denominator, but for capital intensive companies, depreciation and amortization, while non- cash charges, reflect real expenses associated with wear and

tear on the firm's assets. If an investor wishes to capture the need for reinvestments EBIT should be the preferred denominator.

$$\text{EV/EBIT} = \frac{Enterprise\ value\ (equity\ and\ debt)}{EBIT}$$

- P/ S (Market value of equity/ revenue)
  Suggested company value is calculated by multiplying last year's revenue by a multiple commonly used for the company's group of industry peers.
  $$\text{P/S} = \frac{Market\ value\ of\ equity}{Revenue}$$

One important note is that many analysts prefer to use EV/EBIT or Price/Sales to at least put the other calculated multiples in context. It is not uncommon that companies resort to "window dressing", that is; to make the financial statements look as positive as possible. EV/EBIT and P/S will limit such options to a greater extent than e.g. P/E does.

3.1.3 Option based valuation

An option is defined as a right but not a duty to buy or sell an asset at a certain time and at a set price. (Hull, 2012) In many ways a company works by the same mechanisms, since the management or board of directors can choose to act or not act upon business opportunities and investment decisions. The option based approach to valuation aims to assign a value to decision options and decision flexibility, thereby treating the company as a portfolio of real options.

Basically the options may be to:

- Delay a project.
- Commence a project due to potential beneficiary opportunities arising as a result.
- Abandon a project.

In practice, this method is sometimes used as a supplement to fundamental valuation by isolating flexibility from the fundamental value and calculating it as a separate value by way of option pricing. The estimated present value of an option is then added on to the calculated equity value from the fundamental valuation to find the value of the company's equity. The alternative to using supplementing option based valuation is to make sure the flexibility is

directly reflected in the forecasted cash flows used in the fundamental valuation. For example, due to overcapacity and failure to secure financing, several cancellations of ship new builds have been observed over the last few years. Normally, such cancellations have had an effect on a firm's market value, so clearly there is value connected with the action/ option. Investors may choose to price this effect as an option, or to simply include one or more cancellations in the forecasted cash flows from a certain point in time. The problem facing an investor will be the same in both instances; what value should one assign to the option?

3.1.4 Asset based valuation.

Asset based Valuation estimates a company's value by identifying and summing the value of its assets. The value of equity is then calculated by deducting the debt value. This looks easy enough, but a significant problem is what is omitted from a company's balance sheet.

Intangible assets are only included on a balance sheet if they have been purchased, and as such have been assigned an objective/ unbiased value. This means that for example a brand name will not be given a value using asset based valuation and neither will synergy effects, intellectual property or e.g. the conversion of an office building to a production facility.

Strictly speaking however, this method can be used with some accuracy for companies that own for the most part easily marketable assets. Unless markets are under severe credit rationing (as during the financial turmoil in 2008- 2009) real estate companies and shipping companies will typically have access to well functioning second hand markets for their assets, thereby being able to estimate an accurate value of their equity. The same goes for companies which main assets are natural resources. Indeed these firms are sometimes referred to as "asset based companies". When mapped, the resources can quite accurately be given an estimated value which will form a base for valuation of the company after deducting the debt.

This method can also be used with some credibility when liquidating a company, normally at a lower value than in the case of continued operations.

3.2 Choosing a method

Ultimately it is the expected cash flows that will serve as a baseline for valuation of any company. However, the generated cash flow is affected by several forces (drivers). The main value drivers for the residual stakeholders (shareholders) in a shipping company are amongst others; Operations, Risk Management and Financing. These drivers can in turn be influenced to a varying degree by a company's strategy, its management and also by the operating

environment (in wide terms – the world economy). Discussing how to best value a shipping company, it can be argued that there is a well functioning second hand ship-market, thus enabling investors to at any point in time calculate an asset based valuation. However, today's pricing of an asset may not be even remotely accurate in the distant future, and as 6 of Golar's vessels (mainly FSRUs) are all tied up in very long term charters, how can one accurately estimate the market value of a vessel not becoming available for sale until 10- 20 years from now? Looking at the new build prices over the last 10 years, they have varied from USD 150 mill to USD 250 mill. Apart from difficulties in assessing long term asset valuations, the asset based valuation method will also fail to include value drivers such as operations- and to some extent risk management. Golar LNG's plans for converting old carriers to FLNG vessels will not be accounted for in an asset based valuation of those vessels; neither will the estimated 10 year life extension to those vessels. (Golar LNG Partners, 2012) Arguably they should not be considered either; however according to Golar, such converted vessels can be launched in H2 2015. Also, the company is evaluating FSRU conversion of 2 of its carrier new builds. (Golar LNG, 2012)

It is obvious that when pricing a company by its balance sheet alone, one will not take into account that companies are managed in different ways and by different people. For this reason I have chosen not to value Golar LNG by way of asset based valuation (as reported in the balance sheet).

The same reasoning is used when opting not to solely use comparative valuation. As companies are managed in different ways and have different strategies, it seems insufficient to calculate their value by using the same multiple (-s). Additionally, there are not that many directly comparable peers available. Comparative analysis is a good tool for checking the credibility of one's own valuation conclusions, and can also be used to check if traits that set a company apart from its peers seem to be included in the market valuations. If for example Golar LNG (aspiring to be a mid stream player) is trading at higher multiples than its down-stream peers, this may indicate the market is assigning a premium to the mid stream positioning strategy.

As mentioned in chapter 2.1, there is a possibility that GLNG will receive a larger portion of the earnings in GLMP than their 54,1% stake in the partnership. Although not an option as much as a possibility, this upside could potentially be priced as a call option. The problem however is that it is hard to say how many vessels will be dropped down to GLMP, and

subsequently to predict when and if the earnings will reach a level entitling GLNG to payoffs according to its IDR's. Any attempted pricing of this "option" is bound to be affected by so many assumptions that I have chosen not to do it. At the moment the IDR's are not in effect, but if they ever take effect, this would represent an upside in GLNG earnings.

By excluding the other methods, my valuation of Golar LNG will be done by way of fundamental analysis. As Golar LNG is operating in a capital intensive industry, and companies controlled by John Fredriksen are renowned for innovative financing/ leveraging, one can expect the debt-to-equity ratio to change substantially on a regular basis for Golar LNG. It therefore makes sense to first value the firm and then to find the equity value by subtracting net debt at the time. By the above reasoning, directly calculating the value of the equity would be more complicated.

An important element in the fundamental analysis will be the value of expected cash flows from not yet officially contracted projects. Mid- stream growth is implied in Golar LNG's official strategy, and in the fourth quarter 2012 presentation, they reiterate this by stating:

"Limited undedicated FSRU tonnage in market […] market will require new builds"

"[Regarding FSRU, company has..] Ability to build speculatively"

"Significant interest from the market for fast track modular liquefaction solution that is very competitive with land based alternatives"

In my calculations I will not price in additional new builds, but I will assume the 3 old carriers are converted into FLNG vessels. The value of the FLNG conversions will be estimated as discounted cash flows and not as option based value.

The valuation model will be as follows:

The total value of the firm's equity will be calculated via the FCFF by using the summed EBIT contribution from 4 segment values, less the negative EBIT contribution from general company costs.

The 4 segments to have EBIT estimated separately are:

- Existing Carrier fleet

- Existing FSRU fleet

- Prospective converted FLNG fleet

- New build fleet as a whole

A final note on the method; I am aware my chosen method can arguably be labeled a "hybrid" asset based valuation, as the vessels (assets) are being valued independently (by their DCF). However, according to Penman (2010), asset based valuation does not require forecasting. In other words, according to Penman, asset based valuation is done by balance sheet alone, not by discounting cash flows.

4   Strategic Analysis

This chapter will briefly discuss projections for world energy demand but will mainly be a strategic analysis of the company and its operating environment. A strategic analysis seeks to identify opportunities and threats (external) and weaknesses and strengths (internal). In this thesis, the external analysis will be given priority.

4.1   Energy markets and gas industry developments.

4.1.1   World energy projections

Long term estimates and projections for periods of 25-30 years will not allow for unforeseen events. Such unforeseen events are typically the ones that may cause a change in trend, and estimates to become less accurate. Estimates will also vary depending on one's bias and choice of method and models. Different institutions will have different growth estimates, however there is not much dissent over whether or not the demand for energy will increase or decrease in the long run – It will increase.

It is foreseen that energy efficiency will increase along with increased energy demand, and by that reduce the rate of demand growth somewhat. In other words, the energy demand will most likely not rise at the same rate as the increase in world GDP. Higher energy efficiency/ lower energy intensity is caused by different factors such as technology and policies, most notably policies due to heightened awareness of the proposed man made climate-crisis. Of particular interest for the Global Gas industry is the projected changes in global energy mix (see fig 9).

4.1.2   Gas Industry development

Recent short term development suggests sluggish demand and growing supply for natural gas. There are however regional variations. In 2011, the demand in Europe fell, it rose slightly in the US, and Asia (spearheaded by China and Japan) saw a considerable increase. The reasons and time perspective for demand variations are several, but for the most part, demand is affected by weather, political measures, supply shifts, income vs. price, technology policy and pricing of substitutes. In Europe, the demand fell due to absent economic growth, mild weather and carbon emission prices favoring coal over gas. The slight increase in US demand was caused by gas supply growth and a subsequent drop in gas prices offsetting the negative effects on demand from mild weather. Demand for gas in Japan increased due to the limited

power output from the country's nuclear plants after the Fukushima disaster, and in China the gas demand rose as a result of government energy policies.

In the long run however, there are other factors that will affect the gas industry. According to Statoil's projections, an average yearly increase of 1.6% in world gas demand over the next 30 years is to be expected (base scenario, excluding shifts to the underlying trend in the world economy) (Statoil ASA, 2012).

Sustained growth in demand requires steady and uninterrupted supply, and this seems more likely now than just a few years ago, with huge reserves being uncovered around the world. Pipeline construction is both ongoing and being planned from Russia and the Middle East into Europe and Asia. Unconventional plays and newly discovered conventional reserves around the world may also contribute to more steady regional supply. Of the projected increase in world demand for natural gas, LNG demand is expected to play a role; increasing from today's 280 Million Tons Per Annum (mtpa) to potentially 400 mtpa by 2020 and 500 mtpa by 2030.

Source: Ernst & Young assessments of data from multiple sources
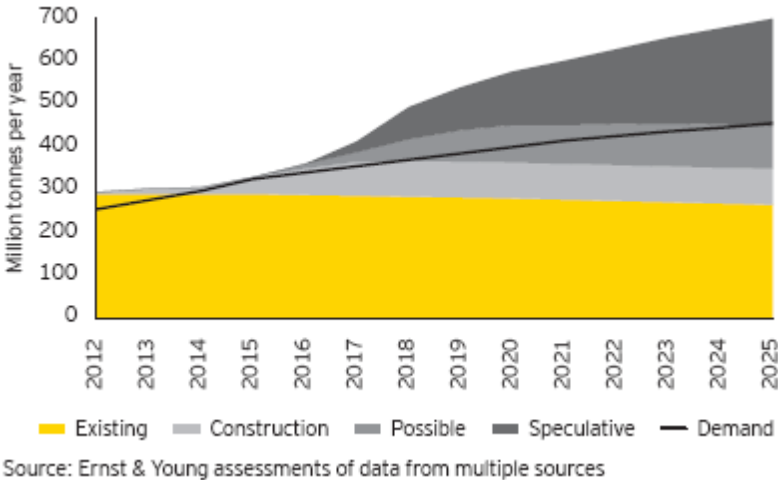
Figure 6 Projected Global LNG capacity and demand. (Ernst & Young, 2013)

It is obvious that unless LNG demand turns out to be higher than expected, any additional speculative LNG export capacity is bound to cause LNG supply-side competition.

Australian LNG is set for large scale export once the ongoing construction of liquefaction plants is finished, and several other regions are either in a construction or planning phase for LNG export, ref fig 7.

The US may be considered a somewhat special case, as despite its vast gas reserves, and a persisting situation of domestic natural gas oversupply, the US government has so far expressed hesitation towards exporting LNG. The government wishes to re-establish the country's self sustainability for fossil fuels; a luxury that hasn't been enjoyed in over 40 years, and as a result only one out of a dozen proposed LNG export projects has yet managed to secure all necessary contracts and required permits. This policy may cause the gas price (Henry Hub) in North America to remain at a low level for some time, but it is expected that eventually the US gas producers will be allowed to export LNG, especially once the consumers and production industry are back on their feet after "The Great Recession" and have increased affordability for higher energy prices.
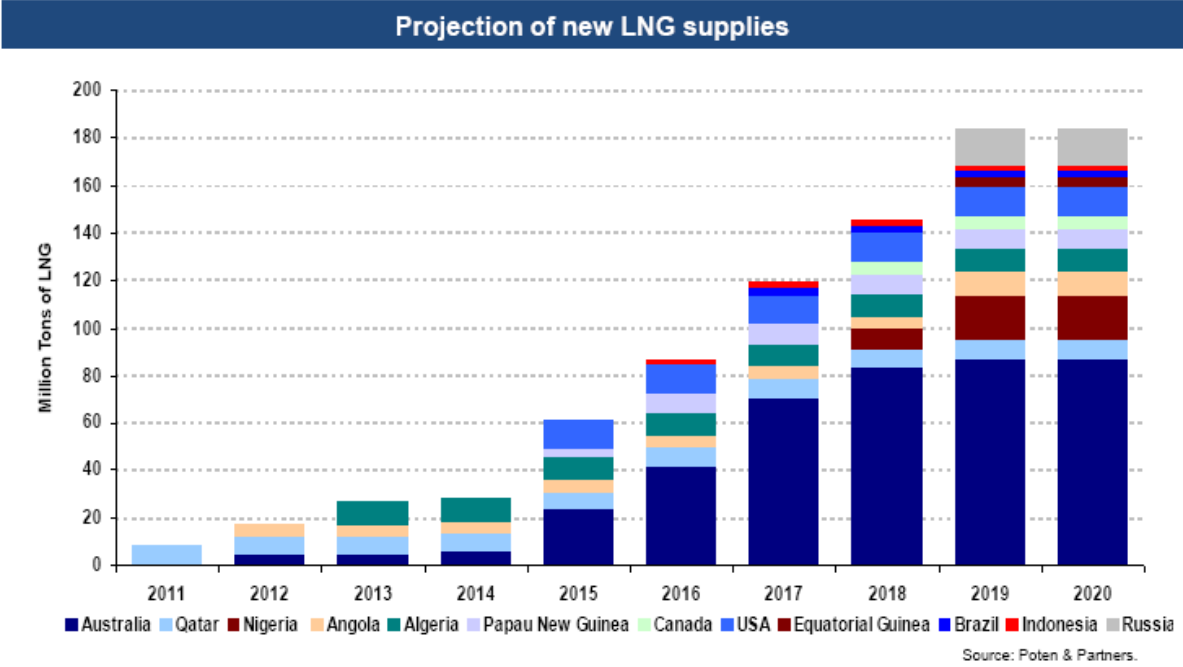
Figure 7 Projected LNG supplies (Golar LNG Partners, 2011)

Since the above illustration was issued, there have been changes in the projections, and several liquefaction plants have had construction delays, however it is expected that liquefaction capacity picks up by 2016.

