Applying the Market Economy Investor Principle to State Owned Companies — Lessons Learned from the German Landesbanken Cases

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Introduction

The Market Economy Investor Principle (MEIP) is in the Commission’s practice one of the entry points for economic analysis in State aid cases. Its purpose is to establish the extent to which an aid measure confers an economic advantage on the recipient of the aid. In many cases, determining the size of the economic advantage is fairly straightforward, i.e. for direct subsidies granted to firms. However, often the situation is much less clear. The assessment of the state aid character of a measure is particularly difficult in cases where the State intervenes by means of measures which are comparable to that of private investors, for example by making equity investments or providing loans or loan guarantees.

In such cases, the Market Economy Investor Principle (or one of its derivatives, like the Private Creditor Principle) becomes relevant. According to the MEIP the credit approved or the investment undertaken should be considered as state aid in the meaning of Article 87(1) if the (monetary) compensation the State receives in exchange is lower than what a private investor would have requested under such circumstances. The exact quantification of the economic advantage received becomes relevant in particular when the aid is found unlawful and has to be repaid by the aid beneficiary to the aid granting State authority (so called ‘recovery’).

One group of cases which has contributed significantly to the further development of the market investor principle are the German Landesbanken cases. While only touching on the specificities of those cases the following article summarizes some of the methodological issues raised during the investigation of those cases. In the following the article first sets out some general principles in assessing the MEIP. Thereafter, specific assessment issues when analysing public capital injections into public firms will be discussed. The article starts with a brief description of the German Landesbanken cases.

The German Landesbanken cases — a brief review

At the beginning of the Nineties, the introduction of the Own Funds and Solvency Directives required German public banks to take up large amounts of new capital in order to maintain their level of activities. That capital was in some cases provided by the German federal states (Länder), which partly or fully owned the banks, by way of a transfer of public housing and other assets. The financial transfers triggered a complaint by the Association of German Private Banks (BdB) as they were under the same obligation to increase their solvency ratios without, however, being able to rely on public support. The complaint concerned seven banks, of which WestLB was at the centre of attention and was acting on behalf of all of them. In 1999, the Commission adopted a first negative decision concerning the transfer to WestLB and ordering the recovery of some € 800 million. In 2003, the Court of First Instance annulled the decision taking the view that the Commission had not sufficiently explained its calculations but confirming the decision on the substance. A new decision on all seven banks was taken in 2004. In its decision on WestLB the Commission asked Germany to recover illegal state aid of ca. € 979 million plus interest (2).

In addition, in 2002 the German authorities and the Commission agreed on the abolition of the public-law guarantee mechanism (so called ‘Anstaltslast’ and ‘Gewährträgerhaftung’) in favour of the Landesbanken from July 2005 on (3). The abolition of the state guarantees triggered a further round of capital increases aiming at strengthening the core capital of the Landesbanken. Recently, the Commission authorised two of those capital increases and a special fund transfer for three Landesbanken.

(1) The CET has contributed at various instances to the application and development of the MEIP for these cases. It has to be stressed, though, that the main burden of work has been carried out by various case teams of DG COMP. In particular, reference has to be made to the internal working group on that topic and the recent case team including M.Cambas, J.L. Colson, M. Löfler, Y. Simon. Michael Tröge was visiting DG Competition when the paper was written. The views expressed are those of the authors and not of the European Commission.

(2) See IP/04/1261.

(3) See IP/02/343.
after having investigated in-depth the compliance of those measures with the MEIP (4).

**Empirical assessment of public capital injections**

*Evaluating investments — general considerations*

The literature on financial theory provides a rather simple principle of when a private investor will carry out an investment project: an investment is individual rational if the expected return on this investment is higher than the opportunity cost of capital, i.e. the return that the investor can expect to make with other investments of similar risk in the capital markets. This principle holds for all rational and risk adverse private investors. Built upon this principle some clarifications can be formulated:

