Global Arbitration Review

The Guide to Damages in International Arbitration

Editor
John A Trenor

Second Edition

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M&A and Shareholder Arbitrations

Kai F Schumacher and Michael Wabnitz[1]

We have seen M&A and shareholder arbitrations becoming more litigious in recent years. This is for different reasons for M&A and shareholder arbitrations. With regard to M&A disputes, the intensified personal liabilities of the board members and managers to investigate all business matters potentially relevant to their business have left many market participants no choice but to analyse transactions for million-dollar purchase price recoveries. Concerning shareholder disputes, it is foremost because of increased transparency and the self-awareness of shareholders to enforce their rights and maximise their economic position.

From a damages perspective, M&A and shareholder arbitrations are only partially comparable. Damages in M&A arbitrations involve accounting, forensic or corporate finance aspects, sometimes in addition to valuation issues. In contrast, damages in shareholder disputes most often deal with the correct valuation of a specific business. From a damages point of view, methodical valuation matters dominate the controversy.

Therefore, M&A and shareholder arbitrations will be discussed separately.

M&A disputes

Usually, neither sellers nor buyers intend for a conflict related to M&A transactions. Nevertheless, such conflicts are more common than generally thought because of the high purchase prices involved and the economic impact associated with these one-off transactions. Moreover, these disputes can be of critical economic importance for the parties involved. The authors have witnessed purchase price adjustments of more than 50 per cent, worth millions of euros, during their practical activity.

Post-contractual M&A disputes often cannot be prevented. There is an abundance of issues that may lead to a dispute in the course of a transaction. An incorrect purchase price adjustment, a dispute concerning the calculation of an earn-out or a breach of a balance

1 Kai F Schumacher and Michael Wabnitz are managing directors of AlixPartners GmbH, Munich.

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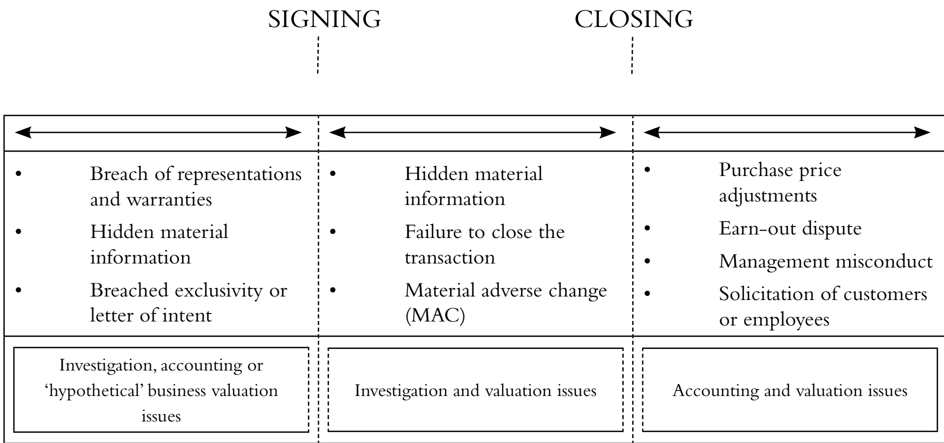
sheet warranty is familiar to most M&A experts. However, cases such as breaches of exclusivity, failures to close a transaction, directors and officers liabilities, an 'unlawfully flattering' business plan or the non-disclosure of decision-relevant information are more likely to be themes that some may not have been exposed to.

To structure the most frequent types of M&A disputes, a clustering by time of occurrence (before and after signing or closing) and by potential issues is provided below. Generally, M&A disputes can be structured as follows:

- pre-signing issues that require either forensic investigations, accounting analysis or hypothetical valuations (or any combination thereof);
- issues that are attributable to the period between signing and closing of the transaction, which deal with investigative or valuation questions; and
- post-closing related issues that are valuation and accounting-related.



