

# EXEC SUM

## MANAGING RISKS WITH THE FAIREST VALUES



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## **Abstract**

Theoretically, one could think of fair values as representing the right market values. However, markets are not fixed entities and different types of markets can be used to fix a value. Three “market” categories have been identified in this study, each one leading to a set of market values: a given asset, at a given moment, has numerous market values. How is such a value chosen?

This paper shows that the fairest value is the one that brings the least problems along with it: the preferred market is the one that keeps insiders out of trouble. For example, if it is likely that a problem with the regulator, counterparty or liquidity would happen, a different market type can be chosen in order to get a different market value. This could then avoid negative consequences of the earlier value.

The fair value portrayed is not the right value but it is the right value under the right circumstances. It is used to make sure the organisation’s health is guaranteed, not necessarily through the organisation’s actions but through its representation.

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## So what ?

- > Fair Value accounting is dependent on internal choices

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- > A given asset, at a given moment, has multiple market values

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- > The final valuation is (partially) based on the pressure that is put on actors that determine them.

## MANAGING RISKS WITH THE FAIREST VALUES

The market value is the right value. However, what is it? Looking for example at a Bloomberg screen of a liquid sovereign bond, it is very difficult to find the one market price. On it, you can see more than ten different market values, for the same asset, at the same moment. Have you ever had to calculate the market of an insurance liability under Solvency II? You would probably have to choose among a such wide range of results that could more than double your solvency ratio. The market value is neither unique nor objective. To use it, one has to first choose it. But how is this done? And why in this specific manner?

In this article is shown that the fairest value, the right market value, is the one that brings the least trouble along with it. For financial institutions, "fair value" or "market value" has become a crucial accounting method. This paper shows that these values are representations of the organisational pressures.

Theoretically, one could think of fair values as representing the right market values. However, markets are not fixed entities and different types of markets can be used to fix a value. There are three different markets that the insiders can choose from:

- The first type, the *Direct Transaction* is the economic actions that we carry out on a daily basis, the direct buying and selling of a product in interaction with a counterparty, seller or client. For example, the price one pays when buying a couple of tomatoes on the local food market is a Direct Transaction.
- The second market type is *the Aggregation*. It can be seen every night on television when the daily stock market value is discussed. It is a representation of multiple transactions that are brought together mathematically. This can, for example, be a mean but a specific selection process or a historical curve. Such a representation is the result of plenty of conventions. For example, the asset values on an insurer's balance sheet under Solvency II are generally this type of calculations.
- The last market type is even further from the actual transaction. *It is the Ideal Calculation* that recreates a market through mathematics and computations into what it is supposed to look like in theory.

All three are used fluidly between one another by risk management to make sure trouble is prevented. These three markets are interchanged in the valuation to help the insiders in finance and risk departments solve (likely) problems. For example, if a problem with the regulator, counterparty or liquidity is likely to occur, a different market type can be chosen. This could then avoid negative consequences of the earlier value.

### The Background of The Study

In sociology and the social studies of finance, the organisation in which markets are dealt with have hardly been studied. A famous study of foreign exchange rate traders shows how traders create the market. They do this with the help of screens to interact with each other around the globe. However, markets are more than traders and this paper shows that there is more than the myth of the "man behind his screen". The financial market is also a form of representation that influences accounts and internal decisions in organisations. Not only does the financial market influence the financial organisation, it is the organisation as a legal entity that carries out the transactions in the markets.

By studying risk management practices, the background of those market transactions becomes clear. With the help of two ethnographies in risk management, one in a bank and the other in an insurance company, the practices are untangled. Risk management deals on the one hand with the risks that occur in the financial market, through calculations of risk categories like interest rate risks and counterparty default risks. On the other hand it deals with financial markets through its function of manager of problems. The last task involves work related to accounting and regulatory requirements. Organisations can be in serious trouble due to possible default or hostile regulators. It is up to risk management to avoid these serious foreseeable negative consequences. They do so by using their resources and choosing between different legitimate possibilities. They minimise the likely problems.

In the determination of market values, this role of risk management becomes clear. Market values could be seen as a value that is always correct because it is the information of all participants that come together at that moment in time. This outsider determination might make it less influential management. But there is not one market and the right market can be determined in multiple ways. Accounting rules and regulation give this leeway but so do financial market themselves. In the paper there are three examples of using different markets, all discussed below.

### Example 1: Valuing (Il)liquid Bonds

During the fieldwork at the market risk management team of the bank, I worked on an accounting reclassification of bonds. They had been valued through a model that was supposed to represent the market. However, the regulator had stepped in and did not accept the model anymore. The values had to be changed. However, there was one problem. This specific bond portfolio was very difficult to sell and they were holding onto it for better times. At the moment, the bank's balance sheet could handle the market values of the bonds but it might not in the future. So to keep it safe, the bonds were reclassified into a more stable category. In order to do this, they had to be determined as il-liquid. Il-liquidity of the market basically means a lack of market participants. So the objective was to show for as many of the bonds possible that there were very few actors handling the bond. That way the general market price of the curve could be used in the reclassification.