First, a private investor will estimate the overall return on his investment at the time the investment is made. This ex-ante expected return on the investment on which investors base their decisions can be very different from the ex-post achieved return. Second, risky investments in financial markets will not only yield a higher return in case of success but also a higher average return. Therefore, when making a risky investment a rational investor expects at least the return he could achieve with equivalent risk in the financial markets. In other terms risky investments have a higher (opportunity) cost of capital. Third, from an economic point of view only investments with returns that exceed the opportunity cost of capital can be considered to be profitable. Investments producing a lower return are not economically profitable, even if they produce positive accounting earnings. Fourth, the expected return for investors does not necessarily have to come directly from the investment project or even the company. A rational investor may accept low returns on a specific investment, if this investment produces high positive returns for the same investor from other assets. In any case, investors will want to clearly identify and quantify these 'externalities'. Fifth, an investor is exclusively interested in the return on his investment. The marginal profitability of the investment project for the company and the accounting profitability of the company can be useful for determining the return for the investor but are essentially different concepts.

In practical terms, when assessing the conformity of an investment with the MEIP it is necessary to evaluate the average return an investor can reasonably expect on his investment at the time the investment was made and to identify the opportunity cost of capital, i.e. the return that could have been expected with an investment of similar risk in the financial markets. The standard approach for determining the expected average return on an investment and its opportunity cost of capital will be discussed in the next section.

**Measuring Expected Average Return on the Investment**

Often returns are calculated in terms of accounting returns, where some type of earning number is divided by book value of equity (ROE), assets (ROA) or investment (ROI). However, these accounting returns (5) should in general not be considered as a correct measure for an investor's expected average return. Private investors might use these ratios to evaluate smaller investments because they are easy to understand and can be conveniently calculated using existing management information. However, accounting returns are calculated on an annual basis, whereas a rational investor will consider the return over the entire life time of the project. Averaging out expected annual return numbers will not lead to correct results. Returns arriving far in the future would be overvalued which could give a wrong impression of the investment's profitability. In addition, accounting information is historic information about the company and therefore better adapted to evaluate ex post performance of the firm than ex ante expected performance of the investments. Accounting earnings are also very sensitive to the company's accounting choices and can therefore be easily manipulated. Last but not least investors are not really interested in accounting earnings but care about their monetary gains i.e. the cash flows they receive from their investment.

In fact, the economically most meaningful way to determine an expected average annual return is to calculate the internal rate of return (IRR) of the investment. The IRR is not based on accounting earnings in a given year, but takes into account the stream of future cash flows that the investor expects to receive over the entire lifetime of the investment. Given a stream of future cash flows the IRR is calculated by numerically solving the following equitation:

$$\text{Investment} + \sum_{i=1}^{\infty} \frac{\text{Expected Cash Flow}}{(1 + \text{IRR})^i} = 0$$

The crucial input for calculating the IRR is the correct forecast of future cash flows. In case of an

(4) See IP/05/1096.
equity investment this means that a realistic and detailed business plan for the undertaking has to be developed. The earnings forecasts obtained with this business plan are then transformed into cash flow numbers by adjusting for non cash items such as depreciation and change in working capital.

Of course the expected IRR on an equity investment can be influenced by overly optimistic or pessimistic business plans. It is essential here to check the plausibility of the key assumptions that have been used to construct the forecast. It is in this context that accounting returns and other accounting ratios can be helpful. Forecasted accounting returns, growth rates, margins and balance sheet ratios should be in line with the company’s historical performance and industry benchmarks.

A number of additional technical problems often arise in practice:

- The cash flows received by an equity investor are dividends, and indeed this is what the investor is interested in most. Dividend streams are however difficult to forecast as they depend on the company’s distribution policy. Therefore forecasts are usually not made for dividends but for ‘Free Cash to Equity’. Free Cash to Equity can be considered as ‘potential dividend; it only depends on the underlying profitability of the business.

- Equity investments do not have a clearly defined horizon. To limit the analysis, it is however standard practice to establish detailed cash flow forecasts only for a finite number of income streams, typically between 5 and 10 years. Revenues arising further in the future can then be taken into account by assuming that they will grow at a constant rate. This constant growth rate should however be chosen carefully and the sensitivity of the expected return with respect to slight changes in the growth rates should be verified. In case the investment’s expected return depends critically on the choice of the growth rate, cash flow forecasts based on a detailed business plan should be established for a longer horizon.