The expertise of the quantum expert analysing the facts underlying the dispute and determining the damages might differ for each issue. A flawed purchase price adjustment or the violation of a balance sheet warranty can be relatively easily identified and documented on the basis of closing accounts, financial data, financial statements and due diligence documents. In cases of suspected balance sheet manipulation, fraud or an 'unlawful sugar-coated' business plan, however, the evidence is much harder to find. In this category of damages, most often forensic email reviews and interviews of key personnel are required in addition to the regular data analysis. For example, the email from an accountant to a colleague or the thoughtless statement of an operating manager have been the sought-after evidence for purchase price reductions worth millions of euros.

The success of a claimant in any arbitration not only depends on whether the claimant is able to expose and prove the facts justifying his or her claim, but also how the often interdependent claims are dealt with. In contrast to most other areas of arbitration, M&A disputes often involve several claims that might be financially interdependent. For example, an incorrect balance sheet guarantee might also affect the purchase price adjustment claimed, the earn-out adjustment and the allegation that not all relevant information was disclosed. The interdependencies between the claims should be carefully analysed, so as not to award the same effect twice or more.

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The fact that not all price-relevant information was provided during the due diligence phase is especially sensitive. It could lead to a situation in which the buyer claims that he has wilfully – thus intentionally – been deceived by the seller. In many jurisdictions, such a claim enables the buyer to lever out contractually agreed liability limitations of the purchase agreement.

The proof of damages in practice

The fundamental objective of every damage assessment is to restore the injured party – i.e., put them in a position they would have been in without the injuring event. However, this relatively simple principle of damage determination must be adjusted depending on the jurisdiction and the underlying purchase agreement. And these adjustments may be relatively complicated in practice.

M&A damage quantification – often misunderstood

If an M&A-related dispute has occurred, there is not only the need for evidence, but there is also the question of how to quantify the compensation. If, for example, a provision was omitted in the balance sheet, even some experienced litigators still believe that the damage represents 'only' the shortfall in the account balance – leading to a euro-for-euro indemnity. For example, if a provision was omitted amounting to €1 million, it is quite often seen in practice that claimants claim exactly the same amount as damages. However, in some jurisdictions, some provisions might not even have a full future cash flow effect because of prudence principles. Moreover, the provision might be influenced by interest rate effects, tax effects, interdependent damages and (overlooked) mitigations. These effects can quickly accumulate to deviations of plus or minus 40 per cent or more, compared to the simplified euro-for-euro approach. Thus, not only when confronted with valuation-related issues, but also with contested accounting errors and high-impact breaches of balance sheet representations and warranties, it is advisable to opt for a more precise approach to quantify damages.

The most commonly used form of the damage assessment is the 'differential method', applying the widespread 'but for' theory in damage calculation. It represents the actual situation (including the damage) compared with the counterfactual (without damage). The difference in value between the two financial situations represents the damage.

For larger disputed amounts it is advisable for buyers and sellers to verify whether the damage should be calculated applying the 'differential method'. If confronted with larger indemnifications that affect more than one year, the but-for analysis is most often the preferable approach because of its increased accuracy. For indemnifications that are either smaller in size or are limited to one (accounting or tax) period, an adjusted euro-for-euro approach could be advisable. This adjusted approach looks for additional financial implications that are considered in isolation, without the need for the differential method.

Financial statements might not be 100 per cent accurate

In M&A arbitrations it is often asserted by the respondent that the underlying financial statements are audited and, therefore, the amounts stated in these financial statements must be correct. This is a common misunderstanding. Financial statements are generally deemed to provide the stakeholder (e.g., investors or creditors) with a 'true and fair' view or a

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faithful presentation of the relevant financial situation of a company. Financial statements are described as showing a 'true and fair view' when they are free from material misstatements and faithfully represent the financial performance and position of an entity. However, the interpretation of what constitutes a material misstatement of a single balance sheet item in a M&A arbitration might be different from an auditor's entity perspective.