4.2   External analysis

The purpose of the external analysis is to chart Golar LNG's operating environment, to better assess the level of competition in the business. The analysis will be performed using Michael E. Porter's Five Forces Model.

In the following, all five forces will be discussed, with the inclusion of policymakers and regulations under substitutes.

4.2.1 Competitors (Rivalry)

Under "perfect market conditions" all profits would be competed away, and business strategy would be obsolete. In the real world however, even if markets are relatively efficient, there will always be "pockets of imperfection" (The international society for decision support systems, 1995). Some companies will hold an advantage over other companies, giving them the edge. Such advantages may be short lasted or persistent.

In the LNG shipping business, the fiercest competition over the next few years will be in the carrier segment. This due to the fact (as explained in chapter 4.2.3) that the next few years may see an oversupply of carriers relative to liquefaction capacity. In the carrier market, Golar LNG does not appear to hold an advantage over their competitors. Its carriers are mainly operating on spot rates or short term contracts, and as such Golar is as- or more vulnerable to volatility as other large shipping companies such as Hoegh LNG, BW Gas, and Teekay. These shippers have more carriers on long term contracts, and are therefore less exposed to down- and upside in charter rates. As a consequence, the stocks have lower volatility than GLNG, which is confirmed by lower beta-values (just under 1 according to financial websites). From history and other shipping segments, we know that ships will continue to accept cargo even below breakeven rates, so it is to be expected that the rivalry can be fierce and potentially damaging if carrier rate levels go down.

For FSRUs the market is tighter, and is expected to remain so in the foreseeable future. As the only company to have completed fast track FSRU conversion projects, and with an ability to build speculatively, Golar LNG claims to be uniquely positioned to capture opportunities in a tight FSRU market. (Golar LNG, 2012) Recently the company was named the preferred bidder for Jordan FSRU, and they own the only FSRU vessel available in 2013. According to Golar LNG, they see strong opportunities, and limited competition in the FSRU market.

FLNG vessels are still in the development stages, and it is hard to tell how the competition will be, but as one of the pioneers also in this segment, Golar LNG is in a position today that may see them as a strong FLNG market player eventually. There are other FLNG projects ongoing, but with a forecasted lack of worldwide liquefaction capacity relative demand, it is to be expected that the market is there to be conquered.

Of the previously mentioned peers (Hoegh LNG, BW Gas and Teekay) only Hoegh seems directly comparable as they have carriers and FSRUs as well as advanced FLNG development plans. The two others are not specifically involved in FSRU/FLNG as of early 2013, and are also too diversified into other segments such as crude oil and product tankers to be directly comparable. There are other shippers that are comparable, but as they are privately held, it is hard to use them for comparison. From what I can see, Golar and Hoegh are the only two publically traded 100% specialized LNG shippers in the mid- stream segment.

4.2.2 Bargaining power of suppliers

The more differentiated a product is, the higher the bargaining power of the supplier. (Hitt, Ireland, & Hoskisson, 2001) Golar LNG's main suppliers are shipyards building their ships, so this is where they are the most exposed to supplier bargaining. However the company also has suppliers on the operational side, most notably staffing, fuel and maintenance.

The shipbuilding industry will tend to overheat and deepfreeze along with the spikes and slumps in the shipping business. When order books are full, the yards may set higher prices or reduce quality of the delivered product to increase profits. If on the other hand the orders are sparse, the yards have a weakened position and may have to accept lower prices and more sophisticated delivery options. As it is, Golar LNG is part of a John Fredriksen owned group of maritime companies (Seadrill, Golden Ocean Group, Frontline, Frontline 2012, Ship Finance) and their subsidiaries. This group of companies constitutes one of the largest maritime contracting company clusters in the world, and has time and time again showed its ability to negotiate (and execute) favorable terms and conditions. Due to the combined size of

the Fredriksen- dominated group of companies, Golar LNG will probably have stronger supplier bargaining position relative to most of their competitors.

4.2.3 Bargaining power of customers

Customer's bargaining powers will be determined by their dependency of a company. In other words; if a company's services are in high demand, the customers have little bargaining power. Reversely the customer will be in a strong bargaining position if they do not depend much on a company's services. As previously noted, Golar does not currently operate much of their fleet on long term contracts. Only 8 of the 26 vessels (existing and new builds) are tied up beyond 2014, and of those 8 only 4 are LNG carriers. Should the rates drop substantially in the next couple of years; the company may suffer reduced earnings if operating in the spot market or it can be bullied into accepting sub- optimal contract freight rates. On the other hand, should the rate level increase, then the table is turned and the customers are at Golar's mercy.

The company could charter out more vessels on favorable long term contracts (as recently done for "Golar Maria") to reduce the risk, but on the other hand that may not be possible. That the fleet's FSRUs are all on very long contracts but few carriers, may just as well be a result of relative customer strength in the carrier market, and that the customers expect to secure tonnage at lower rates in the future. In fact there is only one FSRU vessel available for charter in 2013, and most new FSRU projects are all on 5 year + terms.

The going concern is also that liquefaction capacity cannot keep up with the carrier capacity in the next couple of years, and thereby will put downward pressure on the carrier rates. Shipping analysts expect the carrier capacity to increase by 16% over the next 2 years, but liquefaction capacity to rise by no more than 9.7% in the same period, thus potentially causing carrier oversupply and possible rate slump unless offset by longer sailing routes (Bloomberg, 2012).

However, if Golar LNG follows through with its plans to become a fully integrated mid stream payer, they may in a couple of years be in a position to benefit from a potentially tight liquefaction and regasification market. Relatively low carrier rates due to lacking liquefaction capacity may result in very favorable day-rates for the FLNG vessels as customers seek to take advantage of carrier rates that are off the highs, and what is assumed to be a continued arbitrage opportunity with considerable regional gas price differences.

4.2.4 Threat of new entrants

There are numerous suggested barriers to market entrance in different industries. Apart from capital cost they range from Government regulations to intellectual property and advertising. This analysis will focus on capital, technology and access to markets. In the case of LNG carriers, the main barriers will not be insurmountable. Yard capacity and financial funding channels are available, and the technology is well known. Market access is also available, with the order book for new builds not being completely disproportionate to expected market demand for LNG transport. In other words, the freight rates are not seen to enter crisis territory anytime soon (although a short term dip is possible the next couple of years).

FSRU vessels may present greater obstacles in the form of technology, capital and the bidding process as tendered by project owners. Most FSRUs today are being built for specific regasification projects as instigated by large industrial players or countries. Naturally the tendering parties will evaluate not only the cost of the project bids, but also the bidders perceived ability to deliver on time and with technology guaranteed to adhere to environmental and safety standards. When competing against large established players such as Hoegh and Golar plus some private companies (E.g. Excelarate energy), new entries may prove very difficult indeed.

For FLNG vessels/projects there are none established industry leading companies, but it seems logical that if a company has problems gaining entrance to the FSRU market, then establishing itself in the FLNG market will be even harder. The technology is newer, and the capital costs will be relatively higher as the vessels will be more or less prototypes. With Golar LNG having successfully converted several LNG carriers into FSRU vessels, they may have an advantage over new entrants when it comes to building/ modifying FLNG vessels as well. The company is amongst the very first in the business to venture into FLNG territory and this may prove an advantage if and when the FLNG market opens up.

Overall, the threat of new entrants is not looming. The chance of shipping companies presently operating in other cargo segments suddenly turning their attention to the LNG industry is not very likely, at least not on a large scale and in the near future.

4.2.5 Substitute Products

For a gas carrier company, as is Golar LNG, there are three types of substitutes:

-   Alternative energy sources.

-   Alternative gas transportation channels.
-   Regional supply.

Alternative energy sources will always be a concern for any tradable energy source – and natural gas is no exception. As mentioned the demand growth and price for natural gas is diversified in different parts of the world, and as such the threat from substitutes will not be uniform worldwide. However, it can be said that the main fossil energy substitute to natural gas at present is coal. With low coal prices, carbon pricing in single digits, abundant regional supply and many operational plants and plants under construction, coal is a considerable threat – at least in the short run. The current enthusiasm for renewable energy has yet to materialize into real supply, but is expected to take hold over the next decades. However, the impact of the individual alternative energy sources varies from region to region, and also within demand segment consumption. Within industry, transport and to a certain degree power, oil is the main substitute. Renewables is and will mostly be a substitute in power supply, and the unlikely, but ongoing, resurrection of coal (especially in Europe) may reduce demand for gas for heating purposes.
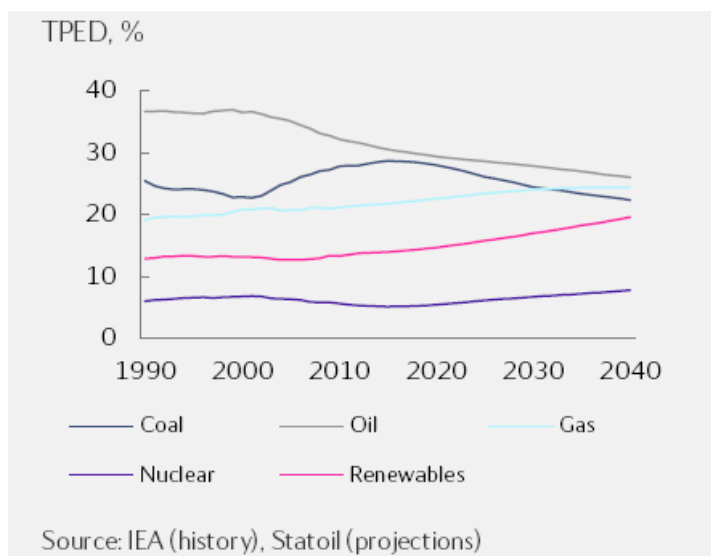
Figure 9 Shares of primary global energy demand (Statoil ASA, 2012)

The only significant substitute to gas carriers for gas transportation is pipelines, which can be a great alternative to LNG carriers. For the time being, there are plans to significantly expand the pipeline capacity in Eurasia, with the possible addition of a northern and a southern route from Russia, and another from the Caspian area into Europe. However, as Russia (Gazprom) continues to defend the traditionally higher index linked gas prices in Europe, there may be arbitrage opportunities, allowing for carrier gas import to Europe still.

Asia may also see quite a few hydrocarbon supply pipelines being constructed in the next decade, with gas supply mainly coming from the former soviet –'stans' and the Middle East (Iran). But there are gas sources that cannot be accessed with pipelines; any export from America, Africa and Australia is bound to be via LNG carriers, and as long as the world's demand for natural gas is growing, these sources will be tapped at some point in time as well.

In the long run, regional supply may also reduce the need for gas carriers (and pipelines). With new gas reserves being uncovered around the world, there is a chance the need for gas transport will diminish. For example, China is on an official policy to ramp up natural gas production, and they do have vast shale gas reserves. But as we have seen previously with oil, and in fact also electricity, it is likely there will continue to be trading and transportation, exploiting arbitrage opportunities in the quest for profits, and ensuring steady supply.

4.2.6 Conclusion external analysis
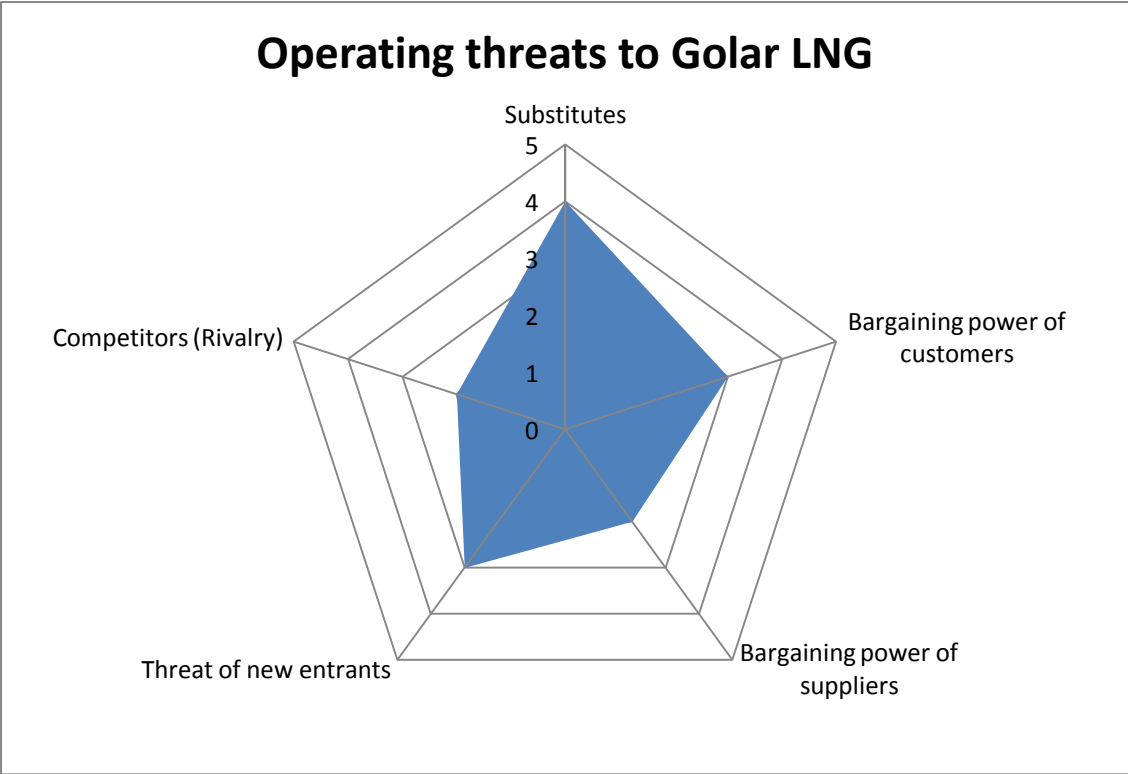
Figure 10 Level of operating threats to Golar LNG (0- none, 5- high)

It seems that, due to its mid- stream strategy, Golar LNG will be more diversified than many of its competitors, and that the company will not be as vulnerable to charter rate fluctuations as the down- stream LNG transporters which derive their earnings solely from carrier operation. The fact that short- term liquefaction capacity is lagging worldwide, and that several new plays are opening up offshore, may turn out to be an excellent business

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opportunity. Not only will it generate earnings directly from employed FLNG vessels, but it will also help improve the operating terms in the carrier market, by reducing carrier fleet due to conversions and also prolong the useful lives for old converted carriers.

However, the big question is how the LNG trade will fare over the next years and even decades. No example illustrates this better than a US that is currently brimming with LNG reserves. Only 5-6 years ago the US was tipped as the big importer of gas, but this prophecy fell in tatters almost overnight with the introduction of shale gas extraction technology and other conventional gas play discoveries in North America. Needless to say, multiple gas discoveries around the globe may eventually have an impact on the LNG shipping business, if regional supply results in shorter sailing routes or no sailing routes at all.

Given there will be a future LNG shipping market however; Golar LNG seems to be in no less favorable position than many other shippers. It is exposed more than others to risk of carrier overcapacity, but at the same time has upside potential if the rates stay high or increase. Also, Golar LNG has shown the ability to adapt, and to exploit opportunities.

