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1. Introduction

In the aftermath of the financial crisis, the *most topical research question these days* is perhaps to uncover its causes. The authors argue that one of the causes is the insufficient theoretical background used in most valuation cases. Over the last decades, there has been a beneficial controversy between the proponents of the various valuation theories. However, especially the apologists of the Anglo-Saxon valuation theory seemed unimpressed by the insights of this debate, holding on to unrealistic assumptions like perfect capital markets and pure competition. Consequently, it has to be considered closely, whether they are at least partially at fault for overvaluation that ultimately promoted the financial crisis.

Another substantial issue inherent in Anglo-Saxon valuation theory is the lack of differentiation between price and value in valuation matters. The price of a good is determined as an exchange value from supply and demand. How high each party is willing to bid depends on its marginal utility, the outcome of its intentions and its preferences. Hence, the value of a good for the valuation subject is distinct, or in other words: subjective. This insight is based on the "subjective value doctrines" founded by Hermann Heinrich Gossen (1854) and Carl Menger (1871) as well as the so-called Austrian School more than 100 years ago. In addition to that, the more famous Eugen Schmalenbach acknowledged and expressed the need for subjective orientation when it comes to valuation

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processes [41]. However, the Anglo Saxon valuation school mainly disregards this subjectivity [33].

Like every other calculation, business valuation is initiated by a specific cause and therefore has to serve a determined purpose [8]. *This paper analyzes and systematizes* these causes, presents the development from the objective to the subjective and finally to the functional business valuation theory and hence, gives a theoretically well founded answer to the question mentioned in the headline. Arguments will be presented to deduce that only the functional business valuation provides the appropriate framework for successful valuation under the aspect of decision support. Therefore, practitioners are advised to reflect the ideas of the functional theory. Furthermore, it will be disclosed how "fair values" and "fair value accounting" enhanced the pace and impact of the collapsing financial market. Precisely in times like these, where the effects of this slump are still evident, the *knowledge about functional business valuation* should attract interest and might help prevent similar undesirable developments.

Firstly, the different valuation causes will be elucidated and systematized and secondly, the objective and subjective theory of business valuation will be described, compared and evaluated. This will disclose the tremendous differences between them. Subsequently, the implementations of functional business valuation will prove that this theory has overcome the dissension between the objective and the subjective theory. The *key role in functional theory* is assigned to the three different types of value (decision value, arbitration value, argumentation value) which necessarily incorporate all expectations, plans and intentions of the valuation subject under realistic assumptions (e. g. the premise of imperfect markets, which was confirmed when the wholesale money market collapsed). Next, the genesis of the financial crisis will be associated to the use of objective valuation theory to expose that functional business valuation has to be considered as the predominant approach because it exclusively fully respects the fundamentals of valuation (overall assessment, future orientation and subjectivity) in order to achieve expedient decision support. Lastly, the relevance of "fair values" and "fair value accounting" in the progress of the financial crisis will be examined more closely on their prerequisites and their adequacy to support decisions. In the end, a summary will restate the most important insights and conclusions. Proposals for improvements in valuation and accounting will be made.

2. Valuation Causes

Within the framework of business valuation, the object that shall be valued, usually a whole company/business or certain definable parts of it, is called valuation object. The valuation subject on the other hand is the initiator of the valu-

ation process. The causes of this process are various motives and occasions. The systematization of these causes, originating from the work of Matschke [18, 20, 1], supports the model-theoretic analysis and enables a deduction of adequate valuation models. Causes connected with the change of ownership can be classified into the following types of conflict situations: Acquisition/sale and merger/demerger, one-dimensional and multi-dimensional, joint and disjoint as well as dominated and non-dominated conflict situations.

Conflict situations of the acquisition/sale-type are valuation causes in which one party (seller) abandons its ownership of the valuation object to receive a reward from the opposing party (acquirer). Merger/demerger conflict situations do not feature this kind of change in ownership. The conflict type merger [38] describes a situation in which several companies shall be merged and the owners of these companies intended for valuation will receive proportionate ownership of the new entity. This definition applies to the situation type demerger vice versa.

In order to achieve a result from the negotiations between the conflicting parties, it is necessary to have consensus on specific terms. These specific terms are called conflict-resolution-relevant facts. Concerning the number of these facts, *one-dimensional and multi-dimensional conflict situations* must be distinguished. One-dimensional means that only one fact exists that is relevant to solving the conflict. In the case of the acquisition/sale conflict situation, the price is usually this sole fact. However, the crux of the merger/demerger conflict situation is the distribution of shares in the new entity or the split-offs respectively. Eventually, it takes an agreement on several parameters to solve a multi-dimensional conflict situation.