For practical reasons, auditors have to rely on a risk-based auditing approach that applies statistical sampling. Audits are neither designed nor are they intended to scrutinise each position of the set of financial statements every year. Consequently, auditors have defined thresholds, for example, with regard to total assets and revenues. Up to these thresholds, misstatements in the financial statements are not considered 'material'. This assumes already that other mistakes have not even been identified. However, for a one-time M&A dispute the thresholds of the controversial parties might be different to that of an audit. This supports our conclusion that a euro-for-euro compensation should be treated with even more caution if based solely on the information of financial statements.

The fortune and misfortune of purchase price adjustment mechanisms

Corporate transactions are frequently associated with very material purchase price payments. Therefore, it is understandable that both buyers and sellers often agree to adjust the purchase price on the date of economic transfer given the actual financial situation. This is done by means of contractually agreed purchase price adjustment mechanisms. In theory, such purchase price adjustment mechanisms should include several interdependent key financial parameters such as net debt, net working capital, investments, capital expenditures and off-balance sheet items to cover significant price-related aspects up to the economic transfer date. In practice, the parties frequently agree on a simplified purchase price adjustment mechanism for the sake of a reduction in complexity. This simplified purchase price adjustment might be limited, for example, only to the net financial debt and selected items of the working capital. This simplification comes at a price: it allows the shrewd seller as well as the price-conscious buyer to influence the purchase price payable and to open a discussion for a price adjustment, depending on the party that prepares the transaction accounts.

No financial statement is free of subjective assessments of the party who prepared the financial statement. Allegedly 'aggressive' valuation assumptions or asserted still tolerable inaccuracies accepted by auditors might give rise to subsequent purchase price claims. With full access to all information of the transaction object as well as with updated knowledge since the last financial statement was prepared, many buyers come to different conclusions on the value of the acquired target than at the time of the signing of the purchase agreement. However, even sellers can use simplified purchase price adjustment mechanisms to their advantage (e.g., when they use accounting discretion in the preparation of the transaction financial statements).

When a 'locked box' is not really locked

In general, the economic transfer of an M&A target takes place with the closing. However, given that the closing occurs weeks or months after the financials have been analysed and after the purchase price has been agreed, an adjustment of the purchase price is often incorporated in the purchase agreement. This adjustment of the purchase price should reflect

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the economic changes that have occurred between the last reference date underlying the purchase price basis and the closing. Unfortunately, these purchase price adjustments are a frequent source for disputes.

The 'locked box mechanism', a price mechanism that is meant to avoid purchase price adjustment disputes, is regularly used in a seller's market. Given the scarcity of attractive M&A targets, the sellers aim to reduce their risk of price adjustment disputes with the locked box mechanism. With the locked box mechanism, the economic transfer of ownership takes place at a point in time in the past. Most often, the date of the last audited financial statements is chosen for practical reasons. Given that the past financials rarely change, in theory, the locked box mechanism should erase all purchase price adjustment disputes.

However, what is intended not to be adjustable, and thus to avoid conflicts, will often be diluted for other sub-goals. Generally, 'no leakage' clauses and other adjustments might dilute the locked box mechanism allegedly preventing cash outflows until the actual transfer date. Consequently, transactions might be labelled as 'locked box' but still be disputable. Adjustments to the locked box mechanism are often an invitation for a contestation.

Purchase price multipliers – when damages soar

Purchase price multiples have a special status in M&A disputes. If, for example, the damage relates to the normalised earnings before interest and taxes (EBIT) or earnings before interest, taxes, depreciation and amortisation (EBITDA), which would be the basis for the purchase price derived by a EBIT/EBITDA-multiplier, then the question arises whether the damage is to be compensated only once or several times (equal to the EBIT/EBITDA-multiplier). This is an interesting question, and not only from a financial perspective. A remarkable leverage effect for the buyer can be noted if the data is able to support the reimbursement of damages based on a multiplier. Even relatively minor EBIT/EBITDA adjustments might suddenly be followed by large compensations. Therefore, each identified potential adjustment needs to be analysed and assessed as to whether it affects the long-term profitability of the business, and thus should be included in such multiplier analysis. Alternatively, it may comprise a one-off effect (e.g., for only one specific period). While an ongoing reduction in profitability or lowered growth assessment usually affects such multiplier calculation, a unique failure of a balance sheet treatment might most often not. In general, it can be concluded that a recurring financial impact (e.g., recurring customers that were lost but have still been included in the business plan) might be claimed several times, while one-time effects like a neglected non-recurring provision should be claimed only once.