*But at the same time there were market prices available, by the few buyers and sellers that were present. That was not preferable because it would have meant an instability of the accounts. So the bonds went from an Ideal Calculation type market value to one of the Aggregated market type because of regulatory pressure and the quest for stability.*

*However, there had also been a possibility to make the bonds be valued through the Direct Transaction. The latter was not chosen because it would have meant less stability and possible problems with shareholders. By doing it this way they managed to adhere both to the wishes of the regulator and prevent future changing values.*

### Example 2: Derivative Valuations

The valuations of many derivatives depend on specific models. In the case of non-standard derivatives, these calculations are not standardised and financial organisations can use their own specific models. Besides that, these models evolve continuously. This makes it sometimes difficult to keep up with current developments while at the same time derivatives still need to be priced. At the bank that was studied for this paper, they had difficulties valuating certain derivatives. Since they were collateralised, the derivative valuations mattered because they determined the daily collateral exchanges. In those collateral exchanges,

disputes could arise because of disagreements in calculations. Those disputes were not seen as preferably at the time I was there and so valuations were tested to the counterparties'.

In order to do so, the risk department at Bank F organised regular meetings on the derivative models and the counterparties' values. With the help of a ratio, values were compared with one another. During one of the derivative discussions, the different market types came up again. The discussion concerned a specific currency swap family and there were two sides around the table. There were those that wanted to keep the current correlation calculations, based on a hypothetical market, namely the implied correlation. The other side of the table, the risk managers wanted a new type of correlations, calculated based on historical data. According to the quantitative person of the risk department, the latter would bring them closer to the counterparties, thereby avoiding disputes. However, for the non-risk managers at the table, such a new calculation would mean quite a lot of work. They disagreed with the whole premise of the historical correlation because it would not give them the market value, the one that was theoretically correct. Quite a heavy discussion followed, first on the calculative aspects but which was concluded on the practical aspects. Namely in the end they would study the new historical calculation, not because it was theoretically right but because it would make them deal and explain themselves to the counterparty. The latter had been expressed by the head of the market risk department and the highest in the hierarchy. *All three market types were discussed in the end. The Ideal Calculation was the one preferred by a part of the people while the Aggregation by another part. The reason behind the latter was that it made life easier in the first type of market, namely in the Direct Transaction.*

*So the derivative calculation that was finally studied was not the one that was theoretically best and based on what a market was supposed to look like. It was the calculation that was explainable to the counterparty in a direct transaction of collateral that was preferred by risk management. It was namely that type that would most likely lead to more stability towards the counterparties.*

### Example 3: Market Conformity of Risk Simulations

In the risk management of insurance companies, the market is less visible than in banking. It is far away, dealt with by asset managers and investment departments. However, by scratching the surface of the practices, the Ideal Calculation becomes present. With the introduction of Solvency II, insurance companies have had to apply market values to assets, liabilities and risk calculations. In order to make these accounting objects market consistent, stochastic calculations have been introduced. With the help of these risk-free scenario calculations, one can theoretically estimate a market, as if it were in line with Black-Scholes option pricing theory. The market is thereby calculated in the form of what it is ideally supposed to look like.

During the ethnography I was in the middle of a question and response session with the local regulator about the risk calculations of the assets. I was located at the local entity who was responsible for answering to the regulator. However, making it difficult to fulfill to these responsibilities, it was the group entity who had all the knowledge about the asset risk calculations. They had designed and implemented them, leaving us with the same knowledge as had been transferred to the regulator, namely the internal policy documents. But the regulator did have questions and with the little knowledge the risk team had locally, we had to answer them. One of the questions was if the functions that simulated the assets were not overfitting the current input data. In this discussion, it was the market that became part of the discussion. Because, as a consultant put forward, if we have market consistent functions, do we then have overfitting? This was the argument that started the discussion and since the consultant was the one with the most technical knowledge in the group, no one really contradicted him. Besides that, it was a possible solution that might keep the regulator at bay. Because that was what was necessary in the end. All of us in the process knew that we were supposed to answer to the questions of the regulator such that they would be as content as possible. The market argument made sense for a while and so it was used at one point. In the final answer however, the market had disappeared. The argument had not seemed plausible enough to make them content. Within boundaries of what the risk managers thought of as acceptable, they sought the right answer

that seemed to keep the regulator of their back.

So the Ideal Calculation can be found throughout the risk calculation process in insurance, from the calculation of provisions to the final regulatory capital calculations. *In the case described above, this market idea seemed to be helpful in keeping the regulator at bay. It turned out to be more helpful to use another study, showing the fluidity of going in between market and other types of calculations. As long as the final objective was attained, namely making sure the regulator received an answer that they could use, the argument of the Ideal Calculation or a more empirical study were instrumental.*

### In a nutshell: risk departments minimize problems with counterparts through market concepts

As the above shows, it is not just the trader that determines what the market is or is not, it is done within the process of organisational relationships and resources. The risk departments used the different rationalisations of markets and accounting to keep out of trouble. Other than what one might expect for a rational economic actor, these people never intended to obtain more profit through their work. They did however minimise negative effects. Since they were responsible for the avoidance of organisational trouble, either through a hostile regulator or a negative result of valuations, risk managers tried to minimise such problems. They juggled the different actors, which included their own conscious about what was the right thing to do, to diminish the negative effects.

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