

## **CALCULATION AND ADJUSTMENT OF PURCHASE PRICE IN M&A TRANSACTIONS**

### **Introduction**

Provisions on the calculation and adjustment of purchase prices are among the most important provisions in M&A agreements. However, preparation and understanding of purchase price provisions often cause confusion and - subsequently - disputes. When the provisions are drawn up, the focus on them does not always correspond to what their importance warrants. For example, priority is given to the preparation and negotiation of extensive warranty catalogues and warranty protection, regardless of the fact that it, based on experience, is possible to make more money by carefully thinking over the purchase price mechanism. In addition, the financial and commercial persons involved do often not come into contact with the wording and structure of the agreement, which are indigestible for persons who are not used to reading such material. In contrast, legal advisors do often not possess the necessary understanding of the financial matters which the agreement is meant to describe. In that way, a problem, which is actually relatively banal, is made complicated.

10 to 15 years ago, companies' purchase price was most often calculated based on the traded company's (the "Target") historical accounts or based on an account of the booked equity as of a certain cut-off date. The purchase price could be supplemented by particular mechanisms, for example earn-out mechanisms, where part of the purchase price was dependent upon future earnings or turnover some years after the transaction. However, among financial advisors - and increasingly among medium-sized and large companies - the Enterprise Value concept has become the most central concept in discussions regarding valuation. Enterprise value only corresponds to the equity value, where the traded company has no net liabilities, see below. Although financial advisors and the parties agree on the Target's enterprise value, the negotiation regarding which equity value this corresponds to still remains. Thus, equity value constitutes the amount which the seller is entitled to, traditionally referred to as the purchase price.

Therefore, an understanding of the enterprise value concept and the connection between it and the equity value / purchase price is key when negotiating the purchase price. It is also important when preparing the instrument of transfer.

On that background, it is the purpose of this article to (2.) clarify the connection between enterprise value and equity value. At the same time, this will elucidate the background for the provisions on regulations based on (3.) net liabilities and (4.) net working capital, which are related to models based on the enterprise value. Furthermore, the article will review (5.) individual balance sheet items which often give rise to discussion and (6.) the typical cadence for a regulating mechanism. Finally, the article contains (7.) recommendations for the preparation of provisions on the regulation of purchase prices and (8.) a conclusion. The issues reviewed in the article are only directly relevant for trades with unlisted companies. However, for persons advising on corporate finance transactions, it is generally useful to understand the concepts and issues discussed.

It should be noted that attorney Tue Ravnholt Frandsen in an excellent article<sup>1</sup> has touched on some of the issues mentioned, for which reason some matters in this article will only be briefly reviewed, with reference to the mentioned article by Tue Ravnholt Frandsen.

## 2. The Connection between Enterprise Value and Purchase Price

During sales processes, it is often seen that the buyer is recommended to make his bid for the Target on the condition that the Target has no interest-bearing debt or any liquid funds. This value is defined as the enterprise value. Under the indicated conditions, enterprise value corresponds to the purchase price received by the owners.

However, in theoretical financing expositions, enterprise value is more often defined as a company's value based on a given financing structure, i.e. a given ratio between equity and debt on the liability side of the Target's balance sheet<sup>2 3</sup>. In this situation, the enterprise value does not indicate the amount received by the owners. It indicates the amount due to the investors in general, that is the owners (equity investors) and the debt investors. At M&A transactions, the reality is often that the Target has some debt at the time of takeover, and that it is not practical that the seller or the Target settles this debt immediately before the transfer. If the buyer and the seller agree on a given enterprise value, the owners' part therefore, i.e. the purchase price, may be calculated as the agreed enterprise value with deduction of debt:

$$EV = V_D + V_E \longleftrightarrow V_E = EV - V_D^4$$

Use of enterprise value as an expression of value permits an easier comparison between companies' value, regardless of the concrete financial structure<sup>5</sup> chosen by the owners. Furthermore, a number of common valuation methods initially lead to an enterprise value. This is for example the situation when companies, as is often the case, are valued based on EBIT, EBITA or EBITDA multiples used by the market on comparable companies or at comparable transactions. Thus, the earnings parameter used indicates the earnings before financial expenses<sup>6</sup>. Valuation methods where future cash flows are discounted at the present value will also often initially result in an enterprise value, but these methods are available in many forms, and some lead directly to the equity value.