Shareholder disputes

There are a number of different types of cases in which evidence of the valuation of shares is disputed. For example, the termination of shareholder agreements, compulsory 'squeeze-outs' of minority shareholders, going private transactions, takeover bids by insiders, related party transactions and corporate restructurings where shareholders have dissent right, often end in contentious proceedings about the correct valuation of a certain company or a certain stake in this company. Often, shareholders are compensated with reference to market value or fair (market) value. What may sound like a straightforward task turns out to be highly controversial in practice.

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Differences most often stem from three different areas. First, the meanings of 'market value', 'fair value' and 'price paid' are often confused with each other. Second, there are several different valuation approaches that might or might not come to similar values. Third, adjustments of the values derived by a certain methodology might be needed to reflect the individual circumstances of each specific case.

'Market value' v. 'fair value' v. price paid

There often seems to be confusion regarding the term 'market value'.[2] Unfortunately, it is used quite inconsistently within the appraisal profession, as well as in academic books. Therefore, it is not surprising that this confusion spills over to shareholder arbitrations.

In general, a 'market value' reflects the economic concept of an equilibrium price in a perfect market. It ignores influences on prices resulting from imperfect knowledge, unusual circumstances or the specific situations of the buyer or seller. According to the International Valuation Standards, which form a foundation of international valuation best practice, market value is defined as 'the estimated amount for which an asset should exchange on the valuation date between a willing buyer and a willing seller in an arm's-length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.'[3] The market value of an asset will reflect its highest and best use.[4]

In contrast, a 'fair value' reflects the estimated price for the transfer of an asset or liability that may include subjective interest of one or both parties. Usually, the value that is fair between two parties will equate to that obtainable on the market.[5] However, there will be cases where the assessment of fair value requires adjustments from the market value and vice versa. For example, the price that is fair for two shareholders in a non-quoted business may mean that the price is fair between them, but it could be different from the price that might be obtainable in the market.[6]

Finally, the price actually paid might be different to the market value and the fair value because of negotiation skills, time pressure, liquidity needs, etc. It is for good reasons that there is a famous quote from the star investor Warren Buffett that reads: 'Price is what you pay; value is what you get.'[7]

Thus, to increase transparency, arbitrators and experts need to analyse and determine what the basis for the potential compensation is and if and how it has to be adjusted to represent the correct valuation perspective.

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2 International Financial Reporting Standards for example generally define 'market value' as 'fair value'. The International Private Equity and Venture Capital Association (IPEV) uses the term 'Fair Value' in a way that is essentially equivalent to 'Market Value'. IPEV: IPEV Guidelines, August 2010, para. 3.2.

3 International Valuation Standards, IVS Framework, 2011, para. 30.

4 Ibid., para. 33.

5 Ibid., para. 42.

6 Ibid., para. 43(a).

7 Wiley: Warren Buffett quotes, without date, http://eu.wiley.com/WileyCDA/Section/id-817935.html [last accessed on 27 August 2016].

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Valuation approaches

There are a number of methods that can be used to derive the value of a business or asset. Different valuation methods often come to slightly differing results. Thus, the matter of the valuation method is an important decision for the quantification of damages in shareholder arbitrations. Arbitrators might be confronted with differing results stemming from different valuation methods. Then, they must decide which method to prefer. If the range of the values derived by different methods is wide, it is important to consider what weight or importance to attribute to each method.

The possible methods can be categorised into three overall approaches:

- market approach (e.g., active publicly traded stock, recent transactions of the company in focus, recent observable transactions in substantially similar companies);
- income approach (e.g., discounted cash flow (DCF) methods); and
- cost approach (e.g., net asset values, reproduction values).