5 Balance sheet and financial results

Common practice when budgeting future cash flows via forecasted return- and growth rates, is to reformulate historical balance sheets and cash flow statements. The balance sheet is reorganized in operation- and financial related assets as well as operational- and financial liabilities. The cash flow statement is also rearranged to amongst other include 'dirty surplus' that otherwise would go straight against the balance sheet, and also to present a breakdown of earnings. This to better be able to forecast e.g. sales income based on historical numbers. (Sørensen, 2009)

However, to assign a growth rate to Golar LNG's future income based on historical accounting numbers seems counterproductive. True, one can argue that historical average time charter rates for the company as a whole can be used for forecasting, but this will not capture the changes in the company's vessel- class ratios. Nor are historical rate levels necessarily a very good measure for what level the rates will be at in the future. From the analyst predictions cited in chapter 4.2.3, and Golar's plans (ref: fig 3 and 4) to maybe convert 2 carriers to FSRUs and 3 carriers to FLNGs, it is evident that the composition of the company fleet's vessel- class ratio is bound to shift away from carriers, at least in the near term. Conversion of carriers to FSRUs/ FLNGs will, according to the company, increase the EBITDA for those vessels significantly and should be reflected in the forecast.

Figure 11 Typical charter contributions (Golar LNG, 2012)

I will therefore estimate the operational cash flow (FCFF) from all vessels, correcting for depreciation and investments. By deducting the expenses for company general costs, a total FCFF for Golar LNG can be calculated.

5.1 Income

5.1.1 Charter rates

There are two main characteristics to consider when forecasting charter rates; spot rates vs. contract rates. In my calculations I will assume that FSRUs and FLNGs will all be on long term contracts, and that 25% of the carriers will be in the spot market, whilst 75% will be on some sort of contract (the distinction between spot and contract respectively will be necessary when estimating time in operation). FSRUs and FLNGs costs more to construct, so they are mostly built following a successful tender for export-/import project, hence – they will all be on contract. The reasoning for choosing a 25% spot ratio for carriers is that of the company's 9 existing carriers, 2 are currently not on any sort of contract (2 in 9 equals 22%) and, on average, roughly 25% of today's total contracted and existing world carrier fleet tonnage is currently uncommitted between 2014- 2020.
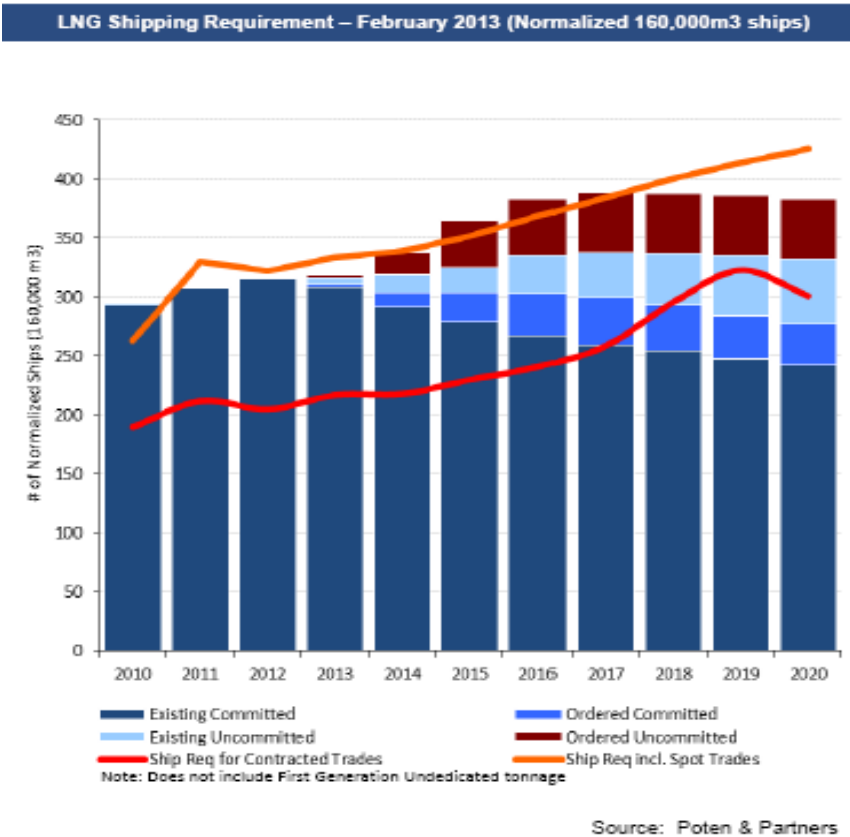
Figure 12 Estimated LNG carrier fleet status committed vs. uncommitted. (Golar LNG, 2012)

Rates will be as in the charter contracts (all options assumed exercised) and thereafter estimated to the best of my ability. As any rate projections I can make for the next 50 years are bound to be highly uncertain I have chosen to use the estimated EBITDA contribution stated by Golar (fig 11) as they are also supported by some analysts. DNB markets in 2012 raised their rate expectations for the period of 2014-2017 to the equivalent of annual vessel EBITDA USD 40 mill for large 2nd generation LNG carriers (DNB markets, 2012). Arctic Securities are a little less optimistic, expecting a drop in vessels EBITDA's to around USD 30-35 mill in 2014-2015 (CNBC, 2012) Currently there are no new builds on order for delivery after 2017, so from then on any predictions are even more uncertain; it could go either way, depending on amongst other how many ships are built. At some point however, it makes sense to let the rate level increase in line with inflationary expectations, and I have done that from 2026 (reason being that is when the last of Golar's current charter contacts expires). The inflationary expectations are derived from central banks' inflationary targets and also being kept at 2% not to exceed GDP projections for OECD countries. The level of uncertainty when it comes to charter rates emphasizes the need for a sensitivity analysis to check what impact changes in the assumptions will have for the valuation of the company.

5.1.2 Time in operation

FSRU and FLNG time in operation is estimated at 95% for duration of life, the 5% out of operation time to allow for downtime, repositioning and maintenance between contracts. Time in operation for carriers on contract is estimated at 90% throughout their remaining life. For carriers on spot rates, time in operation is estimated at 75% throughout their remaining life. Estimated downtime for carriers includes dry docking. Summing the time in operation (assuming 17 carriers, 6 FSRUs and 3 FLNGs) gives a fleet- average time in operation of just below 90%. Compared to the last two years fleet- average time in operation of 92%, my estimate is on the conservative side.

5.1.3 Gain on asset sales.

No major gain reported on asset-sales the last 3 years, with the exception of the one-time-occurrence in 2012 on "gain on loss of control". As the company is expanding, and converting its oldest carriers into FSRUs and FLNGs it is assumed they will not dispose of any assets.

5.2   Expenses

5.2.1   Operational cost

As it is hard to find the exact operational costs per ship/ vessel class, the costs will not be stated separately. Instead they will be incorporated with the estimated charter rates, and an estimated EBITDA will be used in the cash flow projections. For each announced contract, Golar LNG has issued press releases with an estimated generated EBITDA which will be used in my calculations. For ships not yet on charter hire, an estimated contract value will be assigned on basis of the discussion in 5.1.1. Additionally, most of the existing long term charter contracts are set up in a way that will allow rate increases to compensate for cost inflation; keeping the EBITDA stable, which is yet another reason to focus on the EBITDA contribution rather than separate income-/ cost segments.

5.2.2   Dry dock

In 2010, 2011 and 2012 the average annual dry dock costs per ship was approximately USD 3 mill (Golar Lng, 2013). However, the company at the same time states they are expecting inflationary pressure on dry docking costs. In my forecast I will therefore assume dry docking costs of USD 3 mill per vessel in 2013, thereafter increasing by an annual inflation rate of 2%, regardless of age or class. The annual increase is due to the company itself has expressed specific concern for such inflationary pressure concerning these costs (Golar Lng, 2013). As most maintenance will be done according to class requirements (most often every 5 years), assigning a cost to every year will also somewhat take into account the company's practice of deferring dry dock costs 2-5 years. Given the new builds will massively reduce the fleets average vessel age; my assumption can be regarded as conservative.

5.2.3   Interest

The weighted average interest rate on the company's debt is 3,97% (Golar Lng, 2013). Although the lending rate is assumed to go up at one point in time, it is hard to say when, so I will use 3,97% in my calculations.

5.2.4   Tax

The company is taxable for operations conducted by its subsidiaries in UK and Brazil, and may (if they do not qualify for exemption) be taxable in the US. However, the company firmly believes it qualifies for said US exemption. As it is not certain where the company will operate/ not operate in the future, it is therefore hard to estimate a future tax rate, so I will simply assume today's rate to be valid throughout. The company also had a balance post of

deferred tax benefits related to intra- group transfers of long term assets, but that post has been written off and recognized as part of gain on loss of control (see also 5.4.2. and 5.4.3). Based on the average amount of income tax (before amortization of deferred tax benefit) over the last three years, I will use a tax rate of 4% in my calculations.

5.2.5 Loss on asset sales

As for gain on asset sales, this post will also be assumed to be zero.

5.2.6 Depreciation

Vessel useful life is 40-50 years as stated in the company's 2012 annual report. I will use 50 years in my calculations, assuming life extensions to old vessels due to upgrades (Golar LNG Partners, 2012). As I cannot find the historical cost for the individual vessels, the balance total vessel value will be straight line depreciated (Golar LNG, 2012) throughout remaining life relative each vessels remaining useful life. There is no mentioning of a set salvage value in the annual reports, so I will assume the salvage value to be USD 6 mill per vessel.

New builds will also be written off at straight line depreciation. The total committed sum for new builds is approx. USD 2.700 mill (Golar LNG, 2012). I will assume the FSRUs are at USD 300 mill each, and the carriers are at USD 190 mill each. Consequently, I will use USD 5,9 mill. per year for new build FSRUs, and 3,7 mill per year for new build Carriers respectively.

The annual depreciation for existing vessels will be as shown in the below table.

Vessel	Years	Mill. USD	Mill. USD	Mill. USD	Mill. USD	Mill. USD
Golar fleet	**Remaining life**	**Share of asset value on balance**	**Investment**	**Salvage value**	**Depreciation per year**	**Additional Depreciation p.y. from 2016**
Nusantara R.S.	34	154	0	6	4,35	
Freeze	13	59	0	6	4,07	
Winter	41	186	0	6	4,38	
Spirit	18	82	0	6	4,19	
Methane P.	40	181	0	6	4,38	
Mazo	37	168	0	6	4,37	
Grand	43	195	0	6	4,39	
Maria	43	195	0	6	4,39	
Arctic	40	181	0	6	4,38	
Viking	42	190	0	6	4,39	
Hilli	13	59	100	6	4,07	10
Gimi	13	59	100	6	4,07	10
Gandria	13	59	100	6	4,07	10
Total years	390					
Balance asset value 31.12.12		1766				

Figure 13 Annual depreciation for existing fleet vessels (The table is assuming FLNG conversion of 3 old carriers at USD 100 mill per vessel)

According to Golar's accounting practice, depreciation will only start once a vessel is delivered/ ready for use. (Golar Lng, 2013)

NOTE: The balance asset value of USD 1766 mill. is from the unaudited 4th quarter 2012 report, as it is easier to make sure the correct vessel depreciation values are calculated prior to the effects of deconsolidation of GLMP and the "gain on loss of control".

5.3 Dividend

Dividend is expected to increase from today's level, without the raising of additional equity (SeekingAlpha.com, 2013). At today's rate the dividend is USD 1,70 per year. As the dividend is not an important factor in my valuation of the company, I will not make projections, but it is assumed the dividend will increase from today's level, given increased earnings.

5.4 Balance

Consolidated balance sheets can be reviewed in the appendix section. With visual simplicity in mind, minor posts have been pooled and given the reference 'other…' As the numbers therein are not all relevant for my valuation analysis, I will only briefly comment the main classes.

5.4.1 Current assets

Steep increase in cash during 2012, which is mainly due to sale of vessels to GLMP.

5.4.2 Long term assets

Investments and new builds have increased during 2012, and vessels and capital leases have been reduced. This is due to the one- time accounting effect of gain on loss of control (deconsolidation of GLMP) and also transfer of vessels to GLMP and paid new build installments.

5.4.3 Current liabilities

Mark- to- market effect of currency-/ interest rate swaps have reduced the 'other' liabilities post, and overall current liabilities are down due to sale of vessels.

5.4.4 Long term liabilities

Debt reduced due to sale of vessels. Also, the capital lease obligations have been eliminated.

5.4.5 Equity

Sharp increase in retained earnings due to the one-time accounting effect of gain on loss of control (in GLMP).

As stated in chapter 2.2, the company does not intend to raise equity, so share capital will be kept unchanged at USD 80.504.000,- (USD 1 * number of shares).

5.5 Working capital

Working capital is defined as current assets less current liabilities. Changes in working capital will affect the cash flow, as a company for example increase their stock of goods, accounts payables, account receivables etc. Golar LNG does not carry large and fluctuating inventories, and unless payment terms changes substantially, then the working capital is not very likely to fluctuate. One may argue that a doubling in fleet size will potentially double the working capital, but as this would probably be a "one time blow" (and not a very large one) I have chosen to assume no changes in working capital, and that over the years, any changes in current assets is offset by a similar change in current liabilities.

5.6 Investments

5.6.1 New builds.

Of the committed USD 2.700 mill for new build investments, installments of roughly USD 435 mill has been paid as of 31 Dec 2012. The remaining is due as follows (Golar LNG, 2012):

- 2013   USD 1.107 mill
- 2014   USD 1.039 mill
- 2015   USD 121 mill
   Total   USD 2.267 mill

5.6.2 Conversion

I have assumed conversion of 3 old carriers to FLNG vessels. The conversion cost has been set to USD 100 mill per vessel, and conversion period to 2 years. These estimates are based upon the reported FSRU conversion costs for Golar Freeze + USD 10 mill. per vessel (Golar LNG, 2006).

6 Return

6.1 Cost of capital

The cost of capital reflects the perceived risk by investing in a company. The cost should be the same as for alternative investments, given the same risk applies. The cost of capital is the minimum return required by investors to choose one same- risk project over another. Incremental changes in the cost of capital can have significant impact on the company valuation so it is important to get the cost estimate as precise as possible. However, establishing the cost of capital, is "[..] Far from an exact science, more a mixture of theory and discretion". (Dahl, Hansen, Hoff, & Kinserdal, 1997)

My valuation model will be based on the estimated net cash flow to the firm, and it is therefore required to find a cost of capital for operations, sometimes also referred to as the weighted average cost of capital (WACC). Penman (2010) uses "Value of operations" as denominator, but for transparency I will use the sum of "Equity market value" and "Market value of debt".

$$\text{WACC} = \rho E \times \frac{V^E}{V^E + V^D} + \rho D \times \frac{V^D}{V^E + V^D} \times (1 - t_c)$$

Where,

   ρE = Equity cost of capital

   ρD = Debt cost of capital

   V^E = Equity market value

   V^D = Debt market value

   t_c = Corporate tax rate

6.2 Cost of equity

A much used tool to find the cost of equity is the CAPM model as independently derived in the early 60's by William F. Sharp, Jan Mossin and John Lintner (Bodie, Merton, & Cleeton, Financial Economics, second edition, 2009)

$$R(i) = R(f) + \left(R(m) - R(f)\right) \times \beta(i)$$

Where,

R (i)   = Equity cost of capital for company (i)

R (f)   = Risk free rate

R (m)   = Market return

β (i)   = Beta value for company (i)

Assumptions,

1. Investors hold risky assets in the same relative proportions
2. In equilibrium, prices adjust so demand equals supply for each security

All companies listed on a stock exchange are subject to the same, common systemic forces/ risks (inflation, credit availability etc), which can be expressed as the co-variance between a stock and the market. CAPM denotes this risk as β. Company specific risks are diversified away (ref assumption 1).