## 3. Calculation of net liabilities

Where the parties have agreed that the purchase price is to be calculated based on an agreed enterprise value with deduction of debt, the purchase price depends on the calculation of the debt at the financial cut-off point. The cut-off point is often fixed at the time where the parties make the exchange, often referred to as "Closing". In doing so, the financial and the legal risk are transferred simultaneously.

It may give rise to discussion which items should be included at the calculation of the debt to be deducted. The debt items to be deducted are often described as "interest-bearing" debt. This typically covers bank borrowing, debt to mortgage banks and debt to shareholders. Some items may cause doubt. This is for example the case with regards to taxes payable and pension liabilities. The starting point should be that such items are to be deducted from the calculation of the purchase price, but the matter must often be settled by negotiation, see below on individual balance sheet items.

The debt is calculated as net debt, i.e. deducted by liquid funds. Liquid funds comprises cash and cash-like assets, such as for example liquid securities. The logic behind this is that the liquid funds could be used to reduce the debt, and that it will often be a coincidence whether liquid funds have been used to reduce for example an overdraft facility. However, in the on-going operations, companies do need a certain minimum of liquid funds, and the argument can be made that this minimum should not be deducted from the debt, but that it rather represents working cash. To my knowledge, this nuance is rarely taken into account in practice, as it is often of little relevance. However, for some business types, for example widely branched retail businesses, there may be a real need to do so.

Finally, the debt should be calculated at market value, should this deviate from the booked value.

#### **4. Regulation for Working Capital Fluctuations**

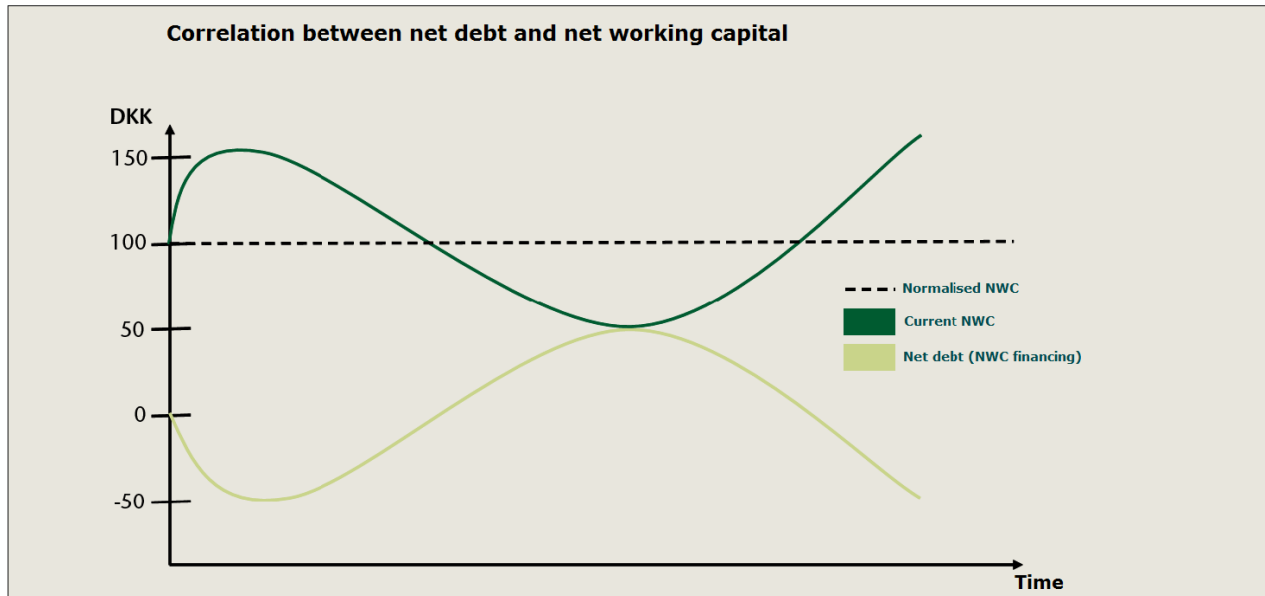
A company may not be operated - and earnings and cash flows may not be generated - without a certain fixed assets base. Furthermore, the company owner has, as part of the on-going operations, a certain capital tied-up in outstanding accounts and inventory as well as a certain financing from suppliers. These balance sheet items (outstanding accounts + inventory - supplier debt) constitute the core of the net working capital, which, however, is sometimes defined as (i) current assets with the exception of liquid funds deducted by (ii) short-term obligations which do not form part of the net debt. Fluctuations in these items, which have a direct effect on the net debt, see the above, often occur during normal operations: customers pay, purchases for the inventory are made, or suppliers are paid. An agreed enterprise value, where the purchase price is only calculated by deduction of net debt as of Closing, will thus lead to the purchase price fluctuating at random. This is the main argument why a purchase price mechanism, where the purchase price is calculated based on the enterprise value with deduction of net debt, should also contain a working capital precondition and a regulation mechanism, by means of which a regulation for fluctuations in the working capital at the cut-off point is made.<sup>8</sup> For that reason, fluctuations in the net debt, which only reflect normal working capital fluctuations, should not have an effect on the purchase price: the increase of the net debt, which is due to a normal inventory purchase where the inventory exceeds what is normal, should not have an adverse impact on the seller, just as the seller should not profit from individual larger debtors paying earlier than what is customary, thus bringing the amount of debtors below normal.

