

# **Fair Value in the Professional Valuation: Concept and Models**

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**Andrey Artemenkov**

The International Valuation Centre  
Haifa , Israel, Email: achudakhin02@gmail.com

**Suman Lodh**

Middlesex University  
Middlesex University Business School  
The Burroughs, Hendon, London, NW4 4BT, UK  
Email: s.lodh@mdx.ac.uk

**Monomita Nandy<sup>1</sup>**

Brunel University, Brunel Business School  
Kingston Lane, Uxbridge, Middlesex UB8 3PH, UK  
Email: monomita.nandy@brunel.ac.uk

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<sup>1</sup> Corresponding author

## Abstract

The Paper is on the subject of value measurement bases in Professional Valuation and, as such, also has a direct relevance for the field of Accounting Measurements. In this paper we, specifically, consider semantic and methodological features of Equitable/Fair value as a sui generis basis of valuation in the Professional valuation. As used in the field of Professional Valuation, Equitable/Fair value is the logically necessary basis for estimating values-in-exchange for illiquid assets traded on the markets where the operations of “the law of one price” are very weak. Its logical relevance is demonstrated with the aid of a tool based on Venn-diagrammatic approach (VDA). This VDA is also helpful in explaining in detail interrelationships between other valuation bases used in Professional Valuation. In particular, the article analyzes fair value estimating formulas based on the V. Galasyuk's approach and the Transactional Asset Pricing Approach. At the same time, the unavoidable economic and ethical nature of Fair value as used in Professional Valuation is emphasized, which becomes even more pronounced with the renaming of this valuation basis from Fair to Equitable Value in the International Valuation Standards (IVS) 2017 edition. The contribution of the Paper is in analyzing the main aspects of Fair value estimation theories that exist today in terms of where they fall in the normativist/positivist continuum of economic analysis and drawing into relief their distinguishing elements, while the proposed VDA tool can also find an application as a helpful tool for valuation and accounting measurements analyses. It is also hoped that the debates on Equitable/Fair value as they evolved in the field of Professional Valuation and the ensuing respective proposals in this Paper will help provide a new perspective enriching wider debates on Fair Value in the Accounting Measurements world.

**Keywords:** Accounting measurements, Equitable (Fair) value; Venn –diagrammatic approach to valuation bases; the International Valuation Standards; the European Valuation Standards; Professional Valuation; Transactional Asset pricing Approach (TAPA); Galasyuk Fair Value theory.

## 1. Introduction

There is a diverse body of literature exploring the concept of Fair value, as used In the Accounting Measurements specialism. In recent times, this concept has been consolidated in the International Financial Reporting Standard (IFRS) 13 “Fair Value measurements”, and the associated US GAAP standard erstwhile known as FASB 157. As an accounting basis of measurement, Fair Value enjoys some prominence in the theoretical debates about its procyclicality (e.g. see Courtois, 2010; Biondi, 2011; Donatien A. & Edimo P. 2015; Xie, 2016; Uzma, 2017), and historical context (Georgiou& Jack, 2011). But in the Professional Valuation sense, this accounting concept of value is more often referred to and conceptualized as the “Market Value”, e.g. in The International Valuation standards (IVSs) editions (IVSC ,2007; Dorchester Jr ,2011). What Professional Valuers internationally come to mean under the Fair Value is a differing notion, the discussion and treatment of which is presented throughout this Paper and which might be interesting for Accountants (Accounting Measurements experts) to get to grips with, including in order to impart new critical perspectives on the debate about the effects of Fair Value Measurement system in the Accountancy world and its possible alternatives. The consensus of Professional Valuation specialism worldwide has now for a score of years been embodied in such formal documents as national and international valuation standards. On the international level, the International Valuations Standards (IVSC,2017), published since late 1990s by the organization now known as the International Valuation Standards Council (IVSC), represent the foundational standards document for the field of Professional Valuation globally and in them is also found distilled the current state of the fundamental body of knowledge within the valuation profession.

From early 2000s, the IVSC has unanimously promoted the Fair Value agenda and in that had a support from the International Accounting Standards Board IASB (a respective cooperation memorandum between the two bodies has been in effect for quite a while now). Over the years, this has resulted in a convergence of views being expressed about the Fair Value (in the Accounting Measurements world) and the Market value (in the Professional Valuation sense) -- to the point of harmonizing these similar bases of measurement in use across the two Economic Measurements specialisms (IVSC, 2014). Such was the achieved consistency of the views that when valuers were to have been engaged by accountants to report on Fair value for accounting needs, the prescribed IVS basis of measurement that had to be used for that should have been the Market value (IVSC,2011; Deaconu & Buiga,2010)). However, since the IVS 2007 edition valuation methodologists at IVSC are looking beyond their infatuation with Fair and Market values in an attempt to advance reputational standing of the Professional Valuation and innovate its techniques, which were heavily criticized immediately following the 2008-2009 economic crisis as being too mechanistic and too pro-cyclically tied to the market to have any independent, or fundamental, public utility dimension. This dissatisfaction with the Professional Valuers' role to act just as a "speaking market" has resulted in a lot of soul-searching among the valuation methodologists, including their urge to advance forward the valuation methodology along the lines of "something behavioral" (Courtois, 2010), or something more fundamental than the Market value as a foundational measurement objective for the profession (e.g. developing measurements of such fundamental, or long-term, value spin-offs as the "Mortgage Lending Value" (MLV) concept becomes a priority in the evolution of the profession (see RICS, 2017, p.31-32).

The promotion of Equitable/Fair Value to the status of an IVS-recognized valuation basis going on since 2007 is a sign of such aspirations -- as this Paper will show, illustrate and develop the point, including providing a review of its fast-evolving measurement techniques. It is hoped that the following discussion will be found to be of some relevance in promoting further critical perspectives related to the Accounting Fair Value debates.

One note on the terminology, confusingly disparate as between the Accounting Measurements and Professional Valuation worlds, is in order: What in Professional Valuation from 2007 onwards (and, occasionally, still) is widely referred to as "Fair Value" is anything but Fair value in the Accounting Measurements sense. The International Valuation Standards (IVS) -recognized basis of valuation first introduced in 2007 and designated as "Fair Value" has been imbued with a meaning almost opposite to its more popular and long-used homonym in the field of Accounting measurements . In that sui generis sense, Fair Value has caught on in the Professional Valuation practice, with its sui generis definition also being carried over to subsequent editions of the European Valuation Standards (EVSs 2009, 2012, 2016). To avoid the confusion that subsequently developed between Fair value as used in the Accounting Measurements sense and Fair Value as used in the Professional Valuation sense, in the current edition of the International Valuation standards (IVS 2017), the Fair Value basis has been renamed as "Equitable value". On the one hand, through such renaming, it can be conjectured, IVSC emphasizes, and quite rightly in our view, a substantial economico-ethical connotation implicit in the concept, and, on the other hand, saves it from the constant confusion and mixing up with Fair Value in the Accounting measurements sense under IFRS, as explained below<sup>2</sup>.