Conflict-resolution-relevant facts can be divided into original and derivative facts. If parameters change the decision field directly, they have to be considered as *original conflict-resolution-relevant facts*. For instance, in order to promote a shift of ownership, the conflicting parties need to have consent on these factors. Therefore the original facts have a complementary relationship to each other. Original facts include e. g. the amount of remuneration, the extent of the company as well as regulations about restraints on competition. The very various ways to configure remuneration are assigned to the original parameters as well.

Derivative conflict-resolution-relevant facts influence the valuation subject's decision field indirectly. Derivative parameters are utilized to deduce or found the value of the original circumstances and therefore have a means-end relation to the original facts subject to negotiation.

In a *disjoint/unaffiliated conflict situation*, one party values the object in a sole conflict situation that has no relation to other negotiations. Usually business valuation literature deals with this simplified situation. Exceptions are solely presented by Matschke [18], Brösel [1] and Hering [6].

However, the *joint/affiliated conflict situations* are indeed of high practical importance. Here, the valuation subject is involved in more than one negotiation which creates interdependencies. An isolated consideration of one conflict situation is therefore not sufficient.

Discrimination between *dominated and non-dominated* raises the question, whether one conflicting party is able to dominate the valuation process and the change in ownership or not. Hence, none of the conflicting parties can enforce a change of ownership against the intention or without co-operation of the opposing party in a non-dominated conflict situation [46]. On the contrary, one conflicting party *is* able to change ownership on the valuation object against the expressed will of the other conflicting party in a dominated conflict situation [7].

3. Valuation Concepts

The center of interest of the objective business valuation theory, which has been the leading opinion in business valuation literature until the 1960s, was to appraise an objective value of the company/business (e. g. Mellerowicz 1952 and Lackmann 1962). This approach is meant to be impersonal, meaning detached from subjective interests. The sought-after value is attached to the company and can be realized by every "ordinary" businessman, according to representatives of this theory.

The focus of this theory was to ascertain an unbiased value in order to overcome clashing interests of conflicting parties, without taking the parties' interests into account. Therefore representatives of this concept mainly focused on past and present conditions while calculating the objective value. Because of its abstraction from the valuation subject, the so calculated objective value does not provide adequate decision support [27].

Representatives of the *subjective business valuation theory* argued for a controversial position that was supposed to replace the objective theory (Busse von Colbe 1957, Münstermann 1966 as well as Käfer, reprinted papers, 1996). According to their position, the calculated subjective value incorporates intentions and plans of a specific valuation suitor.

As a basic principle, every valuation subject ascribes a specific and generally different value to the valuation object, which is considered as the marginal price for the company of the valuation subject. This concept of business valuation is characterized by the fundamental doctrines of valuation: The principle of overall assessment, the principle of future orientation and the principle of subjectivity.

The highly controversial opinions expressed by the objective and the subjective business valuation theory were resolved by the functional business valuation

theory (basic literature to this theory are e. g. Sieben 1968, Matschke 1969, 1975 and 1979; the latest comprehensive literature is Matschke and Brösel 2011). The main idea of the leading opinion in valuation literature since the 1970s is the purpose-dependent value of a business. Accordingly, the value of a business is calculated by incorporating the expectations, intentions and plans of the valuation suitor, with regard to the specific remit [29, 28]. "A business does not only have a specific/individual value for every valuation subject but can also have different values for different remits" [22].

Valuation is conducted purpose-driven; the one and only business value and its method to calculate it do not exist. The functional business valuation theory is based upon the fundamentals of comprehensive valuation, and the application of the future as well as the subjectivity amended by the principle of dependence of purpose [29, 2].

4. Valuation Functions and Types of Value

Only when beginning with the purpose of business valuation, sensible rules of valuation can be derived [21]. Within the framework of functional business valuation, main and minor functions are distinguished (e. g. determining the form of contract, the tax base and the type of communication). The following remarks are confined to the main functions, to which the decision, mediation, argumentation and the connected types of value are subordinated.

The *decision value of a business* is the outcome of a *valuation within the scope of the decision function*. "Assuming a predetermined system of objectives or preferences and given decision field, the decision value discloses to the decision subject under which circumstances or complex of conditions the execution of a given action just barely does not reduce the achievable level of target achievement" [17]. In other words, the decision value is the utmost limit of concession to the decision subject in specific conflict situations [8, 25].

The decision value has *four attributes*: It is calculated in reference to a defined activity (attribute of activity-orientation) and is related to a specific decision subject (attribute of subjectivity and system of objectives orientation). It is a critical parameter (attribute of marginal value) that is exclusively valid for a concrete decision field and its deducible alternatives (attribute of decision field orientation) [26].

If business valuation is tending to a change in ownership and the price is the sole relevant factor for the conflicting parties, the decision value corresponds to the marginal price of a party in this conflict situation. From the presumptive buyer's view, the decision value, as the upper price limit, is exactly the price he

is willing/able to pay without taking an economic disadvantage. In negotiations, of course, this critical price should be kept secret in order to not weaken one's own position [44].