In addition, without a working capital regulation mechanism, the seller will be in a position to manipulate the purchase price, for example by reducing the inventory to an unusual extent, by pressing debtors for payment or by putting off payments for suppliers.<sup>9</sup>

Thus, a mechanism for regulating working capital will in general imply that the seller receives compensation (the purchase price is increased) corresponding to the amount by which the working capital exceeds the pre-conditional working capital at the cut-off point (often Closing). If the working capital is lower than the pre-conditional working capital, the opposite will take place.

The connection between fluctuations in net working capital and net debt is illustration in figure 1.

Figure 1:

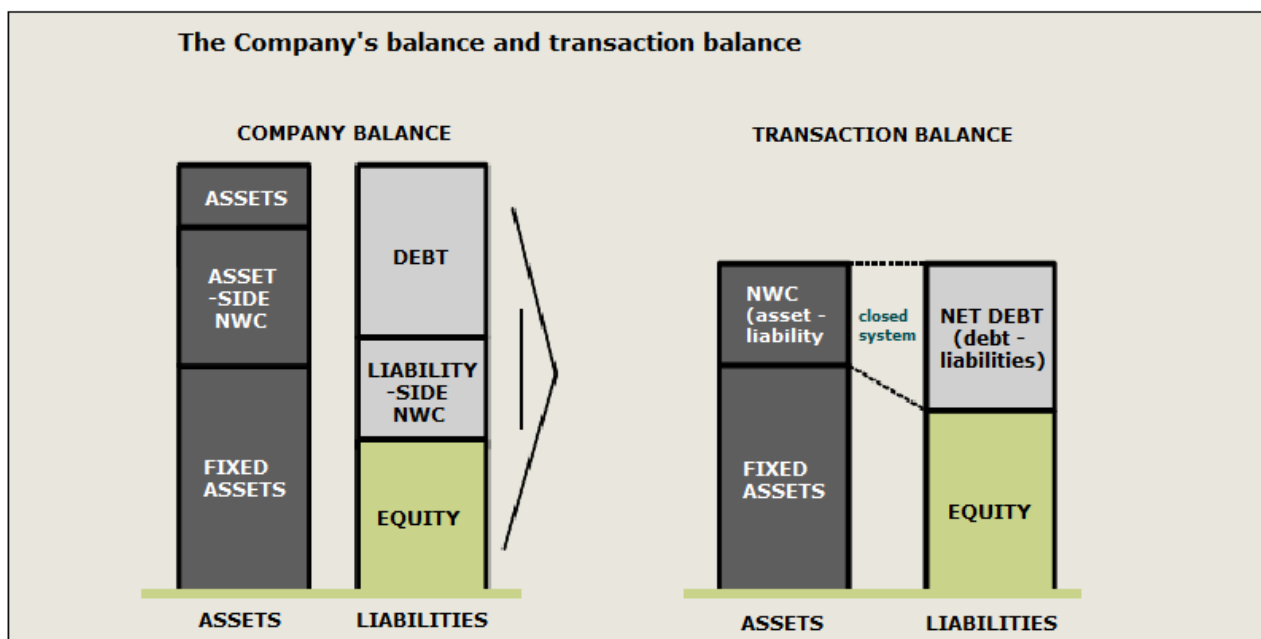


Subsequently, it is key to determine the net working capital level which the regulation is based upon. This depends on the parties' conditions in connection with the valuation. These conditions will often correspond to a level where the Target is in a "steady state" and where the working capital has not fluctuated due to seasonal variations or other extraordinary factors. In contracts, this is often defined as "Normalised Working Capital" or "Base Working Capital". It is in the interest of the seller that this level be low, while the buyer, in contrast, will wish for the level to be high. The understanding of what the level should be is therefore a significant element in the buyer's financial due diligence and in the negotiation of the price. However, the negotiations will often in the early stages only be concerned with the enterprise value, without the parties' addressing how the intermediary lines of figures from there to the purchase price should be carried out. A potential buyer who wishes to indicate that this item remains unsettled may attach a precondition for a "normalised working capital level" to his bid. Thus, the buyer will often only at a later stage in the process have the knowledge necessary to form an opinion as to what the pre-conditional working capital should concretely be. Conversely, sellers receiving a bid for the enterprise value may attempt to obtain the buyer's pre-conditional working capital with a view to both "locking" the purchase price and to ensuring that different bids may be compared.

Sometimes, the normalised working capital is calculated based on the average in a previous period. However, this method may not be used mechanically. For example, it may, depending on the length of the period, lead to a too low level for the company's growth. However, the method does take seasonal variations into account, as long as the average is calculated based on a full cycle. However, the parties will often not only rely on historical data, but will also take into account how the net working capital is expected to develop in a period of six to 12 months after the cut-off date.