## **2. The Fair value homonym**

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<sup>2</sup> In order to avoid such mixing of connotations, we refer to the concept in its Professional Valuation sense as "Equitable/Fair value" throughout the text, thus also making it clear that the "fairness" adjective is used in the sense of "Equity", not that of "marketness", which latter connotation is obviously generally presumed in the Accounting Fair Value sense (i.e. "village fair" (fair=market; thus, conceptually, Fair Value in the Accounting Measurements sense = Market Value in the Professional Valuation sense )).

As is known, the broad field of Economic Measurements comprises a wide spectrum of microeconomic measurement practices (A. Artemenkov, 2008). Of primary interest to us in the context are, of course, the Professional Valuation and the Accounting Measurements. Under the *Professional Valuation*, in accordance with the standard use of this term in the IVS standards, is commonly understood a distinct, professionally recognized and regulated field of economic measurements associated with the development of valuation estimates primarily in respect of (rather heterogeneous) asset classes with low-to- medium liquidity that are traded on less-than-efficient markets, where the economic “law of one price” is not fully operational (A. Artemenkov, 2008).

In this regard, in terms of its methodological orientation, the Professional Valuation occupies an intermediate ground in the continuum of economic measurement practices between the *Assessment of the Efficiency of Investment Projects* (“projects”-as a category of planned activities that are non-tradeable and illiquid by definition) and the *Investment - Financial Valuation* (i.e, valuation of fungible and liquid assets, such as publicly traded shares and financial instruments, which circulate on the markets with apparent spot efficiency, where the law of one price prevails, but where the intertemporal efficiency aspects are called into question (e.g. see Damodaran, 2012 for the review of this field of economic measurements).

The related field of *Accounting measurements* (as it is known in the IFRS context and we also mention under the same name) ties in with value-based Economic measurements and treats of the valuation of different asset/liability classes with different liquidities -- but having the prime regard to the underlying methodological Accountancy conventions; The practice of Accounting measurements often, therefore, amalgamates the elements from the above pure types of value-based Economic measurements<sup>3</sup>.

The International Valuation Standards (IVSs), published by the International Valuation Standards Council (IVSC), and the European Valuation Standards (“the Blue book” published by TEGoVA, EVSs) are the reputed global standards for *Professional Valuation* developed with the macro-economic import of harmonizing valuation practices and applicable methodology in order to limit unfair cross-border arbitrage opportunities attendant on national differences in valuation/pricing of property (the TEGOVA EVS standards) or as between other asset classes (the IVSC standards). The IVSC standards used to provide best practice interfaces with the contiguous professional economic measurement practices, such as for IFRS compliant Accounting measurements, (e.g. “Valuations for Financial Reporting” Application standard in IVS 2011 edition), but this attempt to build interfaces through standards with the contiguous areas of Economic measurements has been unfortunately abandoned in the latest IVSC standards edition (IVS 2017), with the retirement of all previously-issued Application Standards.

So with the explicit reference to the pronouncements in the earlier editions of IVSC standards (IVSC, 2011), it shall be noticed that, while in the field of Accounting measurements the accepted notion of “Fair value” implies practically the same as what appraisers from the field of Professional valuation are more wont to call “Market value”<sup>4</sup> - i.e. the measurement basis aimed at the best *reflection* of the prevailing level of market prices in respect of an asset under consideration, – Equitable/Fair value<sup>5</sup> as

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<sup>3</sup> With often disproportionate borrowings from the Investment-Financial valuation viewpoints -- for which the IFRS 13 “Fair Value Measurement” standard has been often criticized.

<sup>4</sup> In the Accounting measurement sense, Fair value is understood more in a sense the word “fair” is used in such contexts as “village fair” (i.e. village bazaar, or market, i.e. synonymous with the market value), but not fair in a sense of any explicit fairness, or equity per se. This always poses an issue for translating the accounting expression “Fair value” into indigenous languages, such as Slavic languages or Hebrew, where the explicit connotation of fairness as equity almost always pops up unwittingly.

<sup>5</sup> To this day, TEGoVA’s European Valuation standards (EVSs 2016) haven’t changed the nomenclature for Fair Value in the Professional Valuation sense and continue using the homonym of Fair value to designate this valuation basis, while the IVSC standards (IVSs 2017) have switched to calling it “Equitable Value”. This again prompts our again explains our somewhat clumsy hyphenated reference to Equitable/Fair value throughout this

used in the *Professional valuation sense* now takes on a particular distinct meaning as a valuation basis associated with the values-in-exchange and used for structuring transactions, where the asset, on the contrary, is not exhibited on a broad market (if any market at all), and the valuation is conducted with a view to reflecting and reconciling, in the best way possible, the interests of each of the specific transacting parties in question. In other words, In Professional valuation, Fair value is the basis of valuation that is particularly relevant for the work of the appraiser acting as a consultant when structuring transactions. Acting in such a role, the appraiser has the obligation not so much to reflect any external observable market artifacts, or their central tendencies, available in relation to the asset under consideration (such as market prices, average yields on the market, etc.), as to explicitly reflect and incorporate in the estimate developed by him the *interests of the specific parties* to a prospective transaction with the asset under consideration (of course, the appraiser, in the process of structuring such a fair value estimate, shall reflect all the market data related to the asset in question, but only to the extent this is deemed appropriate for the context of valuation). In this respect, fair/equitable value could also be a natural valuation basis of choice in the circumstances where the market for the asset in question is not efficient, such that the operation of the economic "law of one price" is imperfect or in other words, under circumstances when it is difficult to understand what the "market value" is, because It is not clear what the "market" is, or if it exists at all.