If *business valuation* is performed *within the scope of the mediation function* [20], the outcome will be the *arbitration or mediation value*. An appraiser will be assigned as an impartial third party who has to determine the arbitration value. With this value, the conflicting parties can agree on a reasonable compromise regarding the conditions of change in ownership. Hence, the interests of both conflicting parties are equally respected. In order to be reasonable, the arbitration value should not infringe on both parties' negotiation limits (principle of rational behavior). This requires the existence of an overlapping negotiation bandwidth: Hence, the decision value of the buyer essentially has to be higher than the decision value of the seller.

The decision value therefore has a vital role within the mediation function. According to the principle of party-based adequacy, it incumbents on the appraiser to determine the arbitration value within the so-called arbitration-band based on the postulate of justice.

The outcome of a *business valuation within the scope of the argumentation function* is called the *argumentation value* [19]. The argumentation value is highly biased. Its purpose is to influence the opposing party within the negotiation. Utilizing this tactical value, the own position can be strengthened and in consequence, a better deal can be struck. Argumentation values are often proposed into negotiations as alleged decision or arbitration values. Appropriate argumentation values require knowledge of the own decision value as well as an assumption of the opposing party's decision value. The coordination of an argumentation value also requires knowledge of the own decision value promoted by an idea of the aspired result of the negotiation.

The argumentation function is rejected by public auditors as contradictory to their code of conduct. In contrast to the functional business valuation theory, in which the valuing auditor is assigned as a consultant to the valuating subject (for the purpose of decision function) and an arbitrator (for the purpose of mediation function), they see themselves first and foremost in the role of a neutral appraiser. Their major task is to calculate an objectified value [11]. This value is supposed to represent a company's value under the assumption of going concern, but lacking sufficient specified future measures and personal value drivers.

Objections against this static oriented and objectified business value are raised, because this kind of valuation requires embedding all plans of the valuation subject. Future orientation must be deduced from planning dependency. A new attempt to standardize behavioral patterns and valuation techniques is conducted by the IDW, firstly in 2000 and then continuously reprised, lastly in

2008 [12]. However, the significance of the objectified value even under unchanged negligence of crucial value drivers will be the *starting point of continuous critique* [40, 10].

5. "New" Objective Valuation Theory and "Fair Value Accounting" as Driving Forces of the Financial Crisis

5.1. Proliferation of an Unrealistic School of Thought

As long as 40 years ago, German-speaking valuation literature was able to rate the thitherto dominating objective valuation doctrines as untenable. The attempt to ascertain an unbiased, objective value detached from the valuation subject was destined to fail due to its lack of reality contact. In the end, advocates of this theory had to acknowledge that it is impossible to determine an arbitration value without respecting the conflicting parties' decision fields. This was consequently the breakthrough for the subjective valuation theory.

At the beginning of the 1990s, when neo-classical capital market theory developed to an overwhelming theory – as an outcome of the "shareholder value orientation" and international standardization of accounting – it experienced a renaissance in the German-speaking business studies literature in the form of the objective school of thought. Reasons for this were improved communications, closer economic networking and a one-track transfer of knowledge (from English to German-speaking literature) [5]. Primarily questionable is that this theory – also known as market value valuation – emanates from the exclusive existence of one "objective", "true" or "fair" value which serves as subjective decision value. The "market value" is turned into a subjective value. Hence, from a present-day perspective, this reactivation has to be regarded as the cradle of the financial crisis [39, 9].

Applying fashionable neo-classical financial valuation models (e. g. types of DCF-method and the option pricing model) in order to calculate a decision value seems to be quite *doubtful*. Based on idealized information efficiency as well as perfect markets and pure competition, supporters of these models try to calculate a mystic objective exchange value that should serve as the company's virtual market value [42, 37, 35, 39]. The lack of subjectivity of the input variables in DCF-methods could infringe the respective decision values. Therefore, valuation subjects are at risk of paying an excessive price for the acquisition resulting in financial disadvantages. A popular European case is BMW acquiring Rover in 1994 (purchased for 2.3bn DM sold in 2000 for 34 DM) [45].

Analyzing these equilibrium models, apart from unrealistic assumptions and their inconsistent combination[1], it is questionable why individuals would undertake transactions if the value of the company equals the price and the transaction therefore does not create any benefit. In order to support decision-based valuations, financial valuation models are hence not qualified.

But users of these models can be reassured: They don't have to throw their tools overboard when applying functional business valuation [23]. The various methods of financial models found an "abundant reservoir to take various argumentation values and with consensus of both parties also arbitration values" [6].

In order to calculate the limit of concession, however, it is recommended to use more appropriate investment-based models like the state marginal price model, the future performance value procedure or the approximated decomposed valuation [1, 36, 6]. Nothing less than a change in mindset is necessary to replace the prevalent DCF-methods with investment-based models [39].