From the formula, three estimates are needed to calculate cost of equity capital:

- Risk free rate
- Market premium (R(m) – R(f))
- β

6.2.1 Risk free rate

It is broadly accepted to use government bonds to derive the risk free rate (Dahl, Hansen, Hoff, & Kinserdal, 1997) (Penman, 2010), most notably US bonds, with maturity date equal or close to the investment horizon. Given the recent turmoil in the bond market, it is clear however, that risk free government bonds may not necessarily be risk free after all. Even though also US credit rating has been downgraded by some rating agencies, the US government bonds are still backed by the credibility of the largest economy in the world, which can print its own currency and in effect cannot default on its debt. I will use US 30-year bonds as reference, as this has a maturity closest to the expected vessel useful life of 50 years.

The current US 30- year yield is 2,87%.

Name	Yield	1 Day	1 Month	1 Year	Time
US Treasury 2 Year Yield	0.23%	0	-2	-8	09:34:39
US Treasury 5 Year Yield	0.68%	-1	-20	-21	09:50:00
US Treasury 10 Year Yield	1.71%	0	-33	-35	09:50:00
US Treasury 30 Year Yield	2.87%	+1	-36	-34	09:50:00

Change shown in basis points

Figure 14 US bond yields as per 8 April, 2013 (Bloomberg, 2013).

6.2.2 Market premium

The market premium is the expected return from a diversified market portfolio with the subtraction of the risk free rate. To determine the expected market premium is not easy, and the opinions are split as to what level should be used. It all depends who you ask or what historical period (-s) one uses to measure market premium. Thoresen argues 3-5% is a good estimate. (Thoresen, 2006) A different interval as suggested by Sørensen, whilst arguing there is "no correct answer", is to assume the premium to be between 4-6% (Sørensen, 2009). PricewaterHouseCoopers regularly conducts investor surveys to find the average understood market premium at the time. In 2013, they found it to be 5% for Oslo Stock Exchange (PWC, 2012), where Golar LNG is OTC listed.

In the following I will use 5% as the expected market premium.

6.2.3 β- 'Beta'

The 'beta' for the market as a whole is by definition 1. It is a measure of a security's market-related (systemic) risk, showing how much a security's rate of return tends to change when the return on the market portfolio changes. (Bodie, Merton, & Cleeton, Financial Economics, second edition, 2009)

If a company's 'beta' is less than 1, it will be less volatile than the market, and contrary if it is larger than 1, it will be more volatile. To find the 'beta' of a stock, the price of the stock must be compared to a market index over a period of time. I have used the following formula to compare the share price against a market index on the last trading- day of the month for a period of 6 years.

$$\beta = \frac{Cov\ (R(i), R(m))}{Variance\ R(m)}$$

Where,

        R (i)   = Equity cost of capital for company (i)

        R (m) = Market return

Finding the 'beta' value, I have chosen to use S&P 500 over NASDAQ as market reference even though Golar LNG is listed on NASDAQ. This due to the S&P is considered the *"best single gauge of the large cap U.S. equities market since the index was first published in 1957. [..] The index includes 500 leading companies in leading industries of the U.S. economy, capturing 75% coverage of U.S. equities".* (Standardandpoors.com, 2013)

6.2.4 Calculations

'Beta' value (See Appendix for calculations) was calculated by finding the covariance between the S&P 500 index and Golar LNG over the last 6 years.

Covariance   0,00529018

Variance   0,00269895

'Beta' value   1,96009001 (For simplicity I will use **1,96** in my calculations.)

The estimated value seems to be in line with other sources, which have it at just above 1,90. (Reuters.com, 2013)

Cost of equity

$$R (i) = R(f) + \big(R(m) - R(f)\big) \times \beta(i)$$

R (i) = 2,87 + 5,00 x 1,96 = **12,67%**

6.3 Cost of capital (debt)

A theoretical model will not be used for this measure. Instead it will be deducted from the financial statements and presentations issued by Golar LNG.

As of 31 Dec 2012, the company's debt was USD 505 mill, which includes current portion of interest bearing debt. The debt is split in vessel specific facilities, which all are at over and above LIBOR at a fixed or floating rate range from 0,70% to 0,95% and 0,70% to 3,50% respectively.

In my calculations, I will use the 2012 weighted average interest rate for all debt, which was at **3,97%** (Golar Lng, 2013).

6.4 **WACC**

To calculate WACC, the market value of equity and - debt respectively must first be calculated.

The stock quote as per market close 31 Dec 2012 was USD 36,78.

There are 80.504.000 shares, so the market value of equity is USD 2.960.900.000,-

The market value of debt is assumed to be equal to the sum of short term and long term debt as listed in the annual financial statement per 31 Dec 2012. Tax rate is 4%.

$$\text{WACC} = \rho E \times \frac{V^E}{V^E + V^D} + \rho D \times \frac{V^D}{V^E + V^D} \times (1 - t_c)$$

$$\text{WACC} = 12,67 \times \frac{2960900000}{2960900000 + 505000000} + 3,97 \times \frac{505000000}{2960900000 + 50500000} \times (1 - 0,04)$$

WACC = <u>**10,95%**</u>

As previously discussed, estimating a cost for capital is far from an exact science. There is many assumptions and probably biased discretion involved as well in any such calculation. As Golar has two classes of vessels in operation, and a third class approaching introduction, it is also important to consider that the WACC for the three classes respectively will probably not be the same. On this background it will be important to do a thorough sensitivity analysis to assess the impact an adjusted WACC will have on the estimated fundamental value of the company. As mentioned in chapter 2.2, funding of new builds and growth plans are expected to be secured without issuing equity, so given that the estimated cost of debt is lower than the estimated cost of equity; the WACC maybe should be lower. It is also worth keeping in mind that we are seeing unprecedented measures being launched by the world's central banks in the form of monetary stimulus, and it has yet to be seen what the final impact of these measures will be. Experts have split opinions on the subject. There are those that expect the interest levels to rise sharply at some point, whilst others argue the rates will stay low for a long time, as they have done in Japan over the last 25 years. Any excessive change in rate levels will obviously impact the WACC and as a consequence the value of the company. As existing

charter contracts states monthly charter payments prior to every month, the cash flow per year will be discounted by a period of 0,4 and not 0,5 as would be normal with payments at month end throughout the year.

7 Cash Flow analysis

7.1 Introduction

As I have made many assumptions in previous chapters, I will start this chapter off with a quick summary of the framework for the Cash flow analysis.

Main assumptions:

- No fleet growth beyond existing new build program
- Charter rates as in existing contracts, all options exercised
- Charters for currently open positions at lower end of EBITDA estimates from Golar. FLNG charter rates assumed to slightly exceed FSRU charter rates.
  From 2027 and throughout, all rates are adjusted for 2% annual growth/- inflation
- No gain or loss on traded vessels
- Tax rate is 4%
- Vessel useful life at 50 years
- Maintenance USD 3 mill per year per vessel throughout useful life (adjusted for annual inflation of 2%).
- Salvage value at nominal USD 6 mill per vessel.
- Time in operation 95% for FSRUs/FLNGs, 90% for carriers on charter contract, 75% for 4 ea (at all times) carriers in spot- market.
- No change in working capital

7.2 Golar LNG partners vessels

I will go through the cash flow calculation for one vessel group each of FSRUs and carriers respectively, and also the calculation of administrative costs. It is assumed that the cash flow to Golar LNG from GLMP equals its share of available cash from GLMP, which will be paid in full to the partners according to "first target distribution" in fig 1. The full calculation for all vessels is attached in the appendix section.

7.2.1 FSRU vessels

The Nusantara Regas Satu is 60% owned by Golar, and has 34 years remaining life. It is currently on a charter contributing an estimated USD 43 mill EBITDA to GLMP per year. Including options, the charter contract runs until year end 2025.

Nusantara Regas Satu (1997)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	...	2046
EBITDA		43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	40,00	40,80		59,44
Time in operation		95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %	95,00 %		95,00 %
Depreciation		4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35		4,35
EBIT		36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	33,65	34,41		52,12
Tax		1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,35	1,38		2,08
NOPLAT		35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	32,30	33,03		50,03
Depreciation		4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35		4,35
Salvage value																			6,00
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96		5,77
Change in working capital																			
CF to total capital		36,39	36,39	36,33	36,27	36,21	36,14	36,08	36,01	35,94	35,88	35,80	35,73	35,66	35,59	32,77	33,43		54,61
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40		33,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %		10,95 %
DCF to total capital			34,91	31,41	28,26	25,43	22,88	20,59	18,52	16,66	14,99	13,48	12,13	10,91	9,81	8,14	7,49		1,70
Sum of DCF to total capital			343,80																
DCF Corrected for 60% stake			206,28																

Figure 15 Calculation of contribution to cash flow from the FSRU vessel Nusantara Regas Satu.

As long as the vessel is on the existing contract, the EBITDA from the charter is USD 43 mill per year, and in line with my assumptions, it drops to an annual USD 40 mill (+2% annual increase) for the remaining years of useful life. Time in operation is set to 95% throughout useful life. The utilization rate can be set this high as the ship will mainly be on long term contracts, thus causing less downtime due to waiting for cargo and time between contracts. It has also been set higher than the utilization rate for contracted carriers due to FSRUs will be moored, which will allow for easier maintenance during operation, as well as better accessibility to spares and specialist mechanics. The estimated 5% downtime includes 5- year class. The EBIT is found by multiplying EBITDA with time in operation and subtracting depreciation cost. Adding depreciation and deducting the estimated annual maintenance cost gives cash- flow to firm (USD 34,91 mill in 2013). As mentioned in chapter 6.4, the discounting period is 0,4 the first year, 1,4 the second year and so forth.

The discounted CF to firm is calculated by the following formula:

$$\text{Discounted CF to firm} = \frac{CF \text{ to total capital}}{(1+WACC)^{discounting\ period}}$$

Having calculated the discounted CF to firm every year of remaining useful life, the total discounted CF is found by summing all the years.

For this specific vessel, there is however a special consideration to make; as it is only 60% owned by the Golar group, the discounted CF must be multiplied by 0,6.

The discounted CF from Nusantara Regas Satu to GLMP is thereby found to be USD 206,28 mill.

The same calculation is done for the 3 other FSRU's, with the exception of correcting for ownership as they are 100% owned.

7.2.2 Carriers

For carriers, the procedure is exactly the same, with the exception of the time in operation. The Methane Princess is 100% owned by Golar, and has 40 years remaining life. It is currently on a charter contributing an estimated USD 24 mill EBITDA to GLMP per year. Including options, the charter contract runs until year end 2025.

Methane Princess (2003)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	....	2052
EBITDA		24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	40,00	40,80		66,94
Time in operation		90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %		90,00 %
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38		4,38
EBIT		17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	31,62	32,34		55,86
Tax		0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	1,26	1,29		2,23
NOPLAT		16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	30,36	31,05		53,63
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38		4,38
Salvage value																			6,00
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96		6,49
Change in working capital																			
CF to total capital		17,91	17,91	17,85	17,79	17,73	17,66	17,60	17,53	17,47	17,40	17,33	17,25	17,18	17,11	30,85	31,47		57,51
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40		39,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %		10,95 %
DCF to total capital			17,18	15,43	13,86	12,45	11,18	10,04	9,02	8,10	7,27	6,52	5,86	5,26	4,72	7,67	7,05		0,96
Sum of DCF to total capital			212,15																

Figure 16 Calculation of contribution to cash flow from the carrier vessel Methane Princess.

As long as the vessel is on the existing contract, the EBITDA from the charter is USD 24 mill per year, and it subsequently increases to USD 40 mill (+2% annual increase) for the remaining years of useful life. Time in operation is set to 90% throughout useful life. The utilization rate can be set higher than for carriers sailing in the spot- market as the ship will mainly be on long term contracts, thus causing less downtime due to waiting for cargo and time between contracts. The estimated 10% downtime includes 5- year class.

7.2.3 General company costs for GLMP

These are costs not directly attributable to a specific charter contract, and as such, not accounted for in the estimated vessel generated cash flows.

- Administrative expenses; has been stable over the last couple of years at approx USD 5-6 mill. In the analysis, this cost is set at USD 6 mill for 2013, increasing by 2% per year to account for inflation, wage increases etc.
- Investments/ depreciation; No such costs are assumed to be relevant, as they would be very small.

Administrative- / company costs, Golar LNG Partners	Mill USD	2012	2013	2014	2015	2016	2017	2018	....	2064
Administrative costs		6,00	6,00	6,12	6,24	6,37	6,49	6,62		16,47
Investment/ Depreciation		0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00
CF to total capital		6,00	6,00	6,12	6,24	6,37	6,49	6,62		16,47
Time of discounting			0,50	1,50	2,50	3,50	4,50	5,50		51,50
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %		10,95 %
DCF to total capital			5,70	5,24	4,81	4,43	4,07	3,74		0,08
Sum of DCF to total capital			69,72							

Figure 17 Discounted cash flow from administrative tasks at GLMP. Not vessel specific.

The negative contribution to GLMP is USD 69,72 Mill.

7.3 Golar LNG vessels

I will go through the cash flow calculation for the new builds, and the FLNG conversion candidates as two consolidated entities. I will also show the calculation of administrative costs. I will not go through the calculation for the 3 new carriers Maria, Arctic and Viking, reason being they are conducted in the same manner as in chapter 7.2.2.

7.3.1 New builds

All new builds are at the time owned by Golar LNG. They will be launched in 2013, 2014 and 2015. At the moment none of the vessels are contracted, but (as disclosed by management during presentation of Q4 2012 results) it is expected at least the 2 FSRU vessels will be by the time they are launched, as the company is in closing stages of contract negotiations (SeekingAlpha.com, 2013) Of the 11 carriers further 2 may be converted to FSRUs, but as the signals are not conclusive I have opted to treat them as carriers in my calculations.

- 5 vessels launched in 2013 will be in operation for an average of 1 quarter in 2013.
- 7 vessels launched in 2014 will be in operation for an average of 2 quarters in 2014.
- 1 vessel launched in 2015 will be in operation 3 quarters in 2015.

All vessels are assumed to have yearly EBITDA of USD 40 mill until 2026, from which point on the EBITDA is assumed to increase by 2% annually for the remaining useful life.

Depreciation is as stated in chapter 5.2.6.

Average time in operation is 86%. The low utilization rate is due to an estimated 4 carriers will be in the spot- market. The average time in operation takes into account the assumed utilization rates of 95-, 90- and 75% respectively.

Investments in 2013, 2014 and 2015 are payment of installments (Golar LNG, 2012) for new build deliveries, and from then on it is estimated an annual USD 3 mill (+2% annual increase) per vessel in maintenance costs. Note that as maintenance becomes relevant in 2016, the annual USD 3 mill per vessel has already been inflated since 2013.