Each of these overall valuation approaches includes different detailed methods of application. The goal in selecting a specific valuation method for a damages assessment is to find the most appropriate method under the particular circumstances of a specific case. This also depends on the information available, the profitability of the company and other specifics of the case at hand.

For the quantification of damages in shareholder disputes, there might be established nuances in the valuation profession. For example, for squeeze-outs in Germany, the courts have shown a tendency towards the higher of the market approach (i.e., the share price) and income approaches (using the DCF or earnings value method). In other areas of business valuations, the preferable method in most cases is seen as the market approach.[8] For example, transaction prices on active markets are considered as reflecting the market value. However, in the event that no transaction price or no prices of similar assets or liabilities are available – which is quite often the case because of the unique nature and individual specifics of the business or asset – the income approach is often the appropriate method. Lastly, if even the income approach might not be applicable (e.g., for continuously non-profitable entities) the cost approach should usually be considered. Hereafter we will discuss the peculiarities of the three different valuation approaches in more detail.

8 The International Private Equity and Venture Capital Association (IPEV), for example, has issued more detailed guidelines, which set out recommendations intended to represent current best practice on the valuation of private equity and venture capital investments. Although the IPEV is not related to disputes or shareholder arbitrations it provides a guideline from an industry that relies on the buying and selling of enterprises and consequently their appropriate valuation. According to the IPEV Guidelines the valuer should be biased towards market-based measures of risk and return to derive fair values. It should be noted that IPEV uses the term 'Fair Value' in a way that is essentially equivalent to 'Market Value'. See IPEV: International Private Equity and Venture Capital Valuation Guidelines, December 2015, para. 3.2., p. 28.

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Market approach

The International Valuation Standards state:

> *The market approach provides an indication of value by comparing the subject asset with identical or similar assets for which price information is available.*
>
> *Under this approach the first step is to consider the prices for transactions of identical or similar assets that have occurred recently in the market. If few recent transactions have occurred, it may also be appropriate to consider the prices of identical or similar assets that are listed or offered for sale provided the relevance of this information is clearly established and critically analysed.*
>
> *It may be necessary to adjust the price information from other transactions to reflect any differences in the terms of the actual transaction and the basis of value and any assumptions to be adopted in the valuation being undertaken. There may also be differences in the legal, economic or physical characteristics of the assets in other transactions and the asset being valued.*[9]

The International Valuation Standards perfectly summarise the basic concept of the market approach. Moreover, they indicate to the expert that further adjustments might be needed.

Income approaches such as the DCF method

The DCF method is the most commonly used valuation method to evaluate international investments[10] and is frequently applied in business valuations.[11] Income-based valuation approaches, such as the DCF method, have also become increasingly popular for the quantification of damages in international arbitrations over the past years.[12]

There are various methods of using DCFs in valuation. All DCF methods involve calculating the value of future cash flows at a certain reference date – this is known as 'present value'. Present values are derived by discounting the cash flows to a reference date allowing for a specified discount rate. Discount rates used to derive the compensation reflect, especially (1) the time value of money associated with the cash flow of a future period, and (2) the riskiness of the cash flows to be discounted.

The undisputed advantage of the DCF method is its flexibility not only for shareholder disputes but also for many other valuation settings. In cases of privately held companies, exotic structures or debt instruments, it is often the preferred option for quantum experts. Despite its inherent subjectivity,[13] the DCF model might be the only reasonable solution for many arbitrations where market-based techniques are inappropriate or not available.

9 International Valuation Standards, IVS Framework, 2011, paras. 57–58.

10 Tom Keck, Eric Levengood, Al Longfield: 'Discounted Cash Flow analysis in an international setting: A survey of issues in modeling the cost of capital', *Journal of Applied Corporate Finance*, Fall 1998, volume 11.3, p. 82.

11 The DCF method represents the so-called income approach; 'The income approach is frequently applied in the valuation of businesses and business interests'; International Valuation Standards Council: IVS 200 Businesses and Business Interests, exposure draft, 2 June 2016, para. 60.1, p. 6.