5.2. "Fair Value Accounting" – Valuation and Accounting Gone Astray

A substantial reason facilitating the emergence of the financial crisis can be found in the implementation of so-called "fair value accounting", rooted in the framework of the International Financial Reporting Standards (IFRS), when compiling the annual financial statements [9]. Founded on the pillars of (objective) market value valuation, "fair value accounting" has the same theoretical shortcomings that already brought down the objective school of thought. It can be argued that it is pointless to set up a financial statement according to IFRS – and hence under "fair value" valuation – assuming perfect markets with pure competition [34]. This assumption also implies that information asymmetries between two subjects do not exist. So why compile a financial statement, if in this world all information is already available to all addresses [9]?

Furthermore, "fair value accounting" refers to market prices and DCF-methods. Thus, objective prices (not values) and methods that are based on incompatible premises cannot ensure a subjective valuation.

In addition, the determined objective "fair value" cannot exist in the real world [34]. A rational acting valuation subject is only willing to sell a valuation object, if the attainable price (in this case the "fair value") is higher than (or at least as high as) the value ascribed [24]. The question arises, why are these "fair valued" assets not sold but still appear on the balance sheet in most cases? Apparently, the valuation subjects have higher decision values than the "fair value"

[1] For a comprehensive consideration of the premises of Miller/Modigliani, CAPM and option pricing models see [6].

states, so a sale does not appear to be "fair". In this respect it is to state that so called "fair values" obviously do not justify their name [9].

Indeed, the delineated theoretical shortcomings are enormous, but they could not have induced one of the most severe financial and economical crises independently. Another crucial factor that contributed to this crisis is the issue of "fair value accounting" and its pro-cyclical effect on book values [15, 9]. In times of economic upturn prices will rise and with respect to "fair value accounting" standards, lead to higher book values (higher than the respective historical costs) and ultimately to bubbles. Especially in the banking sector this valuation usance led to a higher (overvalued) equity base, allowing the banks more credit transactions and therefore facilitating further inflation of the bubbles. If an economic downturn follows, the delineated processes and their effects on book values have reversed effects and prick the bubbles. To adjust the inflated book values to the significantly lower market prices – explicitly required by "fair value accounting" standards – companies' assets have to be written-down massively, melting away the equity base. This points out that the drop turned out much higher than in case of book values based on historical costs. The outcome is a degraded credit rating – particularly in the financial industry – that negatively affects the market values, so the downside trend continues. Clearly recognizable was the plunging trust in each other which ultimately led to a meltdown of the financial market [15, 9].

A situation like this discloses the crudity of "fair value accounting": If there are no efficient markets and no (most likely still valid) market prices of previous transactions, according to IAS 38, 39 and 40, valuation should utilize "discounted cash flow" techniques or option pricing models [34]. The absurdity of these standards lies in the fact that DCF-methods and option pricing models require perfect markets and pure competition, which leads to the conclusion that they must not be applied, if the preconditions are not fulfilled.

6. Conclusions

From a clinical perspective, there are only subjective values. The decision value is the central value of the functional business valuation doctrine, whose fundamentals derive from the concept of subject focusing. The decision value – as the limit of concession to the valuation subject in conflict situations – is not only the outcome of a valuation using the decision function method, but also the basis and crucial element of the mediation and argumentation function. In order to support decisions, it is necessary to incorporate e. g. specific goals, expectations and alternatives of the valuation subject under realistic assumptions.

Hence, "shareholder-value-techniques" are of no avail when it comes to decision support, but these methods can be helpful to the mediation function and argumentation function in situations where the involved parties have strong believe in the "innovative" character of these "modern" valuation models.

The knowledge about the theoretical shortcomings of neo-classical (Anglo-Saxon) valuation models and a consequent rejection of "fair value accounting" could have prevented the origin or at least softened the progress of the financial crisis. Functional business valuation is fundamentally *individualistic*, meaning that it respects the specific goals, plans and intentions of the valuations subject as well as its (limited) courses of action on *imperfect markets*. This results in a distinctly improved contact with reality. Therefore, aligned collective market behavior is precluded by nature. Nevertheless, applying functional business valuation does not prevent pro-cyclical effects completely, but it weakens their dynamics and extents [24].

To prevent overvaluation as causative or reinforcement of future crises, valuation theorists worldwide ought to deal in depth with the subjective and first and foremost functional theory rather than blindly accept the idealized model concept of Anglo-Saxon origin.

Moreover, a more widespread implementation of the "cost method", rooted in the German accounting law since 1884, could prevent re-overvaluation of accounted assets in the future [15]. Not least because of this, the continental European economic zone was comparatively less severely affected by the financial crisis than other areas. If there are no opportunities for bubbles to emerge, there are no bubbles to burst.

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