



Acquisition prices in the tanker market continue to climb for both newbuildings and second-hand tonnage. Concurrently the international financial turmoil spawned by the US subprime mortgage crisis has tightened credit markets. Meanwhile the outlook for tanker earnings over the next few years is clouded by a mountainous orderbook in 2009. There is a growing perception that the investment attractiveness in tanker projects is diminishing as a result of these industry influences.

In this note we aim to evaluate this assertion and to quantify the effect of the various influences. In order to accomplish this we start with the situation as it was at the beginning of 2007, a little over a year ago. At that time asset prices were around the levels shown in Table 1.

Table 1 – Tanker Asset Prices January 2007 – Newbuilding (US\$ Million)

VLCC	SUEZ	AFRA	PANA	MR
127.0	77.0	62.0	55.0	45.0

Also at that time bank financing could be obtained on fairly easy terms: we used 60% loan-to-value with a 30% non-amortizing bullet payment at the end of a 10-year term. Interest rates were higher at the time and we used a rate for the loan based on 1-year LIBOR plus 120 basis points or 6.5%.

In order to assess the free cash flow during the financing period we used an average TCE revenue stream based on our 5-year Outlook issued in January 2008 for newbuildings in the five tanker sectors. Assuming operating costs as shown, free cash flow during the financing period is summarized for the five tanker classes in Table 2.

Table 2 – 2007 Cost Structure, TCE basis (US\$ 000/Day)

	VLCC	SUEZ	AFRA	PANA	MR
TCE Revenue	37.5	31.0	27.4	26.0	15.4
Operating Cost	10.5	8.5	7.5	6.5	6.5
Finance Cost	27.4	16.6	13.4	11.9	9.7
Total Cost	37.9	25.1	20.9	18.4	15.2
Cash Flow*	(0.4)	5.9	6.5	7.6	(0.8)
IRR on 40% Equity*	3.4%	9.7%	11.4%	13.3%	3.8%

* Before tax basis

A simple discounted cash flow calculation using these results and a 25-year project life accounts for all future cash flows and yields the internal rate of return on the 40% equity investment in each project, also illustrated in Table 2. Note that the internal rate of return is calculated based on the assumption that TCE earnings continue at the level indicated for the life of the project, an aggressive assumption.



If we fast-forward to today we find a number of things have changed. Asset prices continued to increase during 2007, an average of 9.3% for new and second-hand tonnage across sectors. This price increase will affect free cash flow and IRR negatively.

In an unusual twist, the ongoing credit crisis has actually reduced the base interest rate from a year ago – we now assume a 1-year LIBOR rate forecast of 2.5%. However, banks are tightening up their criteria for lending and we assume the spread to now be around 150 basis points, up from 120 basis points, resulting in a risk-adjusted interest rate for our calculations of 4.0%. This represents a cost of borrowing reduced a full 2.5 percentage points over the beginning of last year for qualified projects and a bit of an anomaly in the present credit environment.

The final factor we consider in this evaluation is the tightening of credit terms. To model this we've assumed a suitable project can still attract 10-year terms but that the 30% non-amortizing bullet is no longer available. This assumption will have the effect of reducing cash flow and IRR.



TANKERS

INVESTMENT ATTRACTIVENESS

No. 8 ~ 28 March, 2008

We have excluded other factors such as increasing operating costs, bunker costs etc. in order to simplify the evaluation. It should be noted that these have significant potential to increase going forward.

The impact of pre-construction interest payments on acquisition price is also growing. Extended contract periods and high prices have increased the real cost of tanker contracts. To illustrate, consider a contract for a newbuilding VLCC with 36 month delivery at a nominal price of US\$ 127 million and 5 x 20% progress payments due at contract signing, delivery and equally spaced in between. An additional economic cost of US\$ 20 million or 14% of the nominal price is incurred by making the progress payments before delivery and use of the vessel, assuming a 10% opportunity cost. If a four year contract period is considered, which may now be required in certain yards due to backlogs, this additional cost increases to 18% from 14% of the nominal contract price.

Using current tanker newbuilding prices (March 2008) along with a decreased cost of borrowing of 4.0% on a 10-year note and a more restrictive finance structure without a bullet payment, the cash flow and IRR results are displayed in Table 3.

Table 3 - 2008 Cost Structure, TCE basis (US\$ 000/Day)

	VLCC	SUEZ	AFRA	PANA	MR
Price (US Million)	155.0	94.0	76.0	65.0	55.0
TCE Revenue	37.5	31.0	27.4	26.0	15.4
Operating Cost	10.5	8.5	7.5	6.5	6.5
Finance Cost	35.3	21.4	17.3	14.8	12.5
Total Cost	45.8	29.9	24.8	21.3	19.0
Cash Flow*	(8.3)	0.1	2.6	4.7	(3.6)
IRR on 40% Equity*	2.4%	6.3%	7.5%	9.7%	1.4%

* Before tax basis

The IRR results in Table 3 include an assumption of increased scrap prices from US\$ 375/LDT to US\$ 600/LDT to reflect current levels. The effect on IRR is an increase of about 10-20 basis points.

Considering all effects, the cash flow from tanker projects using current acquisition and financing assumptions has reduced more than US\$ 4,600 per day on average from

results projected at the beginning of 2007. VLCC and MR projects are well “under water” with negative cash flow during the financing period. All tanker classes indicate single digit IRRs. Project internal rates of return on investment have been reduced by three full percentage points on average for the five tanker sectors evaluated.

Based on these results we believe that investment attractiveness in tanker projects is indeed diminished from a year ago. Both on a free cash flow basis and rate of return basis the numbers are clearly less enticing.

At this juncture a relevant question to ask is what sustained TCE earnings would be required to restore the desirability of investment in this sector, at current asset prices. Of course, different firms will have different hurdle rates but if we assume that a 15% return on equity is the threshold for desirability, we can calculate the TCE required to generate it. Table 4 displays the required TCE earnings based on the previous assumptions in order to achieve a 15% return on equity invested.

The numbers in Table 4 must be sustained over the 25-year project life in order to realize the 15% return. While history is not a good predictor of the future, it is a good datum to be aware of. Also included in the table are the 10-year average TCE earnings for the period 1998-2007.

Table 4 - TCE Earnings Required for 15% Return on Equity

(US\$ 000/Day)	VLCC	SUEZ	AFRA	PANA	MR
Required TCE	70.9	45.2	37.2	31.9	28.0
10-Year Average TCE	41.4	36.5	28.6	23.8	19.1

It seems to us that the evidence for an asset price correction is mounting.