12 PricewaterhouseCoopers: 2015 – International arbitration damages research, 2015, p. 3.

13 IPEV: International Private Equity and Venture Capital Valuation Guidelines, December 2015, para. 3.8, p. 40.

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Cost approaches such as net asset value

This methodology involves deriving the value of a business by reference to the value of its net assets on the current cost to purchase or replace an asset. The cost approach is an important tool for determining the fair value of a property or asset, particularly where reliable data relating to sales of a comparable asset is not available and where the asset does not directly produce an income stream. Furthermore, the cost approach is more applicable when the asset could be exchanged or substituted for another asset. On the other side, this valuation methodology is not appropriate where the company is realising an adequate return on its assets and its value derives predominantly from its income streams.

Adjustments to the values derived by certain valuation approaches

When using a variety of valuation methodologies, it is important to consider that the values derived from differing methods may need to be adjusted to enable comparability. Some valuation methodologies enable a direct valuation as they are directly related to the company to be valued (e.g., price of recent transactions in shares in the company). Others allow for specific factors in their calculation to be adjusted (e.g., discounted cash flow and earnings of underlying business), while others assume that the subject of the valuation is identical to a group of comparable companies. Adjustments may be required to reflect the possibility that this group, although comprising the most comparable companies available, still remains incomparable in key respects.

Hereafter, we will highlight the most popular adjustment concepts that are usually disputed in shareholder arbitrations, such as the illiquidity discount and the control premium:

> *When using an income approach it may also be necessary to make adjustments to the valuation to reflect matters that are not captured in either the cash flow forecasts or the discount rate adopted. Examples may include adjustments for the marketability of the interest being valued or whether the interest being valued is a controlling or non-controlling interest in the business.*[14]

In general, the effects of a discount or a premium should ideally be included in the estimation of future cash flows. However, there might be situations where the cash flows stemming from these discounts or premiums can hardly be adjusted because of a lack of information. Then, serving as a proxy, a discount or premium is often applied as a percentage multiple to the final estimate of the equity value. Moreover, there can sometimes be the necessity to make use of both, applying sequentially a premium (e.g., for control) but to also consider a discount (e.g., for illiquidity).

Illiquidity discount

When valuing an asset that will be bought and sold via a private sale, it is common to consider the extent to which the investment is liquid[15] or marketable. Market liquidity

14 International Valuation Standards Council: IVS 200 Businesses and Business Interests, exposure draft, 2 June 2016, para. 60.10, p. 8.

15 The concepts of liquidity and illiquidity refer to the degree of ease and certainty with which assets can be converted into cash.

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risk relates to the inability of trading at a fair price with immediacy.[16] Liquidity in a market ensures that an asset can be sold rapidly, with minimum transaction costs and at a competitive price.[17] Consequently, liquidity risk is theoretically applicable to most equity investments not listed on an organised exchange or traded in an active over-the-counter market.

If an asset is not liquid, it is appropriate to consider to what extent its value needs to be adjusted.[18] In business valuation this aspect is referred to as 'illiquidity discount' or sometimes as 'marketability discount' or 'fungibility discount':

> *Both the theory and the empirical evidence suggest that illiquidity matters and that investors attach a lower price to assets that are more illiquid than to otherwise similar assets that are liquid.*[19]

Marketability discount studies exist for both minority and majority interests. For minority interests, restricted marketability can usually be observed through two different lines of studies: restricted stock studies and IPO-based studies. While restricted stock studies compare the prices of listed companies that have been paid in private placements with that of stock market prices, IPO-based studies compare the value of minority shares of companies with that paid in an IPO. However, it should be noted that selection bias and other biases inherent in these studies need to be considered before applying an illiquidity discount.

Illiquidity discounts for majority interests can be observed from studies that compare the transaction multiples for majority stakes for private and public listed companies and the respective discounts considering systematic differences between the different groups of companies and different company sizes.

The marketability discount is applied whether or not the equity interest is a controlling or non-controlling interest. However, individual characteristics of the legislation that might influence the specific valuation principles are to be considered as well. For example, illiquidity and marketability discounts are not considered in German court cases.