**Example:** Municipality N is meaning to transfer a kindergarten building that is in its full ownership on the terms of "market value" to the current kindergarden operator company, with the easement obligation for the latter to continue using the kindergarten building for its intended purpose. A general practice for valuing specialized properties for this purpose in the jurisdiction in question is based on the replacement cost, and such a practice would certainly satisfy the seller, but the buyer-operator, approaching the kindergarten valuation , as it were, under the "accounts/profits method", will not be able to fund such an estimate, as it would have the effect of catastrophically raising the contributions of parents to the kindergarten in order to cover the costs of the building buyout. The potential "spread" of the valuation estimates for the property on the part of the buyer and the seller is too great, and the valuer does not risk taking the position of either side (if he were to take the buyer's side (i.e. use the "accounts/profits method"), then there would be a significant risk of being accused of undervaluing the government property). The valuer refuses to participate in the preparation of such a valuation report, as the objective criteria for estimating the "market value" is not at all clear in such a case. The deal fell through. The kindergarten operator refused to continue using the property. However, application of the fair/equitable value basis, if such a basis were to be provided for in the legislation / scope of work document, could in this case have facilitated the task of the valuer, reducing his risks to an acceptable level in order to be able to undertake such an assignment.

The International Valuation Standards IVS 2007 provide the following definition for the Equitable/Fair value concept<sup>6</sup>:

*"Equitable Value is the estimated price for the transfer of an asset or liability between identified knowledgeable and willing parties that reflects the respective interests of those parties".*

P. 50.2 of IVS Standard 104 further states that Equitable Value calls for an estimate of "the price that is fair between two specific, identified parties considering the respective advantages or disadvantages that each will gain from the transaction. In contrast, Market Value requires any advantages or disadvantages that would not be available to, or incurred by, market participants generally to be disregarded."

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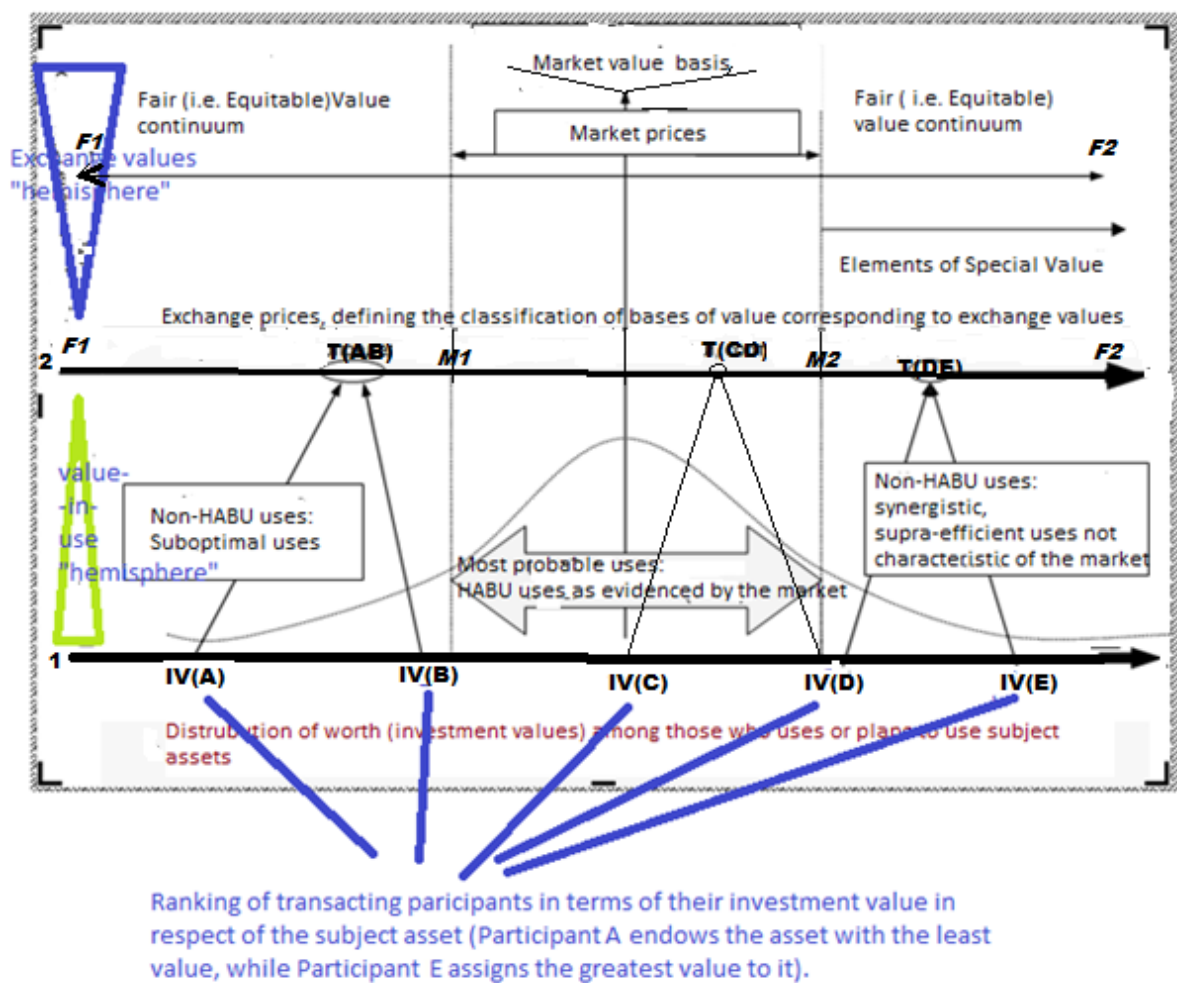
text, where a room for doubt still arises as to what meaning to attach to this Professional Valuation basis of valuation.

<sup>6</sup> The TEGoVA's EVS 2016 Fair value definition in the Professional valuation context is also consonant to the one cited here.

Thus, Equitable/fair value occupies an intermediate position between the investment value and the market value. It would seem that one can successfully apply "Occam's Razor" and not introduce a new entity into the valuation bases "pantheon", instead using the investment value in such cases. But this view is erroneous. We must understand the fundamental dichotomy that exists in the general economic value theory (both classical and neoclassical) between value-in-use and value-in-exchange. The investment value is a value-in-use category, while structuring any transaction and developing an estimate of price in the context of such a transaction would require, by the definition of the task itself, the use of a valuation basis that is a value-in-exchange. Of course, the investment value, by definition being a value-in-use, is not logically suitable for these purposes. At the same time, equitable/fair value, projected on the basis of the investment values of each of the transacting parties, would ideally satisfy the requirements of the task.

### 3. Equitable/Fair Value in the context of Venn-diagrammatic presentations for Professional Valuation bases of value

The Venn-diagrammatic approach to illustrating the interrelationships between different valuation bases globally used in the Professional Valuation (outlined below) would be handy here in illustrating the point-- as applied to some abstract market that does not have full spot efficiency (i.e. where the economic "law of one price" is not operational to the full extent). See the basis-of-value interrelationship on the tableau below (Fig 1).