Thus, the regulation mechanism should make it value neutral that the Target alternates between working capital and net debt as illustrated in figure 2.

Figure 2:



### 5. Individual Balance Sheet Items

When calculating the purchase price based on enterprise value, it is therefore important whether a balance sheet item is included in the calculation of net debt or net working capital. Items included in the net debt affect the purchase price on a one-to-one basis while the purchase price is only affected by changes in working capital items. Normally, neither the main components of the net debt item (bank borrowings, similar interest-bearing debt and liquid funds) nor the main components of the net working capital (outstanding accounts, inventory and supplier debt) give rise to discussions.

However, a number of the other items on the balance sheet often result in discussions, and it is necessary to concretely address each individual item. Particularly, the legal advisor should seek council from financial advisors with regards to such matters. It is useful to consider whether the item in question is a choice of financing or an integrated (unavoidable) part of the operations of the company. However, the criterion is not always easy to apply, and the parties' negotiation skill and strength are normally of greater importance than more theoretical considerations.

*Deferred tax* reflects that the tax-related rules of depreciation differ from those related to accounting. Typically, the depreciation in relation to tax will take place over a shorter period. The result which is taxed, and with that the current tax, is lower than the result after depreciation accounting, and with that the theoretical tax. Companies may therefore often defer a tax-related obligation. In such situations, there is a liability for deferred tax among the short-term liabilities. As long as the company continues its investments, it will be able to defer this tax-related obligation. In reality, it is a continuous financing provided by the State. In this typical situation, it seems most natural to treat the deferred tax as part of the working capital, which also seems to be the case in most transactions. It is a differ-

ent situation when the option of deferring tax ceases or is expected to be reduced significantly, for example because it for a longer period will not be necessary to invest in a type of asset which is fully depreciated in terms of tax, but not in terms of accounting. Correspondingly, it will often be most correct to include deferred tax assets among the liquid funds if they in all likelihood may be realised within a shorter period of time.

*Taxes payable* are typically treated as interest-bearing debt. In part, the obligation will typically bear interest, and in general, it may not be deferred. However, sometimes the argument is successfully made that taxes payable are also in reality a continuous financing provided by the State, as there will in general always be some tax payable.