Control premiums and discounts for lack of control

These are applied to reflect differences between the unadjusted value underlying a certain valuation method and the subject asset with regard to the ability to make decisions.[20] As an example, share prices of public companies usually reflect minority stakes and, therefore, shareholders generally lack control, having no ability to make decisions related to the operations of the company. As such, when a value is derived from non-controlling shares but it is intended to reflect the controlling rights of a shareholder, a control premium may be appropriate. The value of controlling a firm lies in being able to run it better than the cur-

16 European Central Bank: Liquidity (Risk Concepts) – Definitions and Interactions, February 2009, p. 18.

17 Ibid., p. 14 f.

18 Pratt & Niculita: *Valuing a Business*, Fifth Edition Mc Graw Hill, 2007, p. 416-457.

19 Aswath Damodaran: 'Marketability and value: measuring the illiquidity discount', Stern School of Business, July 2005, p. 34.

20 For example, anything less than 100 per cent of the shares leaves room for attacks by minority shareholders, more than 50 per cent are usually required for certain corporate actions and more than 25 per cent usually represents a blocking minority (e.g. ,'Sperrminorität' according to the German stock corporation act).

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rent decisive shareholders and to increase the own cash flows. Hence, Professor Damodaran of New York University's Stern Business School has concluded that: 'Consequently, the value of control will be greater for poorly managed firms than well run ones.'[21]

First, it needs to be analysed whether the business plan assumptions (explicitly or implicitly) on which the valuation is based already include the premise of having control over a business. In such cases, a further consideration of a control premium might be misleading. Similarly, a discount for lack of control would be appropriate if the disputed valuation relates to a minority issue and the minority shareholder would not be able to equally participate on the value of the future cash flows as reflected in the initial business plan.

Controversies arise as to how the control premiums, in particular the discount for a lack of control, are quantified in practice. Theoretically, they are calculated based on the cash flows attributable to control. However, in practice, control premium studies are often applied that compare the observed prices paid for controlling interests in publicly traded securities with the publicly traded price before such a transaction is announced. Examples can be found in studies such as one by FactSet Mergerstat.[22] However, control premium studies have to be assessed critically. They may overstate or understate the effects resulting from synergies, competitive pricing or other individual specifics. Therefore, each transaction may have specific factors that affect its pricing, which means it needs to be examined critically before any conclusion is drawn.

Summary

As has been shown, the specific questions that arbitrators typically face in M&A arbitrations and shareholder arbitrations are diverging. M&A arbitrations often tend to incorporate several claims that might not only be valuation-related, but also driven by accounting and investigative issues in dispute. One of the major difficulties is not to double-count the frequently interrelated claims. In contrast, shareholder arbitrations usually deal with very technical valuation questions such as the appropriate valuation method and its correct adjustment to the specific case.

It can be assumed that the trend to exercise and enforce rights of purchase agreements, as well as shareholder rights, will further increase in the future. Because of the immense economic importance that accompanies many of these arbitrations, this consequence is more than understandable and should come as no surprise.

21 See Aswath Damodaran: 'The Value of Control: Implications for Control Premia, Minority Discounts and Voting Share Differentials', June 2005, p. 2.

22 The FactSet Mergerstat/BVR Control Premium Study is an online searchable database that generates empirical support for the quantification of control premiums, see www.factset.com/data/company_data/mergerscps.

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Appendix 1

About the Authors

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Kai uses the power of facts and financial analysis to quantify damages in international arbitrations and litigations, to perform forensic investigations, to evaluate assets and businesses, to facilitate M&A transactions and to conduct monitorships. Having led more than 150 engagements with values of up to €170 billion and involving entities from 53 countries, he has successfully advised clients for about two decades. Kai is one of about 80–210 of the world's leading experts in commercial arbitration according to *Who's Who Legal: Commercial Arbitration* since 2012–2013. Since 2015–2016 he is nominated as one of the 10 'most highly regarded individuals' in Europe in this field. Kai holds an MBA from Paris' HEC School of Management, a CPA and a CFA charter.

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