Newbuilds	USD (Mill.)	2011	2012	2013	2014	2015	2016	2017	2018	....	2025	2026	2027	....	2062	2063	2064
EBITDA				50,00	340,00	510,00	520,00	520,00	520,00		520,00	520,00	530,40		1060,74	665,00	85,00
Time in operation				86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %		86,00 %	86,00 %	86,00 %		86,00 %	86,00 %	86,00 %
Depreciation				20,70	48,80	52,50	52,50	52,50	52,50		52,50	52,50	52,50		52,50	31,80	3,70
EBIT				22,30	243,60	386,10	394,70	394,70	394,70		394,70	394,70	403,64		859,74	540,10	69,40
Tax				0,89	9,74	15,44	15,79	15,79	15,79		15,79	15,79	16,15		34,39	21,60	2,78
NOPLAT				21,41	233,86	370,66	378,91	378,91	378,91		378,91	378,91	387,50		825,35	518,50	66,62
Depreciation				20,70	48,80	52,50	52,50	52,50	52,50		52,50	52,50	52,50		52,50	31,80	3,70
Salvage value															30,00	42,00	6,00
Investments (dry dock etc)		190,00	243,00	1107,00	1039,00	121,00	41,39	42,22	43,06		49,46	50,45	51,46		102,92	53,00	8,00
Change in working capital																	
CF to total capital				1064,89	756,34	302,16	390,02	389,19	388,35		381,95	380,96	388,53		804,93	539,30	68,32
Time of discounting				0,40	1,40	2,40	3,40	4,40	5,40		12,40	13,40	14,40		49,40	50,40	51,40
Factor of discounting				10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %		10,95 %	10,95 %	10,95 %		10,95 %	10,95 %	10,95 %
DCF to total capital				1021,54	653,94	235,46	273,94	246,38	221,58		105,30	94,66	87,02		4,75	2,87	0,33
Sum of DCF to total capital				1462,69													

Figure 18 Calculation of contribution to cash flow from the 13 new build vessels

EBITDA is lower in 2013-2015 and 2063-2064 due to some vessels are either not yet delivered or have been taken out of service.

7.3.2 FLNG conversion candidates

The 3 remaining old carriers in Golar's fleet are targeted for FLNG conversion. In March 2013 the management confirmed they are still on track to start the first conversion within 2013. However they would not at this time disclose any business sensitive info, other than that there were great market interest in the vessels, and that they expected the project framework would not be entirely different from the FSRU segment. (SeekingAlpha.com, 2013) Another factor making the conversions very likely is that without the conversion and change of use, all 3 vessels are very close to the end of their useful lives. Doing the conversions is expected to add another 10 years to each vessels life (Golar LNG Partners, 2012). As the company seems very optimistic regarding the FLNG market, I have used a slightly higher annual EBITDA per vessel at USD 45 mill. This number is not subject to annual inflation as the first contracts are also assumed to be the last.

In 2013, prior to conversion, just one of the vessels will be in the spot market; at a rate equaling EBITDA USD 16 mill per year (These are 1st generation ships, and therefore are not as attractive (ref fig 11). The 2 other vessels are in lay- up, with zero cost expected until commencement of conversion work.

3 vessels (Hilli, Gimi, Gandria)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
EBITDA		48,00	16,00	0,00	0,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00
Time in operation			75 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
Depreciation			12,21	12,21	12,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21
EBIT			0,21	12,21	12,21	86,04	86,04	86,04	86,04	86,04	86,04	86,04	86,04	86,04	86,04
Tax			0,01	0,49	0,49	3,44	3,44	3,44	3,44	3,44	3,44	3,44	3,44	3,44	3,44
NOPLAT			0,20	11,72	11,72	82,60	82,60	82,60	82,60	82,60	82,60	82,60	82,60	82,60	82,60
Depreciation			12,21	12,21	12,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21
Salvage value															18,00
Investments (dry dock etc)			9,00	150,00	150,00	9,55	9,74	9,94	10,14	10,34	10,54	10,76	10,97	11,19	11,41
Change in working capital															
CF to total capital			3,01	149,51	149,51	115,26	115,07	114,87	114,67	114,47	114,26	114,05	113,84	113,62	131,39
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
DCF to total capital			2,89	129,27	116,51	80,95	72,84	65,54	58,97	53,06	47,74	42,94	38,63	34,75	36,22
Sum of DCF to total capital			288,76												

Figure 19 Calculation of contribution to cash flow from the 3 FLNG convert vessels

I estimate conversion work for 2 full years in 2014 and 2015, at a combined cost of USD 300 mill, before all 3 vessels go into operation in 2016. As mentioned in chapter 4.2.3 it is expected to be a very tight liquefaction market going forward, so my estimated EBITDA contribution may very well be too low. Salvage value and depreciation is as previously stated. Note that the deferred tax benefit in 2013-2015 is not correctly accounted for, but as it is a matter of an amount just under USD 1 mill, I have ignored it.

7.3.3 General company costs for GLNG

These are costs not directly attributable to a specific charter contract, and as such, not accounted for in the estimated vessel generated cash flows.

- Administrative expenses; these have been increasing over the last couple of years. This higher cost is much related to the new build- and project activity. In the analysis, the cost is set at USD 35 mill for 2013-2016, reduced to USD 22 mill for 2017, and after that increasing by 2% per year throughout to account for inflation, wage increases etc. The reason for reduction after 2016 is that by then the project activity should be lighter.

- Investments/ depreciation; no such costs are assumed to be relevant, as they would be very small.

Administrative- / company costs, Golar LNG	Mill USD	2012	2013	2014	2015	2016	2017	2018	....	2064
Administrative costs		33,70	35,00	35,00	35,00	35,00	22,00	22,44		55,80
Investment/ Depreciation		0,00	0,00	0,00	0,00	0,00	0,00	0,00		0,00
CF to total capital		33,70	35,00	35,00	35,00	35,00	22,00	22,44		55,80
Time of discounting			0,50	1,50	2,50	3,50	4,50	5,50		51,50
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %		10,95 %
DCF to total capital			33,23	29,95	26,99	24,33	13,78	12,67		0,26
Sum of DCF to total capital			282,35							

Figure 20 Discounted cash flow from administrative tasks at GLNG. Not vessel specific.

The negative contribution to GLNG is USD 282,35 mill.

7.4 Value of Golar LNG

Summing the segment DCF values, gives the value prior to subtracting net debt to find value of equity. Value of equity is divided by number of shares to find share value.

Vessel	Ownership	Discounted value of Cash flow (USD mill)	Partnership interest (54,1%)	DCF to Golar LNG (USD mill)
FSRUs				
Golar Spirit	100 %	293,04	158,53	158,53
Golar Winter	100 %	348,86	188,73	188,73
Golar Freeze	100 %	261,55	141,50	141,50
Nusantara Regas Satu	60 %	206,28	111,60	111,60
Carriers				
Methane Princess	100 %	212,15	114,77	114,77
Golar Mazo	100 %	252,93	136,84	136,84
Golar Grand	100 %	309,97	167,69	167,69
Golar Maria	100 %	259,42	N/A	259,42
Golar Arctic	100 %	319,59	N/A	319,59
Golar Viking	100 %	293,32	N/A	293,32
Newbuilds				
13 Newbuilds	100 %	1462,69	N/A	1462,69
FLNG Converts				
3 vessels	100 %	288,76	N/A	288,76
Company general cost				
GLNG		-282,35	N/A	-282,35
GLMP		-69,72	-37,72	-37,72
Total est. DCF from Golar fleet				**3323,38**
Interest bearing debt				-504,91
Cash				424,71
Net value of equity				**3243,18**
Number of shares				80500,00
Est. USD per share				40,29

Figure 21 Calculation of Est. Share value for Golar LNG.

The interest bearing debt and cash amount is found in the balance sheet (31.12.2012).

Regarding the vessel Golar Maria, that vessel has been sold to GLMP in 2013, but in my calculations it is treated as if it is still a GLNG owned vessel. This is done to avoid mixing up the numbers, and as the asset sale is done at fair value, it should not matter much in the valuation.

8 Sensitivity analysis and comparative evaluation

8.1 Comparative evaluation

To check if the value- estimation seems reasonable, it is common practice to compare multiples with other companies (peers) that are as similar in area of business, life cycle and size as possible. As mentioned, it is not that many shipping companies that are specialized in LNG transportation and publically traded, so there are not that many peers directly comparable. In my evaluation, I have chosen to use Hoegh LNG (HLNG) and Awilco LNG (ALNG).

HLNG is similar to GLNG in terms of fleet composition. They are of late actively engaged in the FSRU segment as well as planning towards FLNG involvement in the future. However, their carriers are less exposed to spot rate fluctuations as they have higher contract coverage on their vessels. ALNG is a much smaller company, which is only engaged in carrier ownership and operation. As with GLNG, ALNG has currently little contract coverage for their carriers, and as such will be exposed to down- and upside risk in a similar fashion to GLNG. Multiples for peers are found on the web (Bloomberg, 2013) and multiples for GLNG are calculated by the formulas given in 3.1.2, net equity value in chapter 7.4 and numbers from the 2012 balance sheet. The multiples are based on ttm (trailing twelve month) and mrq (most recent quarter).

The multiples are as follows:

	P/E (ttm)	P/B (mrq)	Price/ sale (ttm)	EPS (ttm)
Golar LNG	3,33	1,83	7,9	12,09
Hoegh LNG	66,12	1,57	4,75	0,1185
Awilco LNG	7,33	0,81	2,79	0,3155

Figure 22 Price- ratio multiples for Golar LNG and peers (2012 accounting numbers).

Looking at the multiples, it is obvious there are extraordinary reasons behind the variation in P/E ratio between the three companies. The reason behind HLNG's very high PE I do not know, but I am assuming it is just a transitional phase in which costs have increased, and that the market is looking past it. This explanation is supported by the other multiples. For GLNG the P/E number has been inversely affected to that of HLNG; it is very low, due to the effects of deconsolidating GLMP, and the USD 853 mill "gain on loss of control". To put the P/E

multiples in context, I have included the 2012 EPS, and I have chosen to ignore P/E as a multiple for comparison.

Looking at the other multiples, they may go a long way to indicate that my value estimate of GLNG may be too optimistic. On the other hand, ALNG is a very small player, and their share price may well be subdued due to the fact they have little or none contract coverage, and they may even have problems financing their new build deliveries. HLNG offers little uncertainty (and upside) as their vessels are for the most part contracted on relative long charters. What may support the higher multiples for GLNG is that the fleet will double in size over the next 2-3 years, and that there is little uncertainty with regards to financing the remaining payable CAPEX installments for new builds.

Traditionally, all companies controlled by John Fredriksen will offer attractive yield, which may also contribute to the stock trading on higher multiples.

8.2 Sensitivity analysis

The assumptions made in the valuation framework, and the numbers forming basis for the DCF calculations, are very decisive for the share value estimate. As there is a certain amount of uncertainty connected to most parameters, a sensitivity analysis is very important to shed some light on the effects to share value caused by changes in parameters. The results generated by this analysis will help in executing a qualified evaluation of the estimated share value. The measured parameters are the ones in which I have had to make assumptions, estimations and simplifications. The valuation exercise is repeated for a change in each unique parameter, 10% increase and 10% reduction respectively.

The charted results of the sensitivity analysis measures the change in share value estimate, with the estimated share value of USD 40,39 as the reference point.
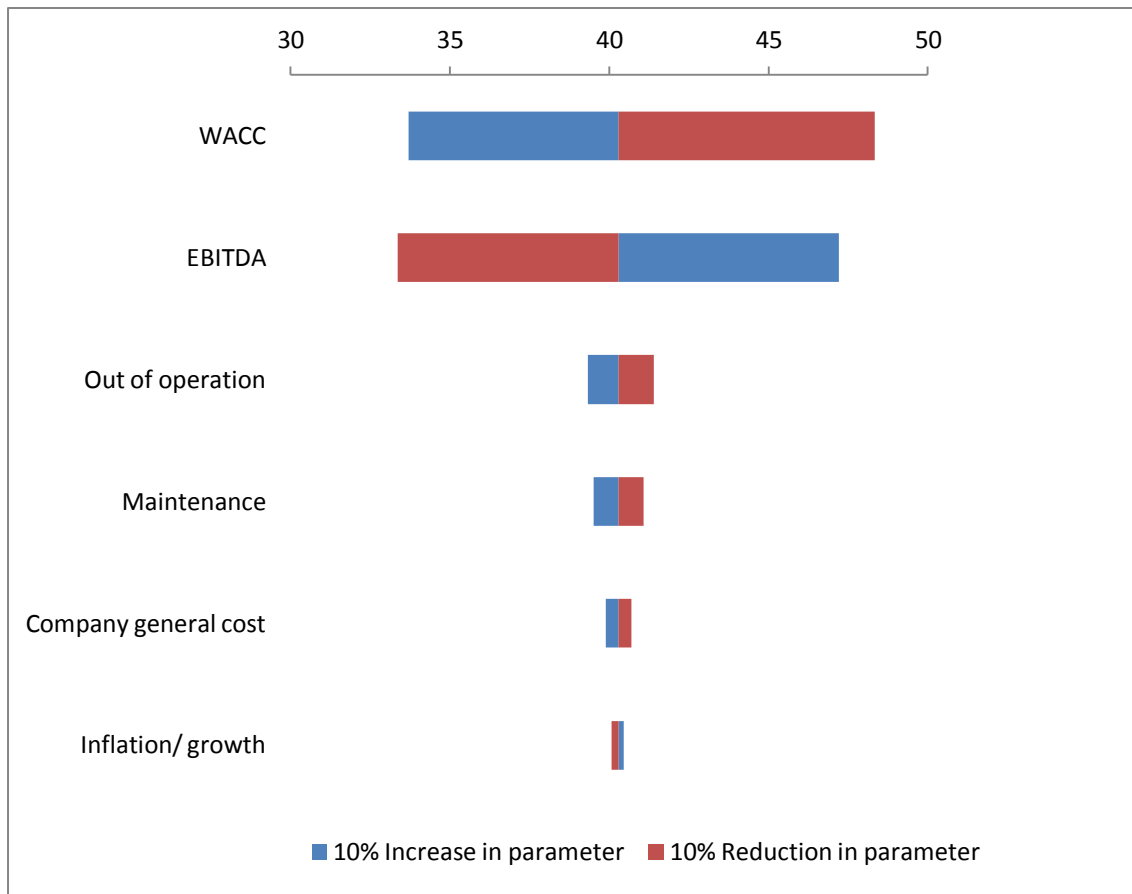
Figure 23 GLNG est. share value (USD) for 10% changes in parameters.

From the above chart, it is obvious that the parameters to have the greatest impact on any share valuation estimate, is EBITDA and WACC. As these are also probably the parameters with the highest degree of uncertainty, it is fair to say my valuation model is robust in all aspects except EBITDA and WACC.

What may cause the EBITDA to change significantly from my estimations are changes to charter rates and to some extent changes to operational costs. Given that the current interest-rate regime in the world will continue for some time, the WACC is more likely to be lower than what I have used. What may also contribute to a lower WACC, is that the cost of equity is higher than the cost of debt. As GLNG has stated they are not likely to finance remaining new build deliveries by issuing equity, but rather by increasing their debt, it is likely the company's debt to equity ratio will raise, thereby potentially lower the WACC for GLNG.