Determining the opportunity cost of capital

In principle, it is possible to obtain the lowest average return an investor would be willing to accept by looking at industry benchmarks. The appropriate benchmark for equity investments should, however, not be historical returns but the ‘forward looking’ returns an investor can expect to achieve by buying shares of a similar risk in the stock market. This return can be estimated, for example by calculating an IRR for an investment in equity of a sample of quoted companies. In this case the observed stock price would correspond to the cost of an investment and free cash flow forecasts provided by financial analysts can be used to estimate the income stream the investor receives in exchange.

However, these estimates for a company’s cost of capital have proven to be highly unreliable. Therefore the minimum required return is almost always derived through a theoretical ‘Asset Pricing Model’. Advanced financial theory has proposed a number of different Asset Pricing Models, however the industry standard for the determination of the cost of equity is still the Capital Asset Pricing Model (CAPM), developed by Sharpe and Lintner in 1965. The CAPM postulates that the expected return on a risky investment should be determined by adding a risk premium to the return on a risk free investment. In perfect capital markets this risk premium will only depend on the non diversifiable risk of the investment, measured by its beta coefficient. The expected return can be expressed in the following way:

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E(R) = r_f + \beta_i \cdot (E(R_m) - r_f)
\]

In practice, the value of the risk free rate is approximated by the yield on a treasury bond. The beta of the company’s share is directly drawn from a professional data provider in case the company is stock market quoted. The beta of non-listed companies can be approximated using betas of comparable listed companies and making an adjustment for differences in leverage. The market risk premium is typically estimated as the historical return difference between a broadly based market index and treasury bonds.

It should be noted that on a theoretical basis different estimation methods for the value of the beta as well as for the equity risk premium can be defended, which can yield to significant differences in the cost of capital estimate. The industry however works with rather well defined standard procedures which will yield a rather narrow range of 3-4% for realistic cost of equity estimates.

The CAPM should theoretically hold for all investments; however, it is normally only applied to identify the appropriate returns on equity type instruments. Risk adjusted returns for fixed income investments, i.e. loans and bonds are usually determined by comparison with well established market benchmarks. In this case risk is not measured in terms of beta, but simply characterized by an
external rating provided by a rating agency such as Standard and Poor's or Moody's. Professional data providers will then provide a range of returns corresponding to a debt instrument with a given rating and a given maturity. In fact, the appropriate remunerations for fixed income instruments can be given with high precision. Unless the company is in financial distress, returns can be typically narrowed down to an interval of less than 30 basis points, which makes it usually very easy to evaluate the state aid character of a debt injection (6).

Reasoning in present values

The basic principles of evaluating investments have so far been formulated in terms of returns. An alternative approach is to evaluate the investment decision in terms of present values, which leads to equivalent but often more intuitive results. The present value of a stream of future cash flows can be understood as the amount of money that would have to be invested in the financial markets today to obtain this stream of future cash flows. It can be calculated by discounting the stream of future cash flows at the appropriate return i.e. at the cost of capital. For example, to estimate the value of an equity stake in a non quoted company investment banks would typically use a Discounted Cash Flow (DCF) approach, i.e., determine the present value of the cash flow rights attached to this equity by discounting them at the cost of equity capital.

If the present value of the future cash flows received is higher than the investment which is supposed to generate these cash flows an investor will consider the investment to be economically profitable. This would be exactly the case if the internal rate of return of the project exceeds the minimum required rate of return, i.e. the cost of capital.

Present values are especially convenient for evaluating equity investments, because they should correspond to observed market values. This gives an additional possibility to cross check the plausibility of return estimates for equity investments. In the case of equity issues for quoted companies the issue price should not deviate significantly from the observed market price. In case no market prices are available, the value of equity can be estimated by comparing the company to stock market quoted benchmarks, using ratios such as the price/earnings ratio. Cross industry comparisons based on price/earnings ratios only are rather sensitive, however, given their dependency on a rage of factors like the leverage of the company and its expected growth.