Source: authors' presentation

Fig. 1 Venn –diagrammatic representation of the logically complete set of valuation bases.

Analyzing the diagram presented in Fig. 1 and inspired by the method of presentation of logical relations called “Venn-diagrams”<sup>7</sup>, one can notice that it is comprised of two “hemispheres (or axes) of value” -- in line with the traditional division of valuation bases between values-in-use and values-in-exchange (still evident in IVS 2007 -2013 editions, but presently dropped). On the bottom axis of the diagram (Axis 1), subjective valuations (i.e. “investment values” as a sole type of the genus of values-in-use, for the purposes of this exposition) with which the set of market participants at a particular market endow a particular object of exchange are ranked in an ascending order. For example, the bottom axis in Fig. 1 illustrates a situation of an asset market with 5 participants, with participant *A* endowing the subject asset with the lowest valuation (investment value  $IV(A)$ ), and participant *E* – with the highest (investment value  $IV(E)$ ); participant’s *C* subjective valuation/investment value is in the middle of the distribution ( $IV(C)$ )<sup>8</sup>. Such subjective valuations have a lot to do with the prospective uses for the asset envisaged by the participants – in general, most participants would have subjective valuations clustered in the middle of the bottom-axis distribution and corresponding to Highest-and-best (HABU) uses as evidenced on the market. However, the IVS and EVS standards also allude to super-efficient uses as well—such as those implicit in Synergistic/Special values, the buying party to implied transactions in which correspondingly envisages for the asset uses more efficient than HABU. Needless to say, on weakly efficient markets for which the satisfaction of the Law of one price remains an unattainable goal (such are the markets for non-standard property and specialized or illiquid assets with which the Professional Valuation often deals), there are also found “left-leaning”<sup>9</sup> participants with suboptimal uses which are not completely jostled out of the market on account of the competition. Such participants, under the circumstances just mentioned, could also be a factor in the market pricing mechanism and should not therefore be discounted out of hand in our analysis.

The above distributional discussion of participant’s investment values is logically “prior to exchange”, i.e. is one of the starting position of the market participants before any of the (spot) transactions in the market take place. Now we move up the diagram into the “hemisphere of exchange”, i.e. to the upper axis (Axis 2) on which the values-in-exchange which can result from the interaction of investment values of market participants (depicted, as just discussed, on the bottom axis -- “the use hemisphere”) are to be plotted. To clarify, numeric magnitudes of value appearing on the upper “exchange-values” axis (Axis 2) are aligned to match those on the bottom “investment values” axis (Axis 1), and both axes are unidirectional. The necessary condition for market participants to transact in subject asset and form transaction prices on the free market is that the buyer’s (*B*) investment valuation with which they endow the subject asset should be higher than the seller’s (*S*) investment valuation:  $IV(B) > IV(S)$ . Otherwise, both parties would lack an inducement to transact. The difference between both valuations,  $IV(B) - IV(S)$ , is often referred to in economics literature as a “gain-from-trade”<sup>10</sup>.

Often the gain is split/shared in some proportion between the transacting parties. If the gain is to be shared equitably/equally in an exchange transaction, then the principle of Isosceles triangulation, as depicted on the diagram, will be the mechanism of transcription of values from the hemisphere of values-in-use to the hemisphere of values-in-exchange (see below under the heading of “normative theories for estimating fair values” –for a more thorough discussion of this principle). For example, a negotiation of the investment values of participants *C* and *D*,  $IV(C)$  and  $IV(D)$ , recorded on Axis 1, into transaction price  $T(CD)$  recorded on the values-in-exchange axis (Axis 2), as shown with the aid of an

<sup>7</sup> A Venn diagram (also called primary diagram, set diagram or logic diagram) is a diagram that shows all possible logical relations between a finite collections of different sets.

<sup>8</sup> If there are more than several participants on the market, then it is possible to draw a distribution curve for the participants in respect of their subjective value distributions, say, a bell-shaped Gaussian curve – as attempted in the diagram on Fig 1 – suggesting that most participants on the market endow the subject asset with the “middling” subjective valuations/investment values.

<sup>9</sup> In terms of the bottom axis on the diagram.

<sup>10</sup> Elsewhere known as the magnitudes of transacting parties’ economic interest.

isosceles triangle  $IV(C)$ - $TC(D)$ - $IV(D)$  straddling both hemispheres, would represent a transaction between participants  $C$  and  $D$ , in which the gains-from-trade have been split in equal proportions. On the other hand, negotiation of the transaction between “sub-optimal” participants  $A$  and  $B$  on the diagram into exchange price  $T(AB)$  manifests an “unfair” split of gains-from-trade between both participants, where participant  $A$  gets most of the benefits (“economic effect”) from executing the transaction (the  $IV(A)$ - $T(AB)$ - $IV(B)$  triangle is non-isosceles and visibly slants to the right).

Obviously, on the evolved more-or-less efficient markets with some transaction regularity, most of transactions between market participants in the values-in-exchange “hemisphere” will be clustered in terms of the recorded transaction prices in the region corresponding to the modal/central tendency/HABU uses on the values-in-use axis 1 (say, illustratively will be clustered in the region  $M1$ - $M2$  on Axis 2). That is, the region delineated by vertical lines passing through  $M1$  and  $M2$  points on Axis 2 and encompassing the bulk of participants’ values-in-use distributions on Axis 1 will notionally represent the region of transactions the prices in which are deemed by market participants and observers, according to their evolved heuristics and market experiences, to be “to a market level” and generally correspond to the HABU uses for the subject asset. Such a cluster, or cloud, of representative “market prices” will have some central tendency, which in Professional Valuation is discussed under the rubric of “Market value”<sup>11</sup>. The more efficient the market, the narrower is the “cloud”, in other words, on efficient markets the particular recorded market prices are tightly clustered and deviate less from their central tendency regarded as the Market value.

What about other values-in-exchange bases? Obviously, given the arrangement of investment values of market participants on values-in-use Axis 1, nothing precludes “suboptimal” participants  $A$  and  $B$  to transact mutually, even though a price attainable in the transaction between them can’t be to a “market level”, delineated by the interval  $M1$ - $M2$  on Axis 2. Under the circumstances, the price  $T(AB)$  on the diagram is feasible albeit it won’t be representative of the market level of prices and, generally, the seller  $A$  will have greater incentive to transact with more use-efficient participants than  $B$ <sup>12</sup>. On the other hand, consider Participant  $D$  on the right margin of HABU distribution and a super-efficient (synergistic) Participant  $E$ . Obviously; it will make little sense for participant  $D$  to sell his asset at the “market prices”, because the in-use utilization of the asset by him will yield greater benefits, according to his reckoning. However, he might be eager to sell the asset for a higher than market price to a synergistic buyer  $D$ , who endows the asset with even superior value-in-use. Again, if the market is generally thin or inefficient a transaction between them priced at  $T(DE)$  has a chance of succeeding, even though, given the greater efficiency of the market, the synergistic buyer  $D$  will still be motivated to transact with the (fungible) asset at its market price level (e.g. by triangulating a transaction with seller-participants  $B$  or  $C$  with reference to  $M1$ - $M2$  range on Axis 2).