9 Conclusion.

My valuation of GLNG indicates the stock is currently undervalued by roughly 8-10% both compared to the 2012 year end share price USD 36,78, and even the share price as per 9th May 2013 of USD 37,20.

As there is an amount of uncertainty with regards to LNG freight rate levels over the next couple of years, and most likely no short- term upside compared to my assumptions, I would recommend a "hold" strategy for the stock. However, looking at the prospectively bright future for LNG and LNG transportation, along with the dividend policy and mid-stream strategy communicated by GLNG management, I would recommend a "buy" strategy for investors with a long term investment- perspective. The stock is also well off its highs (set in Q2 2012) and as such the downside potential may have already been taken out, unless charter rates deteriorate from here.

What may cause the share price to increase is if favorable contracts for the new build vessels are announced, as that will remove much of the uncertainty for GLNG value estimates.

From the comparative analysis there are indications investors are willing to pay a premium for LNG shippers that are actively engaged in FSRU/FLNG vessels. This is most likely due to the market is looking tighter for these vessels than for carriers, an assumption which is supported by current contract terms and lengths.

Mid- stream players such as Hoegh and Golar, will offer less uncertain earnings than the likes of Awilco, which is only operating carriers. Thus it can be argued that mid- stream companies should trade at higher multiples than their down- stream peers- as they in fact currently are.

When estimating the value of a company there will always be numerous uncertainties, as has been stated on several occasions during my valuation of Golar LNG. Some of the most influential weaknesses to my valuation approach has been highlighted in the sensitivity analysis, but the way the contribution from GLMP has been calculated is also not 100% correct. It can be argued that one would arrive at a more technically accurate estimate by calculating the dividend ratio payable to GLNG from GLMP as that would better capture the possible increased contribution from the IDR's. However, as GLNG has relinquished legal control of GLMP, it is not at all certain that the board of directors at GLMP will pursue a growth strategy aimed at increasing GLNG's share of available cash beyond its share of the partnership.

A perhaps unnecessary closing remark, is that my valuation estimate of Golar LNG must be viewed with caution, as my assumptions can be wrong, and factors that may affect the share value can change rapidly.

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11 Appendix

11.1 Beta calculation

S&P 500   **Golar**

Date	Price	Change, price	Change pct	Date	Price	Change price	Change Pct
30.03.2007	1420,86			30.03.2007	13,27		
30.04.2007	1482,37	61,50	0,04328603	30.04.2007	15,94	2,68	0,2017729
31.05.2007	1530,62	48,25	0,032551878	31.05.2007	17,37	1,43	0,089461338
29.06.2007	1503,35	-27,27	-0,01781797	29.06.2007	16,28	-1,09	-0,06299548
31.07.2007	1455,27	-48,07	-0,03197782	31.07.2007	17,07	0,79	0,048619688
31.08.2007	1473,99	18,71	0,012858832	31.08.2007	18,68	1,61	0,094447635
28.09.2007	1526,75	52,76	0,03579325	28.09.2007	21,80	3,13	0,167363546
31.10.2007	1549,38	22,63	0,014822752	31.10.2007	25,40	3,60	0,164878053
30.11.2007	1481,14	-68,23	-0,04403973	30.11.2007	20,80	-4,60	-0,18115568
31.12.2007	1468,36	-12,79	-0,00863386	31.12.2007	21,61	0,81	0,038983768
31.01.2008	1378,55	-89,81	-0,06116223	31.01.2008	20,17	-1,44	-0,06645318
29.02.2008	1330,63	-47,91	-0,03475713	29.02.2008	18,65	-1,52	-0,07554577
31.03.2008	1322,70	-7,93	-0,0059592	31.03.2008	17,85	-0,80	-0,04295627
30.04.2008	1385,59	62,88	0,047541327	30.04.2008	19,60	1,75	0,097976815
30.05.2008	1400,38	14,79	0,010674299	30.05.2008	17,95	-1,65	-0,08424845
30.06.2008	1280,00	-120,38	-0,08595934	30.06.2008	15,13	-2,81	-0,15677763
31.07.2008	1267,38	-12,62	-0,00985961	31.07.2008	17,97	2,83	0,187222035
29.08.2008	1282,83	15,45	0,012188173	29.08.2008	15,67	-2,30	-0,12779009
30.09.2008	1166,36	-116,47	-0,09078891	30.09.2008	12,97	-2,70	-0,17206566
31.10.2008	968,75	-197,61	-0,16942231	31.10.2008	6,68	-6,29	-0,48493841
28.11.2008	896,24	-72,52	-0,07485559	28.11.2008	6,32	-0,36	-0,05409976
31.12.2008	903,25	7,02	0,007830277	31.12.2008	6,60	0,28	0,044821694
30.01.2009	825,88	-77,37	-0,0856605	30.01.2009	6,02	-0,59	-0,08875059
27.02.2009	735,09	-90,79	-0,10993036	27.02.2009	4,27	-1,75	-0,29058792
31.03.2009	797,87	62,77	0,085396941	31.03.2009	3,35	-0,92	-0,21510389
30.04.2009	872,81	74,94	0,093925982	30.04.2009	5,27	1,91	0,571415781
29.05.2009	919,14	46,33	0,053084614	29.05.2009	7,55	2,29	0,434146805
30.06.2009	919,32	0,18	0,000195984	30.06.2009	8,35	0,80	0,106084884
31.07.2009	987,48	68,16	0,074141757	31.07.2009	9,55	1,20	0,143859397
31.08.2009	1020,62	33,14	0,033564869	31.08.2009	9,72	0,17	0,017385024
30.09.2009	1057,08	36,45	0,035717265	30.09.2009	10,80	1,08	0,111550055
30.10.2009	1036,19	-20,88	-0,01975636	30.10.2009	11,78	0,98	0,090415194
30.11.2009	1095,63	59,44	0,057358941	30.11.2009	12,28	0,50	0,042295124
31.12.2009	1115,10	19,47	0,017773455	31.12.2009	12,52	0,24	0,019886317
29.01.2010	1073,87	-41,23	-0,03697658	29.01.2010	11,51	-1,01	-0,08083679
26.02.2010	1104,49	30,62	0,028516831	26.02.2010	11,00	-0,51	-0,04437263
31.03.2010	1169,43	64,94	0,058794217	31.03.2010	11,53	0,53	0,047905607
30.04.2010	1186,69	17,26	0,014758292	30.04.2010	12,80	1,27	0,110255209
28.05.2010	1089,41	-97,28	-0,08197942	28.05.2010	11,26	-1,54	-0,12008938

30.06.2010	1030,71	-58,70	-0,05387869	30.06.2010	9,72	-1,54	-0,13648795
30.07.2010	1101,60	70,89	0,068775178	30.07.2010	10,62	0,90	0,092198217
31.08.2010	1049,33	-52,27	-0,04745009	31.08.2010	10,23	-0,39	-0,03710469
30.09.2010	1141,20	91,87	0,087555879	30.09.2010	12,52	2,29	0,224186483
29.10.2010	1183,26	42,06	0,036852904	29.10.2010	13,26	0,74	0,059105431
30.11.2010	1180,55	-2,70	-0,00228585	30.11.2010	13,91	0,65	0,049019608
31.12.2010	1257,64	77,08	0,065293983	31.12.2010	15,01	1,10	0,079079799
31.01.2011	1286,12	28,48	0,022649578	31.01.2011	17,45	2,44	0,162558294
28.02.2011	1327,22	41,10	0,03195911	28.02.2011	19,06	1,61	0,09226361
31.03.2011	1325,83	-1,40	-0,00105293	31.03.2011	25,58	6,52	0,34207765
29.04.2011	1363,61	37,79	0,028499571	29.04.2011	32,56	6,98	0,272869429
31.05.2011	1345,20	-18,41	-0,01350448	31.05.2011	31,86	-0,70	-0,02149877
30.06.2011	1320,64	-24,56	-0,01825627	30.06.2011	34,89	3,03	0,095103578
29.07.2011	1292,28	-28,36	-0,02147161	29.07.2011	38,13	3,24	0,092863285
31.08.2011	1218,89	-73,39	-0,05679034	31.08.2011	32,99	-5,14	-0,13480199
30.09.2011	1131,42	-87,47	-0,07176448	30.09.2011	31,78	-1,21	-0,03667778
31.10.2011	1253,30	121,88	0,107719384	31.10.2011	40,43	8,65	0,272183763
30.11.2011	1246,96	-6,34	-0,00505563	30.11.2011	43,60	3,17	0,078407123
30.12.2011	1257,60	10,64	0,00853655	30.12.2011	44,45	0,85	0,019495413
31.01.2012	1312,41	54,80	0,043578708	31.01.2012	41,00	-3,45	-0,0776153
29.02.2012	1365,68	53,27	0,040591838	29.02.2012	42,47	1,47	0,035853659
30.03.2012	1408,47	42,79	0,031328759	30.03.2012	38,05	-4,42	-0,10407346
30.04.2012	1397,91	-10,56	-0,00749457	30.04.2012	36,98	-1,07	-0,02812089
31.05.2012	1310,33	-87,58	-0,06265272	31.05.2012	35,03	-1,95	-0,05273121
29.06.2012	1362,16	51,83	0,039554751	29.06.2012	37,70	2,67	0,076220383
31.07.2012	1379,32	17,17	0,012601447	31.07.2012	38,66	0,96	0,025464191
31.08.2012	1406,58	27,25	0,019757326	31.08.2012	39,12	0,46	0,011898603
28.09.2012	1440,67	34,10	0,024242445	28.09.2012	38,59	-0,53	-0,01354806
31.10.2012	1412,16	-28,52	-0,01979387	31.10.2012	38,90	0,31	0,008033169
30.11.2012	1416,18	4,02	0,002849254	30.11.2012	39,08	0,18	0,004627249
31.12.2012	1426,19	10,01	0,007065766	31.12.2012	36,78	-2,30	-0,05885363
31.01.2013	1498,11	71,92	0,050430202	31.01.2013	41,05	4,27	0,116095704
28.02.2013	1514,68	16,57	0,011058822	28.02.2013	37,91	-3,14	-0,07649208
28.03.2013	1569,19	54,51	0,035986259	28.03.2013	36,99	-0,92	-0,024268

Covariance. S&P and GLNG	0,005290176
Variance S&P	0,002698945
β Golar LNG	1,960090007

11.2 Balance sheet

Assets	2012	2011	2010
Current assets			
Cash and - equivalents	424714	66913	164717
Short term investments	1551	28012	21815
Other receivables	11609	7830	12136
Inventories	2051	3211	5664
Total current assets	**439925**	**105966**	**204332**
Long term assets			
Restricted cash	0	185270	186041
Investments in securities, affiliates etc	919214	29876	20276
Newbuildings	435859	190100	0
Vessels and equipment	573615	1203003	1103137
Capital leases	0	501904	515666
Other non current assets	45786	16515	48320
Total assets	**2414399**	**2232634**	**2077772**

Liabilities & Equity	2012	2011	2010
Current liabilities			
Current portion of long term debt	14400	64306	95629
Current portion of long term debt to related parties	0	0	10000
Current portion of obligations under capital leases	0	5909	5766
Accounts payable	10203	23124	16308
Accrued expenses	20413	30642	22588
Amounts due to related parties	4037	21178	438
Other current liabilities	38006	110981	96427
Total current liabilities	**87059**	**256140**	**247156**
Long term liabilities			
Long term debt	490506	627243	691549
Long term debt due to related parties	0	80000	0
Obligations under capital leases	0	399934	406109
Other long term liabilities	72515	113497	133636
Total liabilities	**650080**	**1476814**	**1478450**
Equity			
Share capital	80504	80237	67808
Additional paid in capital	654042	398383	98005
Contributed surplus	200000	200000	200000
Accumulated other comprehensive loss	18730	34948	33311
Retained earnings	848503	34093	78086
Total stockholder equity	**1764319**	**677765**	**410588**
Non controlling interests	0	78055	188734
Total equity	**1764319**	**755820**	**599322**
Total liabilities & equity	**2414399**	**2232634**	**2077772**

11.3 DCF calculations

11.3.1 FLNG converts

3 FLNG (Hilli, Gimi, Gandria)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
EBITDA		48,00	16,00	0,00	0,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00	135,00
Time in operation			75 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
Depreciation			12,21	12,21	12,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21
EBIT			0,21	12,21	12,21	86,04	86,04	86,04	86,04	86,04	86,04	86,04	86,04	86,04	86,04
Tax			0,01	0,49	0,49	3,44	3,44	3,44	3,44	3,44	3,44	3,44	3,44	3,44	3,44
NOPLAT			0,20	11,72	11,72	82,60	82,60	82,60	82,60	82,60	82,60	82,60	82,60	82,60	82,60
Depreciation			12,21	12,21	12,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21	42,21
Salvage value															18,00
Investments (dry dock etc)			9,00	150,00	150,00	9,55	9,74	9,94	10,14	10,34	10,54	10,76	10,97	11,19	11,41
Change in working capital															
CF to total capital			3,01	149,51	149,51	115,26	115,07	114,87	114,67	114,47	114,26	114,05	113,84	113,62	131,39
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			2,89	129,27	116,51	80,95	72,84	65,54	58,97	53,06	47,74	42,94	38,63	34,75	36,22
Sum of discounted CF to total capital		288,76													

11.3.2 New builds

Newbuilds	USD (Mill.)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
EBITDA				50,00	340,00	510,00	520,00	520,00	520,00	520,00	520,00	520,00	520,00	520,00	520,00	520,00
Time in operation				86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %
Depreciation				20,70	48,80	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50
EBIT				22,30	243,60	386,10	394,70	394,70	394,70	394,70	394,70	394,70	394,70	394,70	394,70	394,70
Tax				0,89	9,74	15,44	15,79	15,79	15,79	15,79	15,79	15,79	15,79	15,79	15,79	15,79
NOPLAT				21,41	233,86	370,66	378,91	378,91	378,91	378,91	378,91	378,91	378,91	378,91	378,91	378,91
Depreciation				20,70	48,80	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50
Salvage value																
Investments (dry dock etc)		190,00	243,00	1107,00	1039,00	121,00	41,39	42,22	43,06	43,92	44,80	45,70	46,61	47,54	48,49	49,46
Change in working capital																
CF to total capital				1064,89	756,34	302,16	390,02	389,19	388,35	387,49	386,61	385,71	384,80	383,87	382,92	381,95
Time of discounting				0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40
Factor of discounting				10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital				1021,54	653,94	235,46	273,94	246,38	221,58	199,27	179,20	161,14	144,89	130,27	117,13	105,30
Sum of discounted CF to total capital		1462,69														

