



Long Term Asset Value (LTAV)

Summary

1. In accordance with our engagement, we subjected the procedure for calculating the LTAV (Long-Term Asset Value) pursuant to HSES (Hamburg Ship Evaluation Standard) in the current form to a technical-methodological verification and commented on same. The criteria for the assessment are the mathematical appropriateness of the procedure and the completeness of unbiased and statistically proven parameters used in the calculation. We performed the technical-methodological assessment in accordance with the IDW Standard "Principles for the Performance of Business Valuations" (IDW S 1). Moreover, applying the comparative value method, we compared 2,712 market values from vessel valuations of an appraiser during the years 2006 to 2008 with the LTAV which we recalculated at the respective valuation dates. To this end we examined various sensitivities and scenarios and conducted a total of 135,600 LTAV calculations. The following assessment is based on the principles of business and management economics. Our examination does not extend to assessments and analyses concerning actual use of the LTAV and its inclusion in the value-determination process at individual firms (e.g., shipping companies and banks engaged in ship-financing), special transaction structures which are contrary to the methodological individual assessment of the LTAV (e.g. Asset Play), the creation of value adjustments under german commercial code conditions and assessments concerning utilisation of the LTAV in the ship-financing industry in regulatory terms. To sum up, we arrived at the following conclusions:
2. The discounted cash flow method (WACC approach) on which the LTAV determination is based is a valuation procedure that is acknowledged in technical literature, in practice and in legislation. It is generally also an appropriate procedure for determining the value of vessels. The LTAV can therefore serve as a starting point, for example, within the framework of purchase price determinations, the granting of credits, and in risk provision measures. The actual inclusion and integration of the LTAV in the valuation objectives is not to be performed by the appraiser and is not defined in the HSES; instead, this lies within the responsibility of the party that commissions the valuation.
3. The procedure used so far is generally comprehensible in both technical and methodological terms. With respect to the determination of LTAV parameters, we recommend various methodological adjustments relating to both the forecast of future cash flows and derivation of the discounting rate.



4. Our recalculations of earnings values including a comparison with the market values as at the valuation date indicate that, basically, there is a recognisable correlation between the LTAV values and the market values during the assessment period.
5. The recalculation in active ship markets based on the data and segments made available to us indicates that both the LTAV according to HSES as well as an LTAV which we modified using theoretical considerations (PwC model) fluctuate for container ships and tankers mainly within a range of +/- 15 % around the market price. The LTAV values for bulk containers determined according to HSES and also when using the PwC model, deviate perceptibly more strongly from the market value. For this vessel type, we therefore recommend that the parameters be subjected to more extensive plausibility processes by the appraiser in the individual case. Acceptance of a certain range of parameters in terms of size set by the standard-setter may be of help for the appraiser.
6. We recommend that the current detail planning period be extended from 1 year to 3 years in the HSES. In volatile market situations a further extension of the detail planning period (e.g. to five years) may be appropriate, as well as a justified deviation of charter forecasts from the current valuation date charter rates set by the appraiser.
7. With respect to ships that have not yet been delivered, we recommend that the cash flows be taken into account in the HSES only upon delivery. At present there is no definition to this end in the HSES.
8. In constricted segments (e.g., purpose built vessels), the discounted cash flow method may also be an appropriate valuation method. However, comprehensive plausibility processes concerning the parameters may be required in the individual case. The application of deviating methods is to be examined on a case basis.