A valuer can be called to advise on the “draft prices” in projected transactions between the participants on both “polarities” of Axis 1 distribution (i.e. to advise to  $A$ - $B$ ,  $D$ - $E$  participant sets). Obviously, one basis of valuation (s) he can employ to develop such an advice would be called “Fair” (in EVSs 2016) or “Equitable” (in IVSs 2017) Value, which can be other than the Market Value, numerically. We see that, logically and distributionally, the notion of Equitable/Fair Value is broader than the notion of Market value, the latter dealing with, or aimed at, the aggregation of price data in the  $M1$ - $M2$  range, while the former spanning the entire length of Axis 2 ( $F1$ - $F2$  range). But on pure logical (albeit not economic!) terms, the Market value is, indeed, but a subset of Equitable/Fair Value ( $F1$ - $F2$  range subsuming, as it were, the  $M1$ - $M2$  range). The Standards also operate with the notion of Synergistic or Special Values (which are obviously species of value within the values-in-exchange genus). Our analysis makes it clear

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<sup>11</sup> And in the Accounting measurements area is often described as the “Fair Value” (in IFRS 13 accounting sense).

<sup>12</sup> Except where the market is so inefficient and thin that the notions of market prices and Market Value on it would make little experiential sense.



that Special or Synergistic Values are logically also a subset of Equitable/Fair Values to the right of M1-M2 distribution, while the range of Equitable/Fair Values to the left of M1-M2 distribution is bereft of any reference term, though “price-drafting” to the left of the region can occur in the valuation practice as well.

The distinctions made in the diagram for the (spot, but not intertemporal<sup>13</sup>) bases of value in Professional Valuation obviously form a logically complete self-contained set. And the presented diagram will be an immediately useful tool for valuers to find where they “stand” in solving the problem incidental to their particular valuation assignment. Additionally, the diagram itself, based as it were on the “sublimation” of values-in-use into values-in-exchange, which is the basis of all thinking in Austrian and Neo-classical schools of economics, also makes manifest the dangers of referring to diverse costs as “values”<sup>14</sup>, thus multiplying species of values beyond those logically justified by a neoclassical analysis. If one were to perfect the now-defunct classification of valuation bases incidental to the IVSs 2007-2013 sets, it would also be three-fold: 1) values-in-use, 2) values-in-exchange, and, on separate classificational grounds, 3) cost-based bases of valuation – to wit, substituting as #3 class there a vague legalistic category of “statutorily defined” bases of valuation<sup>15</sup>.

The use of the Diagram underscores as well the specificity of Professional Valuation as a specialism within Economic measurements. The employment of the Fair/Equitable value concept makes sense only for markets with imperfect efficiency, where the Law of one price is liable to a breakdown, that is the area, indeed, where Professional valuers have the primary involvement. Valuers primarily involved in the Investment-Financial Valuation specialism have little need for the concept, since they deal with markets at least with the spot efficiency (e.g. markets for quoted financial instruments), but with the ones where the intertemporal efficiency is sometimes in question. Therefore, for such valuers the concepts of fundamental values/MLV have some topicality, which is less relevant in the Professional Valuation specialism.

#### **4. Theories for estimating the Equitable/Fair value.**

Having discussed the notion of Equitable/Fair value in relation to other bases of valuation, we will move on to discuss the theories for its estimation existing as of today. The contribution of this Paper is in proposing to analyze/differentiate each theory of Equitable/Fair Value in terms of the approach it takes within the normativist-positivist continuum of economic analysis (e.g. see Blaug, 1992).

##### **4.1 Normative Theories for Estimating Equitable/Fair Values**

The logical analysis of Equitable/Fair value discussed so far hints at the possibility of its direct construction based on the respective estimates of investment values for each of the parties to a transaction. Indeed, head-on derivation of Equitable/Fair value can proceed on this basis. Important input data to the problem would then be the magnitudes of investment values of a particular buyer and seller in a specific planned transaction. These values can be, in turn, determined both on the basis of elements of the income approach (i.e. the use of the DCF analysis for values-in-use calculations purposes), and the elements of the cost approach (for example, the reproduction/replacement cost will be a relevant input for calculating the investment value of the seller of a reproducible asset). Furthermore, an important prerequisite for the transaction at fair value shall be the condition that the investment value of the buyer ( $IV_b$ ) exceeds the investment value of the seller ( $IV_s$ ):  $IV_b > IV_s$ . Without

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<sup>13</sup> Such as long-term bases of value, e.g. fundamental value, or its particular specie, the Mortgage Lending Value (MLV) in the EVS 2016 standards.

<sup>14</sup> E.g. Insurable value, Replacement value, etc.

<sup>15</sup> Deplorably, the hollow, purely legalistic distinction between valuation bases defined in the Professional Valuation Standards, and values “defined elsewhere” – now forms the crux of taxonomic effort in the current edition of IVSs (IVSs 2017).

this premise, a seller with the title to the subject of valuation simply will not have enough motivation to make a deal, since it will not be advantageous for him to give up the title at a price less than his own investment value estimate. If this condition is met, the appraiser's task will be to offer a just/fair division of the resulting "gains-from-trade" ( $IV_b - IV_s$ ) between the parties to the transaction. From the need to somehow split these gains between the parties in an acceptable/fair manner the name for this basis of valuation is derived, i.e. fairness here is indeed understood primarily in the ethical sense (Fair = Equitable), plus the appraiser contributes in the formation of this normative aspect of fairness/justice.