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
EBITDA	520,00	530,40	541,01	551,83	562,86	574,12	585,60	597,32	609,26	621,45	633,88	646,55	659,49	672,68	686,13	699,85	713,85	728,13	742,69	757,54
Time in operation	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %
Depreciation	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50
EBIT	394,70	403,64	412,77	422,07	431,56	441,24	451,12	461,19	471,47	481,95	492,63	503,54	514,66	526,00	537,57	549,37	561,41	573,69	586,21	598,99
Tax	15,79	16,15	16,51	16,88	17,26	17,65	18,04	18,45	18,86	19,28	19,71	20,14	20,59	21,04	21,50	21,97	22,46	22,95	23,45	23,96
NOPLAT	378,91	387,50	396,26	405,19	414,30	423,60	433,08	442,74	452,61	462,67	472,93	483,40	494,07	504,96	516,07	527,40	538,95	550,74	562,76	575,03
Depreciation	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50
Salvage value																				
Investments (dry dock etc)	50,45	51,46	52,49	53,54	54,61	55,71	56,82	57,96	59,12	60,30	61,50	62,73	63,99	65,27	66,57	67,90	69,26	70,65	72,06	73,50
Change in working capital																				
CF to total capital	380,96	388,53	396,26	404,15	412,19	420,39	428,76	437,29	445,99	454,87	463,93	473,16	482,58	492,19	501,99	511,99	522,19	532,59	543,20	554,02
Time of discounting	13,40	14,40	15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40
Factor of discounting	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital	94,66	87,02	79,99	73,53	67,59	62,13	57,11	52,50	48,26	44,36	40,78	37,49	34,46	31,68	29,12	26,77	24,61	22,62	20,80	19,12

	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
EBITDA	772,69	788,15	803,91	819,99	836,39	853,12	870,18	887,58	905,33	923,44	941,91	960,75	979,96	999,56	1019,55	1039,94	1060,74	665,00	85,00
Time in operation	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %	86,00 %
Depreciation	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	31,80	3,70
EBIT	612,02	625,31	638,86	652,69	666,79	681,18	695,85	710,82	726,09	741,66	757,54	773,74	790,27	807,12	824,31	841,85	859,74	540,10	69,40
Tax	24,48	25,01	25,55	26,11	26,67	27,25	27,83	28,43	29,04	29,67	30,30	30,95	31,61	32,28	32,97	33,67	34,39	21,60	2,78
NOPLAT	587,54	600,29	613,31	626,58	640,12	653,93	668,02	682,39	697,04	711,99	727,24	742,79	758,66	774,84	791,34	808,18	825,35	518,50	66,62
Depreciation	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	52,50	31,80	3,70
Salvage value																	30,00	42,00	6,00
Investments (dry dock etc)	74,97	76,47	78,00	79,56	81,15	82,78	84,43	86,12	87,84	89,60	91,39	93,22	95,08	96,98	98,92	100,90	102,92	53,00	8,00
Change in working capital																			
CF to total capital	565,06	576,32	587,81	599,52	611,47	623,66	636,09	648,77	661,70	674,89	688,35	702,07	716,07	730,35	744,92	759,77	804,93	539,30	68,32
Time of discounting	33,40	34,40	35,40	36,40	37,40	38,40	39,40	40,40	41,40	42,40	43,40	44,40	45,40	46,40	47,40	48,40	49,40	50,40	51,40
Factor of discounting	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital	17,57	16,15	14,85	13,65	12,55	11,54	10,60	9,75	8,96	8,24	7,57	6,96	6,40	5,88	5,41	4,97	4,75	2,87	0,33

11.3.3 Carriers

Methane Princess (2003)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
EBITDA		24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	24,00	40,00
Time in operation		90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
EBIT		17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	17,22	31,62
Tax		0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	0,69	1,26
NOPLAT		16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	16,53	30,36
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
Salvage value																
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88
Change in working capital																
CF to total capital		17,91	17,91	17,85	17,79	17,73	17,66	17,60	17,53	17,47	17,40	17,33	17,25	17,18	17,11	30,85
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			17,18	15,43	13,86	12,45	11,18	10,04	9,02	8,10	7,27	6,52	5,86	5,26	4,72	7,67
Sum of discounted CF to total capital			212,15													

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
40,80	41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27	59,44	60,63
90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
32,34	33,07	33,82	34,59	35,37	36,16	36,97	37,80	38,64	39,50	40,38	41,28	42,19	43,12	44,07	45,04	46,03	47,04	48,07	49,11	50,18
1,29	1,32	1,35	1,38	1,41	1,45	1,48	1,51	1,55	1,58	1,62	1,65	1,69	1,72	1,76	1,80	1,84	1,88	1,92	1,96	2,01
31,05	31,75	32,47	33,20	33,95	34,72	35,49	36,29	37,10	37,92	38,77	39,63	40,50	41,40	42,31	43,24	44,19	45,16	46,14	47,15	48,18
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
3,96	4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65	5,77	5,88
31,47	32,09	32,73	33,38	34,05	34,72	35,42	36,12	36,84	37,57	38,32	39,08	39,86	40,66	41,47	42,29	43,13	43,99	44,87	45,76	46,67
14,40	15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40	33,40	34,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
7,05	6,48	5,96	5,47	5,03	4,63	4,25	3,91	3,59	3,30	3,04	2,79	2,57	2,36	2,17	1,99	1,83	1,68	1,55	1,42	1,31

2048	2049	2050	2051	2052
61,84	63,08	64,34	65,62	66,94
90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
4,38	4,38	4,38	4,38	4,38
51,28	52,39	53,52	54,68	55,86
2,05	2,10	2,14	2,19	2,23
49,22	50,29	51,38	52,49	53,63
4,38	4,38	4,38	4,38	4,38
				6,00
6,00	6,12	6,24	6,37	6,49
47,60	48,55	49,52	50,51	57,51
35,40	36,40	37,40	38,40	39,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
1,20	1,11	1,02	0,93	0,96

Golar Mazo (2000)

Golar Mazo (2000)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
EBITDA		31,00	31,00	31,00	31,00	31,00	31,00	31,00	31,00	31,00	31,00	31,00	31,00	31,00	31,00	40,00	40,80
Time in operation		90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
Depreciation		4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37
EBIT		23,53	23,53	23,53	23,53	23,53	23,53	23,53	23,53	23,53	23,53	23,53	23,53	23,53	23,53	31,63	32,35
Tax		0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	1,27	1,29
NOPLAT		22,59	22,59	22,59	22,59	22,59	22,59	22,59	22,59	22,59	22,59	22,59	22,59	22,59	22,59	30,36	31,06
Depreciation		4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37
Salvage value																	
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96
Change in working capital																	
CF to total capital		23,96	23,96	23,90	23,84	23,78	23,71	23,65	23,58	23,51	23,44	23,37	23,30	23,23	23,15	30,85	31,47
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			22,98	20,66	18,58	16,70	15,01	13,49	12,13	10,90	9,79	8,80	7,91	7,11	6,38	7,67	7,05
Sum of discounted CF to total capital		252,93															

2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27	59,44	60,63	61,84	63,08
90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37
33,08	33,83	34,60	35,38	36,17	36,98	37,81	38,65	39,51	40,39	41,29	42,20	43,13	44,08	45,05	46,04	47,05	48,08	49,12	50,19	51,29	52,40
1,32	1,35	1,38	1,42	1,45	1,48	1,51	1,55	1,58	1,62	1,65	1,69	1,73	1,76	1,80	1,84	1,88	1,92	1,96	2,01	2,05	2,10
31,76	32,48	33,21	33,96	34,72	35,50	36,30	37,11	37,93	38,78	39,64	40,51	41,41	42,32	43,25	44,20	45,16	46,15	47,16	48,19	49,23	50,30
4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37	4,37
																					6,00
4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65	5,77	5,88	6,00	6,12
32,09	32,73	33,38	34,05	34,72	35,42	36,12	36,84	37,57	38,32	39,08	39,86	40,66	41,46	42,29	43,13	43,99	44,87	45,76	46,67	47,60	54,55
15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40	33,40	34,40	35,40	36,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
6,48	5,96	5,47	5,03	4,63	4,25	3,91	3,59	3,30	3,04	2,79	2,57	2,36	2,17	1,99	1,83	1,68	1,55	1,42	1,31	1,20	1,24

Golar Grand (2006)

Golar Grand (2006)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
EBITDA		39,00	39,00	39,00	39,00	39,00	39,00	39,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,80
Time in operation		90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
Depreciation		4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
EBIT		30,71	30,71	30,71	30,71	30,71	30,71	30,71	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	32,33
Tax		1,23	1,23	1,23	1,23	1,23	1,23	1,23	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,29
NOPLAT		29,48	29,48	29,48	29,48	29,48	29,48	29,48	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	31,04
Depreciation		4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
Salvage value																	
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96
Change in working capital																	
CF to total capital		30,87	30,87	30,81	30,75	30,69	30,62	30,56	31,36	31,29	31,22	31,15	31,08	31,01	30,93	30,85	31,47
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			29,61	26,64	23,96	21,55	19,39	17,44	16,13	14,50	13,04	11,73	10,55	9,48	8,53	7,67	7,05
Sum of discounted CF to total capital		309,97															

2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27	59,44	60,63	61,84
90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
33,06	33,81	34,58	35,36	36,15	36,96	37,79	38,63	39,49	40,37	41,27	42,18	43,11	44,06	45,03	46,02	47,03	48,06	49,10	50,17	51,27
1,32	1,35	1,38	1,41	1,45	1,48	1,51	1,55	1,58	1,61	1,65	1,69	1,72	1,76	1,80	1,84	1,88	1,92	1,96	2,01	2,05
31,74	32,46	33,19	33,94	34,71	35,48	36,28	37,09	37,91	38,76	39,62	40,49	41,39	42,30	43,23	44,18	45,15	46,13	47,14	48,17	49,21
4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65	5,77	5,88	6,00
32,09	32,73	33,38	34,05	34,73	35,42	36,12	36,84	37,57	38,32	39,08	39,86	40,66	41,47	42,29	43,13	43,99	44,87	45,76	46,68	47,60
15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40	33,40	34,40	35,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
6,48	5,96	5,47	5,03	4,63	4,25	3,91	3,59	3,30	3,04	2,79	2,57	2,36	2,17	1,99	1,83	1,68	1,55	1,42	1,31	1,20

2049	2050	2051	2052	2053	2054	2055
63,08	64,34	65,62	66,94	68,28	69,64	71,03
90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
4,39	4,39	4,39	4,39	4,39	4,39	4,39
52,38	53,51	54,67	55,85	57,06	58,29	59,54
2,10	2,14	2,19	2,23	2,28	2,33	2,38
50,28	51,37	52,48	53,62	54,78	55,96	57,16
4,39	4,39	4,39	4,39	4,39	4,39	4,39
						6,00
6,12	6,24	6,37	6,49	6,62	6,76	6,89
48,55	49,52	50,51	51,51	52,54	53,59	60,66
36,40	37,40	38,40	39,40	40,40	41,40	42,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
1,11	1,02	0,93	0,86	0,79	0,73	0,74

Golar Maria (2006)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
EBITDA		24,00	24,00	24,00	24,00	24,00	24,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,80
Time in operation		90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
Depreciation		4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
EBIT		17,21	17,21	17,21	17,21	17,21	17,21	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	32,33
Tax		0,69	0,69	0,69	0,69	0,69	0,69	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,29
NOPLAT		16,52	16,52	16,52	16,52	16,52	16,52	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	31,04
Depreciation		4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
Salvage value																	
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96
Change in working capital																	
CF to total capital		17,91	17,91	17,85	17,79	17,73	17,66	31,42	31,36	31,29	31,22	31,15	31,08	31,01	30,93	30,85	31,47
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			17,18	15,43	13,86	12,45	11,18	17,93	16,13	14,50	13,04	11,73	10,55	9,48	8,53	7,67	7,05
Sum of discounted CF to total capital		259,42															

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
40,80	41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27	59,44	60,63	61,84
90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
32,33	33,06	33,81	34,58	35,36	36,15	36,96	37,79	38,63	39,49	40,37	41,27	42,18	43,11	44,06	45,03	46,02	47,03	48,06	49,10	50,17	51,27
1,29	1,32	1,35	1,38	1,41	1,45	1,48	1,51	1,55	1,58	1,61	1,65	1,69	1,72	1,76	1,80	1,84	1,88	1,92	1,96	2,01	2,05
31,04	31,74	32,46	33,19	33,94	34,71	35,48	36,28	37,09	37,91	38,76	39,62	40,49	41,39	42,30	43,23	44,18	45,15	46,13	47,14	48,17	49,21
4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
3,96	4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65	5,77	5,88	6,00
31,47	32,09	32,73	33,38	34,05	34,73	35,42	36,12	36,84	37,57	38,32	39,08	39,86	40,66	41,47	42,29	43,13	43,99	44,87	45,76	46,68	47,60
14,40	15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40	33,40	34,40	35,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
7,05	6,48	5,96	5,47	5,03	4,63	4,25	3,91	3,59	3,30	3,04	2,79	2,57	2,36	2,17	1,99	1,83	1,68	1,55	1,42	1,31	1,20

Golar Arctic (2003)

Golar Arctic (2003)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
EBITDA		45,00	45,00	45,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,80
Time in operation		90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
EBIT		36,12	36,12	36,12	31,62	31,62	31,62	31,62	31,62	31,62	31,62	31,62	31,62	31,62	31,62	31,62	32,34
Tax		1,44	1,44	1,44	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,29
NOPLAT		34,68	34,68	34,68	30,36	30,36	30,36	30,36	30,36	30,36	30,36	30,36	30,36	30,36	30,36	30,36	31,05
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
Salvage value																	
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96
Change in working capital																	
CF to total capital		36,06	36,06	36,00	31,61	31,55	31,49	31,42	31,36	31,29	31,22	31,15	31,08	31,01	30,93	30,85	31,47
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			34,59	31,12	24,64	22,16	19,93	17,93	16,13	14,50	13,04	11,73	10,55	9,48	8,53	7,67	7,05
Sum of discounted CF to total capital		319,59															

2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27	59,44	60,63	61,84
90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %	90,00 %
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
33,07	33,82	34,59	35,37	36,16	36,97	37,80	38,64	39,50	40,38	41,28	42,19	43,12	44,07	45,04	46,03	47,04	48,07	49,11	50,18	51,28
1,32	1,35	1,38	1,41	1,45	1,48	1,51	1,55	1,58	1,62	1,65	1,69	1,72	1,76	1,80	1,84	1,88	1,92	1,96	2,01	2,05
31,75	32,47	33,20	33,95	34,72	35,49	36,29	37,10	37,92	38,77	39,63	40,50	41,40	42,31	43,24	44,19	45,16	46,14	47,15	48,18	49,22
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65	5,77	5,88	6,00
32,09	32,73	33,38	34,05	34,72	35,42	36,12	36,84	37,57	38,32	39,08	39,86	40,66	41,47	42,29	43,13	43,99	44,87	45,76	46,67	47,60
15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40	33,40	34,40	35,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
6,48	5,96	5,47	5,03	4,63	4,25	3,91	3,59	3,30	3,04	2,79	2,57	2,36	2,17	1,99	1,83	1,68	1,55	1,42	1,31	1,20

2049	2050	2051	2052
63,08	64,34	65,62	66,94
90,00 %	90,00 %	90,00 %	90,00 %
4,38	4,38	4,38	4,38
52,39	53,52	54,68	55,86
2,10	2,14	2,19	2,23
50,29	51,38	52,49	53,63
4,38	4,38	4,38	4,38
			6,00
6,12	6,24	6,37	6,49
48,55	49,52	50,51	57,51
36,40	37,40	38,40	39,40
10,95 %	10,95 %	10,95 %	10,95 %
1,11	1,02	0,93	0,96

Golar Viking (2005)