Applying the MEIP

Carrying out the MEIP test for a public investment in a private company is a straightforward application of the techniques described above. The MEIP test requires two steps: First, it has to be establish what return the investor can realistically have expected on his investment, given historical performance of the company and given the future cash return to which he has acquired contractual rights. Second, this return has to be compared to a realistic risk adjusted return that an investor could have expected by investing in capital markets.

Reasoning in terms of values gives an additional possibility to verify the MEIP which is especially practical for equity issues. Instead of looking at the return for the investor it can be sufficient to look at the price of the equity sold. If the issue price is higher than the prices obtained through different valuation methodologies the investor does not receive an appropriate return. The application of the MEIP converges to the following test: First, the equity stake acquired by the state has to be evaluated, e.g. by using a DCF and/or a multiple approach. Second, the theoretical value of the stake has to be compared to the price paid, i.e. to the amount of money invested by the state.

Assessing Investments in Public Companies

Limits of the MEIP test for investments in public companies

The approach described above is limited, however, when investments in public companies are at stake. Here the State acts both in its role as existing shareholder and as a new investor. In these situations the State can increase the return on an investment in new equity by decreasing the price of the equity instruments to be sold. In particular the return on an equity investment in a profitable company can be always made higher than the opportunity cost of capital. It will therefore be possible to structure the equity issue in a way which satisfies the MEIP principle for the new investment.

What happens is of course that by decreasing the price for the newly issued equity, the company will dilute the value of the existing shareholders' equity. The existing shareholders will in fact subsidize the new equity issue through a loss of value of their equity. This should not be a concern in case the company is privately owned, as it can be assumed that private shareholders will not accept dilution of their wealth. The situation is different, however, in the case of an equity issue for a public company. The State, as an owner of the existing shares, may accept the dilution of its equity. It is after...
all irrelevant whether the firm receives a subsidy directly through a capital injection or indirectly as a decrease in the value of the public owner's existing shares.

In consequence, applying the MEIP to the new equity issue only, will impose limited constraints on the state's ability to subsidize the company. Even the participation of private shareholders in the new equity issue does not imply that the whole transaction has been taken place according to the principles of a market economy. In fact, only the presence of private investors among the old as well as the new investors can be taken as some safeguard against capital injection violating the MEIP.

**A refined MEIP test for public companies**

To make sure that a public company has neither been subsidized directly through the capital injection nor indirectly through dilution of the public owner, the MEIP has to be applied not only to the State in its role as new investor, but also to the State as the owner of the existing company. This can be done simply by extending the approach described above to existing shareholders as well to new investors. The most straightforward way of doing this would be to evaluate how the capital increase affects the present value of future cash flows received by existing shareholders. What makes this approach difficult, however, is that most equity injections do not only change cash flows but also the company's risk and therefore the appropriate discount factor. Therefore a decrease in expected future cash flows for existing shareholders ('earnings dilution') can increase or lessen the value of their equity ('value accretion or dilution' respectively), depending on whether the discount factor decreases or increases.

An alternative approach is based on the fact that the company can only appropriately remunerate new shareholders without cross subsidy from the old shareholders if the capital raised is invested profitably. It is therefore sufficient to analyze the overall profitability of the investment, in addition to the profitability of the new equity issue for the new shareholders. If the MEIP holds for the new investors and generates wealth for the company it is clear that the profitability of the new investment has not been achieved by a cross transfer from old investors.

For instance, in the recent Landesbanken cases the objective of the capital injection was to increase the company's capital adequacy ratio, not to make a specific investment project. Hence, the focus of the assessment was on the overall increase in the company's value due to the capital injection and only to a lesser extent on the profitability of the investment. It was required, therefore, to prove that the total value after the capital injection ('post money valuation') exceeds its value before the capital injection ('pre money valuation') plus the amount of capital invested. In this case there is 'value creation' through the investment and in this case new shareholders can be given an appropriate return without diluting the wealth of existing shareholders.

To sum up, a meaningful application of the MEIP to capital injection in public companies requires a refined test. First, it has to be shown that the new investment is profitable for the new investors. Second, it has to be shown that the return for the new investors has not been achieved by a dilution of existing shareholders.