Neither IVs, nor EVs Professional valuation standards pronounce on how to implement the normative aspect<sup>16</sup> of fairness in estimating the Equitable/fair value (i.e. how to divide the "gains from trade"). Here, and in conformity with the set of possibilities for isosceles or non-isosceles principles of triangulation depicted in Fig. 1, two points of view are possible: first, the gains-from-trade, as a general principle, should be divided equally between the parties, or, as a second option, in some other, but fair proportion<sup>17</sup>. It may be interesting to note that the first principle (of dividing the gains-from-trade by half) goes back to Aristotle, who first attempted to build a normative theory of value/bargaining, which lasted for almost two millennia, passed on through the scholastics, and only in the most recent times, starting from R. Cantillon, came to be so successfully substituted by the positivist theory of value (Artemenkov A. (2009)):

*“Therefore the equal is intermediate between the greater and the less, but the gain and the loss are respectively greater and less in contrary ways; more of the good and less of the evil are gain, and the contrary [to this] is loss; intermediate between them is..., the equal, which we say is just; therefore corrective justice will be the intermediate between loss and gain”<sup>18</sup>.*

In the context of Professional valuation, a noteworthy development of the Aristotelian theory of “bargaining” (or catallactics<sup>19</sup>) relying on the use of modern tools of economic analysis has been occasioned in a recent monograph by V. Galasyuk relating to the decision-making theory (Galasyuk (2016)), in which he also proposes the use of the principle of equal division of gains-from-trade (“economic interests”) in the transaction. The monograph presents a neat way to reconstruct the theory of decision-making and valuation based on four logically possible types of decisions to be made by two economic agents in each transaction. The investment value in this case is based on the Decision Type  $R_{11}$  “To continue exercising control over the object to be exchanged”. The value of each type of the decision is considered endogenizing the benefits and costs, including the possible costs of transacting incidental to the transacting agents/parties (transaction costs).

From the theory of “fair exchangeable value” proposed by V. Galasyuk in his monograph (Galasyuk V.V., 2016, Galasyuk V.V., 2018), the following formula for determining the Equitable/Fair value, based on the

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<sup>16</sup> Under the normative aspect we imply the normative-ethical aspect (as in a philosophical split between normativist and positivist theories of some phenomenon), not normative in a sense of “being required by some legal pronouncement”, although the valuer can be additionally empowered to exercise the ethical presumption by means of the signed Terms of engagement delegating him to take up the assignment on behalf of both transacting parties.

<sup>17</sup> There is nothing unusual in thinking that numerically/monetarily equivalent gains-from-trade may have a different utility for different parties, cf. St-Petersburg paradox in the decision-making theory.

<sup>18</sup> Aristotle, “Nicomachean Ethics”, Book 5, paragraphs. 2-5, See “The Basic Works of Aristotle”, edited by Richard McKeon, Random House, New York, 1941, 1966, pages 1005-1010)

<sup>19</sup> The latter being a term (meaning “of exchange”) which a prominent Victorian philosopher and economist J. Ruskin favours in his series of Economics essays “Unto the Last” <https://archive.org/details/untothislast00rusk> (1910 ed.)

investment values (the values of the  $R_{11}$  Type decisions, in the terminology of the author) of each party to the transaction and their expected transaction costs, results<sup>20</sup>:

$$FV = \frac{IV_s + IV_b + (TC_s - TC_b)}{2} \quad (1)$$

where,

FV- Equitable/Fair value for the subject property in the transaction;

$IV_s$ - Seller's investment value;

$IV_b$  – Buyer's investment value;

$TC_s$  – Seller's transaction costs;

$TC_b$  – Buyer's transaction costs;

As seen, this formula endogenises transaction costs of the parties and is based on the split of gains – from-trade between them in equal proportions (i.e. it makes the “economic interests” of the buyer and the seller equal to each other). Thus, the important difference between Fair/Equitable value and the Market value is that in fair value models the transaction costs of the parties should be made endogenous (incorporated explicitly into the model in order to be able to reflect the respective interests of the parties most closely). Quite on the contrary, the international (and many domestic) conventions for estimating the market value (as well as Fair Value in the Accounting Measurements sense) assume that the market value is determined without having regard to any transaction costs of the transacting parties (e.g. see p. 5.11.3. in the EVS 1 standard). At the same time, the estimation of Fair value, as can be seen in Formula (1), depends not so much on absolute amounts of the transaction costs of the parties as, rather non-trivially, on the *difference* between the transaction costs of the seller and the buyer: only accounting for the difference in such costs in fair value helps to balance the economic interests of the parties to the transaction. It appears that focusing on transaction costs in valuation methodology is not a seemingly minor preoccupation, but is an important manifestation of incorporating transactional “behavioral frictions” into the valuation practices and bases used.

In common with the Market value, Equitable/Fair value is a spot basis for valuation; at the same time, it should be assumed that, in the context of determining Equitable value, any consideration of the exposure period factors is not appropriate: a particular buyer and particular seller, being specific parties, have already “found each other”. Quite similar, but in some ways different from this state of affairs, the market value, as defined in IVS 2017, is still nominally determinable on the assumption that “The exposure period occurs prior to the valuation date”, i.e. that the exposure period has already passed, as it were, on the valuation date, and, like the water under the mill, is therefore irrelevant for valuation as it had ceased to affect any prior liquidity of the asset (see IVS 104, paragraph 30.2 (g)). However, in spite of this definition of the Market Value in the IVS standard 104, the IVS Standard 105 still recommends that valuers take into account discounts for lack-of-liquidity (DLOMs), at least when applying the market approach to valuation (paragraph 30.17 (a), IVS 105). Therefore, it follows from this state of affairs that

<sup>20</sup> This formula represents a *modification* of the formula contained in the Galasyuk monograph (V.V Galasyuk, 2016; V.V.Galasyuk 2018). All the respective changes in notation being made, it follows from the Fair Value formula developed by Galasyuk given the additional assumption that the value of the prospective buyer’s decision  $R_{j\{00\}i}$  «to continue with control unvested in the object» is equal to zero. Otherwise, the value of such a decision should also be deducted from the numerator of the formula. V. Galasyuk (2016) develops one of the techniques to estimate the value of the buyer’s  $R_{j\{00\}i}$  decision (which in a general case, given the presence of alternatives on the market, is other than zero) on the basis of the “principle of reversivity of the cashflows”.

the thesis that exposure period precedes the date of valuation in determining the market value is not an absolute rule. But one of the most fundamental differences between the Fair value and the Market value bears repeating: the Fair value is more tied to specific estimated economic interests of the parties to the transaction, while the market value relates to recent price evidence on the market in the neighborhood of its central tendency.