Golar Viking (2005)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
EBITDA		16,00	16,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,00	40,80
Time in operation		90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %
Depreciation		4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
EBIT		10,01	10,01	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	31,61	32,33
Tax		0,40	0,40	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,26	1,29
NOPLAT		9,61	9,61	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	30,35	31,04
Depreciation		4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
Salvage value																	
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96
Change in working capital																	
CF to total capital		11,00	11,00	31,68	31,61	31,55	31,49	31,42	31,36	31,29	31,22	31,15	31,08	31,01	30,93	30,85	31,47
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			10,55	27,39	24,64	22,16	19,93	17,93	16,13	14,50	13,04	11,73	10,55	9,48	8,53	7,67	7,05
Sum of discounted CF to total capital		293,32															

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
40,80	41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27	59,44	60,63
90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %	90 %
4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
32,33	33,06	33,81	34,58	35,36	36,15	36,96	37,79	38,63	39,49	40,37	41,27	42,18	43,11	44,06	45,03	46,02	47,03	48,06	49,10	50,17
1,29	1,32	1,35	1,38	1,41	1,45	1,48	1,51	1,55	1,58	1,61	1,65	1,69	1,72	1,76	1,80	1,84	1,88	1,92	1,96	2,01
31,04	31,74	32,46	33,19	33,94	34,71	35,48	36,28	37,09	37,91	38,76	39,62	40,49	41,39	42,30	43,23	44,18	45,15	46,13	47,14	48,17
4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39	4,39
3,96	4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65	5,77	5,88
31,47	32,09	32,73	33,38	34,05	34,73	35,42	36,12	36,84	37,57	38,32	39,08	39,86	40,66	41,47	42,29	43,13	43,99	44,87	45,76	46,68
14,40	15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40	33,40	34,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
7,05	6,48	5,96	5,47	5,03	4,63	4,25	3,91	3,59	3,30	3,04	2,79	2,57	2,36	2,17	1,99	1,83	1,68	1,55	1,42	1,31

2048	2049	2050	2051	2052	2053	2054
61,84	63,08	64,34	65,62	66,94	68,28	69,64
90 %	90 %	90 %	90 %	90 %	90 %	90 %
4,39	4,39	4,39	4,39	4,39	4,39	4,39
51,27	52,38	53,51	54,67	55,85	57,06	58,29
2,05	2,10	2,14	2,19	2,23	2,28	2,33
49,21	50,28	51,37	52,48	53,62	54,78	55,96
4,39	4,39	4,39	4,39	4,39	4,39	4,39
						6,00
6,00	6,12	6,24	6,37	6,49	6,62	6,76
47,60	48,55	49,52	50,51	51,51	52,54	59,59
35,40	36,40	37,40	38,40	39,40	40,40	41,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
1,20	1,11	1,02	0,93	0,86	0,79	0,81

11.3.4 FSRUs

Nusantara Regas Satu (1997)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
EBITDA		43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	40,00	40,80
Time in operation		95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
Depreciation		4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35
EBIT		36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	36,50	33,65	34,41
Tax		1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,35	1,38
NOPLAT		35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	35,04	32,30	33,03
Depreciation		4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35
Salvage value																	
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88	3,96
Change in working capital																	
CF to total capital		36,39	36,39	36,33	36,27	36,21	36,14	36,08	36,01	35,94	35,88	35,80	35,73	35,66	35,59	32,77	33,43
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40	14,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			34,91	31,41	28,26	25,43	22,88	20,59	18,52	16,66	14,99	13,48	12,13	10,91	9,81	8,14	7,49
Sum of discounted CF to total capital		343,80															
CF Corrected for 60% ownership		206,28															

2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27	59,44
95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35
35,19	35,98	36,78	37,61	38,44	39,30	40,17	41,06	41,97	42,90	43,84	44,81	45,79	46,79	47,82	48,86	49,92	51,01	52,12
1,41	1,44	1,47	1,50	1,54	1,57	1,61	1,64	1,68	1,72	1,75	1,79	1,83	1,87	1,91	1,95	2,00	2,04	2,08
33,78	34,54	35,31	36,10	36,91	37,73	38,57	39,42	40,29	41,18	42,09	43,01	43,96	44,92	45,90	46,90	47,93	48,97	50,03
4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35	4,35
																		6,00
4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65	5,77
34,09	34,77	35,46	36,17	36,89	37,62	38,37	39,13	39,91	40,71	41,52	42,34	43,19	44,05	44,93	45,82	46,73	47,66	54,61
15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40	33,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
6,88	6,33	5,81	5,35	4,91	4,52	4,15	3,82	3,51	3,23	2,96	2,73	2,51	2,30	2,12	1,95	1,79	1,64	1,70

Golar Freeze (1976)

Golar Freeze (1976)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
EBITDA		43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00
Time in operation		95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
Depreciation		4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07
EBIT		36,78	36,78	36,78	36,78	36,78	36,78	36,78	36,78	36,78	36,78	36,78	36,78	36,78	36,78
Tax		1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47
NOPLAT		35,31	35,31	35,31	35,31	35,31	35,31	35,31	35,31	35,31	35,31	35,31	35,31	35,31	35,31
Depreciation		4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07	4,07
Salvage value															6,00
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80
Change in working capital															
CF to total capital		36,38	36,38	36,32	36,26	36,20	36,13	36,07	36,00	35,93	35,86	35,79	35,72	35,65	41,57
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			34,90	31,40	28,25	25,42	22,87	20,58	18,51	16,66	14,98	13,48	12,12	10,90	11,46
Sum of discounted CF to total capital		261,55													

Golar Winter (2004)

Golar Winter (2004)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
EBITDA		43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	40,00	40,00	40,00	40,00
Time in operation		95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
EBIT		36,47	36,47	36,47	36,47	36,47	36,47	36,47	36,47	36,47	36,47	36,47	33,62	33,62	33,62	33,62
Tax		1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,46	1,34	1,34	1,34	1,34
NOPLAT		35,01	35,01	35,01	35,01	35,01	35,01	35,01	35,01	35,01	35,01	35,01	32,28	32,28	32,28	32,28
Depreciation		4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
Salvage value																
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80	3,88
Change in working capital																
CF to total capital		36,39	36,39	36,33	36,27	36,21	36,14	36,08	36,01	35,95	35,88	35,81	33,00	32,93	32,85	32,77
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40	13,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			34,91	31,41	28,26	25,43	22,88	20,59	18,52	16,66	14,99	13,48	11,20	10,07	9,06	8,14
Sum of discounted CF to total capital		348,86														

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
40,80	41,62	42,45	43,30	44,16	45,05	45,95	46,87	47,80	48,76	49,73	50,73	51,74	52,78	53,83	54,91	56,01	57,13	58,27
95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
34,38	35,16	35,95	36,75	37,58	38,41	39,27	40,14	41,03	41,94	42,87	43,81	44,78	45,76	46,76	47,79	48,83	49,89	50,98
1,38	1,41	1,44	1,47	1,50	1,54	1,57	1,61	1,64	1,68	1,71	1,75	1,79	1,83	1,87	1,91	1,95	2,00	2,04
33,00	33,75	34,51	35,28	36,07	36,88	37,70	38,54	39,39	40,26	41,15	42,06	42,99	43,93	44,89	45,87	46,88	47,90	48,94
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
3,96	4,04	4,12	4,20	4,28	4,37	4,46	4,55	4,64	4,73	4,83	4,92	5,02	5,12	5,22	5,33	5,43	5,54	5,65
33,43	34,09	34,77	35,46	36,17	36,89	37,62	38,37	39,13	39,91	40,71	41,52	42,35	43,19	44,05	44,93	45,82	46,73	47,67
14,40	15,40	16,40	17,40	18,40	19,40	20,40	21,40	22,40	23,40	24,40	25,40	26,40	27,40	28,40	29,40	30,40	31,40	32,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
7,49	6,88	6,33	5,81	5,35	4,91	4,52	4,15	3,82	3,51	3,23	2,96	2,73	2,51	2,30	2,12	1,95	1,79	1,64

2046	2047	2048	2049	2050	2051	2052	2053
59,44	60,63	61,84	63,08	64,34	65,62	66,94	68,28
95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
52,09	53,22	54,37	55,54	56,74	57,96	59,21	60,48
2,08	2,13	2,17	2,22	2,27	2,32	2,37	2,42
50,00	51,09	52,19	53,32	54,47	55,64	56,84	58,06
4,38	4,38	4,38	4,38	4,38	4,38	4,38	4,38
							6,00
5,77	5,88	6,00	6,12	6,24	6,37	6,49	6,62
48,62	49,58	50,57	51,58	52,61	53,66	54,73	61,82
33,40	34,40	35,40	36,40	37,40	38,40	39,40	40,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
1,51	1,39	1,28	1,17	1,08	0,99	0,91	0,93

Golar Spirit (1981)	USD (Mill.)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
EBITDA		43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	43,00	40,00	40,00	40,00
Time in operation		95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %	95 %
Depreciation		4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19
EBIT		36,66	36,66	36,66	36,66	36,66	36,66	36,66	36,66	36,66	36,66	36,66	33,81	33,81	33,81
Tax		1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,47	1,35	1,35	1,35
NOPLAT		35,19	35,19	35,19	35,19	35,19	35,19	35,19	35,19	35,19	35,19	35,19	32,46	32,46	32,46
Depreciation		4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19	4,19
Salvage value															
Investments (dry dock etc)		3,00	3,00	3,06	3,12	3,18	3,25	3,31	3,38	3,45	3,51	3,59	3,66	3,73	3,80
Change in working capital															
CF to total capital		36,38	36,38	36,32	36,26	36,20	36,14	36,07	36,01	35,94	35,87	35,80	32,99	32,92	32,84
Time of discounting			0,40	1,40	2,40	3,40	4,40	5,40	6,40	7,40	8,40	9,40	10,40	11,40	12,40
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			34,90	31,41	28,26	25,43	22,88	20,58	18,52	16,66	14,98	13,48	11,20	10,07	9,05
Sum of discounted CF to total capital			293,04												

2026	2027	2028	2029	2030
40,00	40,80	41,62	42,45	43,30
95 %	95 %	95 %	95 %	95 %
4,19	4,19	4,19	4,19	4,19
33,81	34,57	35,35	36,14	36,94
1,35	1,38	1,41	1,45	1,48
32,46	33,19	33,93	34,69	35,46
4,19	4,19	4,19	4,19	4,19
				6,00
3,88	3,96	4,04	4,12	4,20
32,77	33,42	34,08	34,76	41,45
13,40	14,40	15,40	16,40	17,40
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
8,14	7,48	6,88	6,32	6,80

11.3.5 Company costs

Administrative- / company costs, Golar LNG	Mill USD	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Administrative costs		33,70	35,00	35,00	35,00	35,00	22,00	22,44	22,89	23,35	23,81	24,29	24,78	25,27	25,78	26,29	26,82
Investment/ Depreciation		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
CF to total capital		33,70	35,00	35,00	35,00	35,00	22,00	22,44	22,89	23,35	23,81	24,29	24,78	25,27	25,78	26,29	26,82
Time of discounting			0,50	1,50	2,50	3,50	4,50	5,50	6,50	7,50	8,50	9,50	10,50	11,50	12,50	13,50	14,50
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			33,23	29,95	26,99	24,33	13,78	12,67	11,65	10,71	9,85	9,05	8,32	7,65	7,03	6,47	5,94
Sum of discounted CF to total capital			282,35														

2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
27,35	27,90	28,46	29,03	29,61	30,20	30,81	31,42	32,05	32,69	33,34	34,01	34,69	35,39	36,09	36,82	37,55	38,30	39,07
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
27,35	27,90	28,46	29,03	29,61	30,20	30,81	31,42	32,05	32,69	33,34	34,01	34,69	35,39	36,09	36,82	37,55	38,30	39,07
15,50	16,50	17,50	18,50	19,50	20,50	21,50	22,50	23,50	24,50	25,50	26,50	27,50	28,50	29,50	30,50	31,50	32,50	33,50
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
5,46	5,02	4,62	4,25	3,90	3,59	3,30	3,03	2,79	2,56	2,36	2,17	1,99	1,83	1,68	1,55	1,42	1,31	1,20

2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
39,85	40,65	41,46	42,29	43,13	44,00	44,88	45,78	46,69	47,62	48,58	49,55	50,54	51,55	52,58	53,63	54,71	55,80
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
39,85	40,65	41,46	42,29	43,13	44,00	44,88	45,78	46,69	47,62	48,58	49,55	50,54	51,55	52,58	53,63	54,71	55,80
34,50	35,50	36,50	37,50	38,50	39,50	40,50	41,50	42,50	43,50	44,50	45,50	46,50	47,50	48,50	49,50	50,50	51,50
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
1,11	1,02	0,93	0,86	0,79	0,73	0,67	0,61	0,56	0,52	0,48	0,44	0,40	0,37	0,34	0,31	0,29	0,26

Administrative- / company costs, Golar LNG Partners	Mill USD	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Administrative costs		6,00	6,00	6,12	6,24	6,37	6,49	6,62	6,76	6,89	7,03	7,17	7,31	7,46	7,61	7,76	7,92
Investment/ Depreciation		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
CF to total capital		6,00	6,00	6,12	6,24	6,37	6,49	6,62	6,76	6,89	7,03	7,17	7,31	7,46	7,61	7,76	7,92
Time of discounting			0,5	1,5	2,5	3,5	4,5	5,5	6,5	7,5	8,5	9,5	10,5	11,5	12,5	13,5	14,5
Factor of discounting			10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
Discounted CF to total capital			5,70	5,24	4,81	4,43	4,07	3,74	3,44	3,16	2,91	2,67	2,46	2,26	2,08	1,91	1,75
Sum of discounted CF to total capital			69,72														

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
7,92	8,08	8,24	8,40	8,57	8,74	8,92	9,09	9,28	9,46	9,65	9,84	10,04	10,24	10,45	10,66	10,87	11,09	11,31	11,53
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
7,92	8,08	8,24	8,40	8,57	8,74	8,92	9,09	9,28	9,46	9,65	9,84	10,04	10,24	10,45	10,66	10,87	11,09	11,31	11,53
14,5	15,5	16,5	17,5	18,5	19,5	20,5	21,5	22,5	23,5	24,5	25,5	26,5	27,5	28,5	29,5	30,5	31,5	32,5	33,5
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
1,75	1,61	1,48	1,36	1,25	1,15	1,06	0,97	0,90	0,82	0,76	0,70	0,64	0,59	0,54	0,50	0,46	0,42	0,39	0,35

2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064
11,31	11,53	11,76	12,00	12,24	12,48	12,73	12,99	13,25	13,51	13,78	14,06	14,34	14,63	14,92	15,22	15,52	15,83	16,15	16,47
0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
11,31	11,53	11,76	12,00	12,24	12,48	12,73	12,99	13,25	13,51	13,78	14,06	14,34	14,63	14,92	15,22	15,52	15,83	16,15	16,47
32,5	33,5	34,5	35,5	36,5	37,5	38,5	39,5	40,5	41,5	42,5	43,5	44,5	45,5	46,5	47,5	48,5	49,5	50,5	51,5
10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %	10,95 %
0,39	0,35	0,33	0,30	0,28	0,25	0,23	0,21	0,20	0,18	0,17	0,15	0,14	0,13	0,12	0,11	0,10	0,09	0,08	0,08