*Deposits* received by the Target, for example as lessor, increases the liquid fund balance on the asset side of the balance sheet, while the liability side of the balance sheet will have a set-off. In cases where deposits are received with a long-term view, the starting point should be that the liquid funds received will reduce the net debt. The set-off, deposits received, will be included in the working capital, but the item, in typical situations, will be constant. Deposits paid by the Target imply a reduction of the liquid funds balance (increase of the net debt). The corresponding asset is included in the working capital, unless it is expected to be released in the short term. The same applies to provisions of security to be supplied by the Target, for example by way of custody accounts with liquid funds or securities. Such provisions of security, unless they are short-term, isolated dispositions, represent a net asset value in the same way as for example an inventory. Therefore, liquid funds which are tied-up in this way should not be included in the calculation of the net debt.

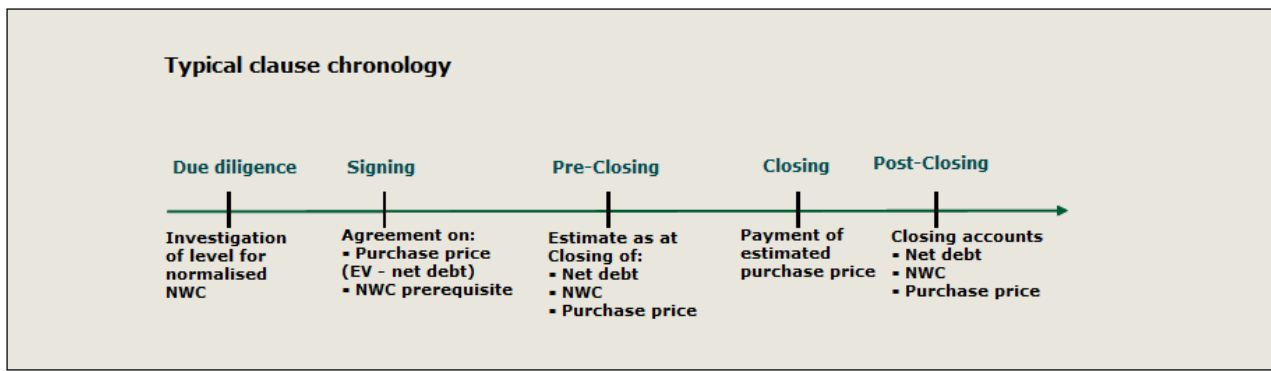
*Pension liabilities* may in some cases also appear on the consolidated balance sheet for companies which are not entitled to operate an insurance business.<sup>10</sup> For example, this may be the case if the Danish parent company (Target) has subsidiaries in other countries, for example in the Netherlands, Norway, Sweden, England or the US<sup>11</sup> where there are not the same restrictions as in Denmark on companies without a license to operate an insurance business assuming pension liabilities.<sup>12</sup> The point of departure for the buyer should be that such obligations be equated with interest-bearing debt: the seller / the Target could have chosen to place the pension obligation externally, and therefore, it is more likely a financing choice than an unavoidable part of the operations. It is important to understand the exact contents, including the measurement, of such obligations. The financial crisis has illustrated how seemingly solid pension programmes may quickly turn out to not have sufficient coverage. The legal advisor should consider to request that specialised pension advisors be involved.

*Balances* between the Target and the rest of the seller's group should be treated as interest-bearing debt unless the balance reflects the on-going trading between the companies. If the balance reflects the on-going trading, it must be considered if this trading should continue on the same terms after Closing, or if terms of payment etc. should be adjusted. Thus, adjustments of such terms will affect the net working capital level in future and should therefore be included in the pre-conditional working capital. If the trading relationship with the rest of the seller's group is terminated at Closing and the balance is settled, it will affect the Target's / the buyers liquid funds. If a corresponding trading relationship may be established elsewhere, it should not impact the value of and purchase price for the Target.

## 6. Cadence for Regulation Mechanisms

In larger sales processes, the regulation of the purchase price often follows a two-step procedure. Shortly before Closing, the seller will provide an estimate of the net debt and the net working capital as of Closing. Against that background, the buyer will pay a preliminary (estimated) purchase price. The preliminary purchase price will be finally regulated after Closing, where accurate calculations of the net debt and the net working capital as of Closing are made. The process is illustrated in figure 3.