The division of gains-from-trade by half, implicit in the above formula (including due to a “2” in the denominator of the formula for fair value, and not, for example, some weighing factor of the investment values of the parties), as has been mentioned, is a normative principle that is not explicitly contained in the International valuation standards. In principle, the gains-from-trade can be split by appraisers in some other (but contextually and ethically fair!) proportion in the process of developing Equitable/fair value estimates. The corresponding result, if justified, will also be called Fair Value (although, if the international standards allowed, it would have been better to simply call such a result a “draft price” or, as Galasyuk (2016) does, call it “exchange value” (distinct from “Fair exchange value”). Even so, any normative theory of dividing the gains- from-trade based on the amounts of the investment values / values of the decisions of each of the transacting parties is handicapped by some unavoidable limitations as to what shall be considered “fair”, or “not very fair”, and how to prove that the investment values of each of the parties are reflected correctly in the resulting valuation, etc. – obviously the appraiser will have to assume his entire responsibility in these respects. This is certainly not a very convenient and practicable state of affairs from the point of view of practicing Professional Valuers.

Would it be possible to formulate a theory of estimating fair value in a more positivist manner -- without any allusion to the need to “divide anything”?

#### **4.2. Positivist theories for estimating Equitable/Fair value**

Indeed, fundamental proposals for formulating a more positivist-oriented (or, specifically in our context, a less “divisive”) theory for estimating fair values are available. In particular, the Transactional asset pricing approach (TAPA), developed by V. Michaletz in a series of publications that appeared over the last decade (Michaletz (2005), Michaletz (2007), Michaletz & Artemenkov (2018)), deserves a wider recognition as an instrument for estimating the fair values of assets, as well as the market value of less liquid assets (Andrews (2011)).

TAPA model is a dynamic model that directly considers fair value as a value-in-exchange, without its decomposition into the corresponding value-in-use elements (i.e. investment values of the parties to the transaction). Instead of explicitly dividing the gains-from-trade (as in model (1)), this model is based on the principle of the lack of “super-interest” for any of the parties to the transaction, namely, it builds upon a transactional principle that the capital incorporated in a transaction at fair value must grow in the economic and investment environment of both the buyer and the seller at an equal rate -- so that in each period  $n$ , following the valuation/transaction date  $0$  and during the life of the subject asset, the following balance is fulfilled, which encapsulates the principle of a fair transaction according to TAPA:

$$S_n^s = S_n^b \tag{2}, \text{ where:}$$

$S_n^s$  – Amount of capital in the investment portfolio of the seller in the period/year  $n$  following the placement of proceeds<sup>21</sup> from the sale of subject asset at fair value ( $PV$ ) into their investment portfolio (seller's investment portfolio):

$$S_n^s = PV \prod_{i=1}^n (1 + r^s(i)) \quad (3)$$

(where  $r^s(i)$  – is an accumulative rate of return in the seller's investment portfolio: generally, it is time-variant and specific for each period  $i$  ( $i= 1...n$ );  $0$ - period of valuation/transaction<sup>22</sup>)

$S_n^b$  -- Amount of capital in period/year  $n$  following the completion of fair value transaction with subject asset accumulated in the investment portfolio of the buyer due to placing into it the stream of net operating income receipts from the use of subject asset ( $NOI_i$ ) generated in periods from  $0$  to  $n$ , plus the reversionary net realizable value of subject asset for the buyer at the end of period  $n$  ( $S_{res}$ ):

$$\begin{aligned} S_n^b &= \sum_{k=1}^n NOI_k \prod_{i=k+1}^n (1 + r^b(i)) + S_{res} = \\ &= NOI_1 \cdot (1 + r^b(2)) \cdot (1 + r^b(3)) \cdot \dots \cdot (1 + r^b(n)) + \\ &+ NOI_2 \cdot (1 + r^b(3)) \cdot (1 + r^b(4)) \cdot \dots \cdot (1 + r^b(n)) + \dots \\ &+ NOI_i \cdot (1 + r^b(i + 1)) \cdot (1 + r^b(i + 2)) \cdot \dots \cdot (1 + r^b(n)) + \dots + NOI_n + S_{res} \end{aligned} \quad (4)$$

(where  $r^b(i)$  – is an accumulative rate of return in the buyer's investment portfolio: generally, it is time-variant and specific for each period  $i$  ( $i= 1...n$ );  $0$ - period of valuation/transaction).

Substituting into (2) Expressions (3) and (4) and then solving it for the period  $0$  fair value ( $PV$ ) variable (i.e. as at the date of valuation/transaction), enables to obtain the following expression (Michaletz (2007)):

$$PV = \frac{\sum_{k=1}^{n-1} NOI_k \prod_{i=k+1}^n (1 + r^b(i)) + NOI_n}{\prod_{k=1}^n (1 + r^s(i))} + \frac{S_{res}}{\prod_{k=1}^n (1 + r^s(i))} \quad (5)$$

Expression (5) is a generic formula for estimating Fair value under the TAPA dynamic model, which, as we see, is based on the general principles of DCF analysis modulated by the dynamic principle of transactional fairness (Formula (2))<sup>23</sup>. A distinctive feature of this model is in accounting for the investment characteristics of transacting parties via the parameter of cumulative rates (rates of return) in their investment portfolio (these parameters are assumed time-variant in the general TAPA model). The dynamics of growth in investment portfolios, therefore, can be different for the buyer and seller, and it is through this parameter that the individual investment characteristics/interests of the parties to the transaction are reflected, the fair value being a parameter equalizing the capital gain of each of the parties due to their transaction with the subject. Thus, the general TAPA model for estimating fair values (5) has much in common with the standard DCF analysis (for example, the one used in calculating the

<sup>21</sup> Since the word "proceeds" is used it represents a net component of receipts to the seller in a transaction at fair value, i.e. net of transaction costs. Same is valid for determining the residual net realizable value of subject asset  $S_{res}$  (see formula (4)).

<sup>22</sup> Thus, instead of exponential compounding (i.e. rate of return serving as functional exponent), Formula (3) (as well as (4)) uses chain multiplication, expressed through the chain multiplication sign ( $\Pi$ ).

<sup>23</sup> As such, TAPA model can be viewed as an extension to the conventional DCF analysis, which came of age with the works of Fisher (1930): the latter providing an investor- specific pricing angle, and the former-- a transactional-based pricing angle.

investment values), except that it does not use a single rate of return (discount rate), but dual rates --  $r^s(i)$ ,  $r^b(i)$  -- reflecting the forecasted cumulative dynamics (rates of return) on the seller's and buyer's investment portfolios, respectively. Thus, instead of reconciling the explicit spot variables (investment values) into a fair value estimate (as in model (1)), in the TAPA model (formula (5)) this reconciliation is mediated indirectly through reconciling the dynamic / forecast variables (prospective returns on investment portfolios of the parties to the transaction) – clearly, it is nowhere explicitly required "to divide anything in half" , therefore the appraiser's responsibilities are better hedged by the analysis of "second-order" variables.

At the same time, it is also possible to simplify model (5) by introducing into it a number of simplifying assumptions; for example, assuming that the return dynamics in the investment portfolios of the parties to the transaction were to be equal,  $r^s(i) = r^b(i) = r(i)$ , leads to the following reduction for (5):

$$PV = \sum_{k=1}^n \frac{NOI_k}{\prod_{i=1}^k (1 + r(i))} + \frac{S_{res}}{\prod_{i=1}^n (1 + r(i))} \quad (6)$$

However, unlike in the "DCF market analysis", the uniform rates of return/discount should not be based on any presumed overall market models (let alone any normative market models, such as the CAPM model (Sharpe (1964)), but should reflect specific expectations of the returns on investment portfolios of the parties to the transaction -- whereas such portfolios can be structured on principles other than the normative principles of portfolio diversification implicit in the Modern Portfolio and financial theories, and can also easily include illiquid assets, as they usually do (Pagliari, J. L. (2017); Anglin, P. M. and Gao, Y. (2011); Chu, Y. (2010); also see (Gallimore, P. & A. Gray 2002) for the role of sentiment in the portfolio selection process)<sup>24</sup>. In this respect, the TAPA theory, also approaching the valuation of assets on the basis of the portfolio principle, just like the Modern Portfolio Theory (MPT) does, imposes far fewer normative restrictions on the specifics of structuring the investment portfolios of the transacting parties (and, moreover, it is explicitly a multi-period model, unlike standard Sharpe's-Lintner's CAPM). Given that the rates of return on investment portfolios are time-variable and may be different for different periods, the "general" and diverse "partial"<sup>25</sup> TAPA approach formulas for forecasting portfolio-level rates of return/ discount rates can be applied by appraisers in the context of fair value estimations under formulas (5), (6). In particular, a convenient formula for forecasting discount rates that now also began to find application in actuarial practice (Andrews (2011)) is the following one:

$$r(i) = \frac{(1 + v(i)) \cdot R}{(1 + v(1))} + v(i) \quad (7)$$

which is based on the assumption that the portfolio-level rates of change in income  $u(i)$  and the capital gain rates  $v(i)$  in the investment portfolios of the transacting parties are in sync for each period  $i (i=0..n)$ :  $v(i)=u(i)$ . In this formula,  $R$  denotes the portfolio-level yield in an investment portfolio comprised of  $n$  assets (i.e. Period 1 portfolio-level current yield):

$$R = \frac{\sum_{s=1}^n NOI_s}{\sum_{s=1}^n PV_s}$$

<sup>24</sup> Only in the context of determining the market value do the IVS standards indicate that, as a part of the application of the income approach, "investors can only expect to be compensated for systematic risk (also known as "market risk" or "undiversifiable risk")" (paragraph 40.5, IVS 105). On the other hand, in the context of determining fair value, this can't be held to be a valid general recommendation.

<sup>25</sup> i.e. obtained under specific simplifying assumptions (in Michaletz (2007))

,where the summations in the numerator and denominator above are the summations of first-period net income and current (date of valuation) values, respectively, for the assets making up the investor's portfolio in question.

To save appraisers implementation time, joint use of Formulas (6) and (7) has now been programmed for easy spreadsheet applications in Excel<sup>26</sup>, so applying TAPA principles is easy, provided one uses it with the full understanding of its assumptions (see Michaletz (2007), Michaletz &Artemenkov (2018)).

The TAPA theory also provides for the uses of some additional simplifying assumptions regarding (6) and (7), which are not covered here, but can be utilized by appraisers in some cases of estimating fair value. In particular, under a number of assumptions, formulas (6) and (7) reduce to even simpler and more well-known direct capitalization formulas, Gordon, Hoskold, Inwood, -- endowing these formulas with a special meaning and peculiar assumptions when applied to the determination of fair value (Michaletz (2007)).

As a result, as we see, the application of the dynamic principle of transactional fairness (formula (2)) in TAPA allows us to develop a theory for estimating fair values in a more positivistic key, and avoid using, in this epoch of positivist economics, any blatantly normativist principles that do not fit in well with the neoclassical value theory.

## 5. Conclusions

Our analysis in the Paper shows that, almost simultaneously with the recognition of the Equitable/Fair value basis in the international standards of Professional Valuation, convenient and practical theories have been developed in the field of Economic measurements to enable carrying out Equitable/Fair value appraisals. These theories are now actively entering the body of knowledge for Professional valuation specialists required to practice both on international and national levels. At the same time, national appraisal legislation and standards, especially in developing countries, is still being very conservative in recognizing this valuation basis, which was also previously vitiated by the almost universal confusion of Fair Values in the Professional Valuation and Accounting Measurements sense. In Section 3, we showed with the aid of the VDA tool that Equitable/Fair value is a logically necessary and consistent basis of valuation in the field of Professional Valuation related to the valuation of less-than-perfectly-liquid assets traded in markets, where the "law of one price" fails to manifest its effects in full. This valuation basis would allow to easily tackle valuation problems arising in the field of Professional valuation that relate to the structuring of transactions and their pricing issues (i.e. the role of appraiser/valuer acting as a consultant), as well as problems related to the market valuation of less-liquid or specialized assets. It may seem that such problems do not arise or rarely arise in the field of regulated Professional valuation (e.g. eminent domain appraisals), but the example given by us involving a valuation of the municipal kindergarten for the purposes of its privatization (transfer to the operator) shows that this is far from being the case. Since the recognition of Fair/Equitable Value in IVSs, EVSs as well as in the draft IVSC Professional Standards, the theory of Fair/Equitable value estimation is becoming an indispensable element in the training of professional appraisers-both internationally, and in national jurisdictions. Accounting Measurements experts may heed this process going on in the neighboring specialism of Professional Valuation and probably draw some lessons and develop new perspectives in order to facilitate a move away from the theoretical near-monopoly of the Accounting Fair Value in their field. As explained, in the Professional Valuation this move away from the parallel concept of Market Value is already in evidence through the incorporation, evolution and promotion of the Fair/Equitable value concept in the international valuation standards (IVSs 2017, EVSs 2016). In particular, we believe that Equitable/Fair Value, by explicitly incorporating transactional

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<sup>26</sup> See [https://drive.google.com/file/d/OB8hVnKftz9\\_2NIdEYnRiX21DMk0/view](https://drive.google.com/file/d/OB8hVnKftz9_2NIdEYnRiX21DMk0/view)

perspectives of economic agents, represents a way forward for the aspiration to incorporate “behavioral aspects” into value measurements, without also bringing in any baggage of the “irrationalities”, with eliciting which the behavioral economics research is sometimes preoccupied.

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