**Figure 3**



However, among other things where Closing has not been staggered relative to the conclusion of the agreement, there may also be one-step procedures where only a subsequent regulation of an agreed preliminary purchase price is made<sup>13</sup>. Based on his knowledge of the Target and his unhampered communication with the management, the seller will normally be in a better position to predict the final purchase price, regardless of the fact that the buyer's due diligence will have evened out the levels of knowledge. The buyer may address the risk of initially paying a too high price with the deterioration of negotiation position that this implies by demanding that part of the preliminary purchase price be placed in safe custody.

## 7. Regulation Provisions

Often, agreements on company transfers use quite extensive regulations as to how the purchase price is to be calculated, including which balance sheet items should be included in the net debt and net working capital, respectively. However, it is normally an advantage to keep it relatively simple.

In overall terms, the calculation must address the following equation:

$$V_E = EV - V_D + \Delta NWC$$

The parties' agreement on the purchase price may be based on a regulation similar to the following:

"X.X The Purchase Price for the Shares shall be calculated on the basis of an enterprise value of DKK 300,000,000 (the "Enterprise Value") assuming a Working Capital level equal to the Normalised Net Working Capital. Accordingly, the Purchase Price shall equal the Enterprise Value less the (i) Closing Net Debt and (ii) the Net Working Capital Difference.<sup>14</sup>

Schedule X.X includes a sample calculation of the Purchase Price.”

Definitions of net debt and net working capital, respectively, are often more precise when the definitions make reference to a statement based on a historical annual account for the Target. Thus, in the Closing accounts, the Target’s assets and liabilities will typically be grouped in the same categories as what has historically been the case. In case of a dispute, it will furthermore be easier for an arbitrator to place a particular asset or liability based on the statement made by the parties in the historical annual accounts than based on wordy definitions.

Thus, net debt and net working capital may for example be defined as follows:

“Net Debt” shall mean all interest bearing debt of the Group less cash and cash equivalents calculated in accordance with the Accounting Principles. Schedule • includes a sample calculation of the Net Debt as of 31 December 2008 on the basis of the 2008 Annual Report.

“Net Working Capital” shall mean the net working capital of the Group calculated in accordance with the Accounting Principles. Schedule • includes a sample calculation of Net Working Capital as of 31 December 2008 on the basis of the 2008 Annual Report.

The definitions and the purchase price calculation in general should normally refer to and make use of the Target’s historical accounting principles, as these principles have formed the basis for the parties’ discussions and negotiations. However, there is nothing to prevent agreements being made on concrete deviations from these principles. For example, the buyer may, during his due diligence, have become aware that sufficient write-downs are not made of the inventory, and in such a case, it may be appropriate to concretely specify how the inventory is to be handled in the final statement. It is self-explanatory that each party should ensure that they have understood the contents of the accounting principles used in the Closing accounts.

Furthermore, the agreement should contain provisions which ensure to the buyer that the Target in the period from the last reliable financial statement or interim financial statement has been operated without changes in accordance with the historic practice. Thus, regulations for net debt and net working capital do not prevent any manipulation of the purchase price. For example, a sale of fixed assets, inadequate maintenance and postponement of normal investments of marketing expenses may reduce the net debt and thereby increase the purchase price. If the buyer senses that there is a real risk of such a manipulation, or if he for some other reason wishes for a higher level of security, detailed provisions may further address this risk.

## **8. Conclusion**

The instrument of transfer’s provisions on the purchase price calculation and regulation must reflect the parties’ value discussion. It is therefore often natural to use an agreed enterprise value as a point of departure. In contrast, regulations based on the booked equity revolve around an entity (the booked equity), which is most often not relevant in the value discussion.



At the negotiation and preparation of such provisions, it is necessary to consider the categorisation of each individual item on the Target's balance sheet. The categorisation of certain items may be discussed, and there is room for the talented and well-prepared negotiator.

Furthermore, it is necessary to understand the meaning of the accounting principles used, and whether deviations should be made from these principles. It may be advantageous for the provisions to make reference to examples as to the calculation of net debt and net working capital based on the Target's historical financial statements.

A mechanism based on enterprise value with a calculation of net debt and net working capital as of Closing has the advantage that the financial cut-off point corresponds to the legal one. Thus, the seller will receive the result up until Closing. However, preparation of the Closing accounts may result in a dispute, and it cannot be avoided that the provisions become a bit complex.

Against that background, it should in each individual transaction be considered whether the parties might not be better served by the transaction being carried out based on the Target's latest historical financial statement or, if relevant, a revised interim financial statement, whose accuracy the seller warrants. In such a case, the parties may discuss the enterprise value and the intermediate lines of figures for the purchase price against that background, but the purchase price (equity value) may be indicated in the instrument of transfer without regulations. Furthermore, the instrument of transfer should ensure that no payments are made from the Target in the period from the balance sheet day for the financial statement in question, or that only payments corresponding to an amount agreed by the parties be made. This method is referred to as the "locked box" method. The method implies that the buyer receives the Target's earnings from the date of the financial statement. This may to some extent be balanced out by the purchase price carrying interest from the same date. The disadvantage that the buyer will assume the financial risk before the legal risk and the control over the management are transferred implies that the method is less suitable in cases where it will take, or may take, a long time from the date of the relevant financial statement until Closing. This may for example be the case when the Transaction has to go through an extensive approval procedure with the competition authorities.

Thus, the purchase price mechanism should be adjusted to the parties' value discussion as well as the expected process. In addition, it should be kept in mind that it, also in these cases, is of value to keep the regulation relatively simple.

## Notes

1 Revision og Regnskabsvæsen, 2006, no. 4, p. 32 (in Danish).

2 See, for example Copeland, Koller and Murrin, *Valuation*, 2nd edition, s. 135ff ("entity value") and Damodaran, *Applied Corporate Finance* (1999), p. 439ff ("firm value").

3 In this article, it is presupposed that the Target has been financed by equity and debt. Cases where hybrid types of financing, for example convertible debt, have been used are not touched on further. They imply nuances relative to the issues raised, but not conceptual differences.

4 EV is used as an abbreviation of enterprise value, while VD and VE are abbreviations of value of debt and value of equity.

5 However, the company's weighted average cost of capital, WACC, depends on the financing structure. When using methods which discount cash flows based on costs of capital, the enterprise value is therefore affected by the financing structure. However, buyers will often calculate the costs of capital based on the planned (future) financing structure for the Target.

6 In contrast, the sometimes used *price earnings* multiple uses the Target's bottom line, the result after taxes (and costs in connection with the financing of debt), and therefore leads directly to the equity value.

7 See, for example Copeland, Koller and Murrin, *Valuation*, 2nd edition, p. 141.

8 The parties' negotiation strength and the concrete negotiation situation may lead to the working capital regulation being deselected or limited, for example in the way that it may only work to the advantage of one party, or may only be carried out if it results in a regulation exceeding a certain amount.

9 See Tue Ravnholt Frandsen, *Revision og Regnskabsvæsen*, 2006, nr. 4, p. 33 (in Danish).

10 The requirement for permission to operate an insurance company ensues from Section 11(1) of the Danish Financial Business Act, see consolidated act no. 793 of 20 August 2009, as amended by law no. 516 and 518 of 12 June 2009.

11 The countries mentioned are based on my own experiences and recollection. I have not studied the relevant legislation in the countries mentioned.

12 Section 1(1) of the Danish Company Pension Plan Act (*Firmapensionskasseloven*), see consolidated act no. 1561 of 19 December 2007, as amended by law no. 516 of 12 June 2009, requires, with few exceptions, that employers uncover pension vows in insurance companies or pension funds who may operate insurance businesses under the Danish Financial Business Act or in pension funds entitled under the Danish Company Pension Plan Act. Foreign group companies are only subject to their respective local rules.

13 See more on the one- and two-step procedure in Tue Ravnholt Frandsen, *Revision og Regnskabsvæsen*, 2006, no. 4, p. 37 (in Danish).

14 Net Working Capital Difference corresponds to the difference between the pre-conditional Net Working Capital Level (Normalised Net Working Capital) and the level as of Closing, that is Normalized Net Working Capital – Net Working Capital as of Closing.

## Contact



Christoffer Galbo, Partner  
Tel. +45 33 77 90 20  
Mob. +45 30 37 96 20  
Email [cga@mwblaw.dk](mailto:cga@mwblaw.dk)