POSSIBILITIES OF CORPORATE FINANCIAL AND NON-FINANCIAL PERFORMANCE MEASUREMENT

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Abstract. This paper examines the relationship between the traditional financial and non-financial performances and the author attempts to suggest a possible new complex measurement method. Complex performance matrix (CPM) is a fast and easy tool in order to measure companies' financial and non-financial performance. CPM has three dimensions: organisation size, economic performance and environmental performance. The author suggest that corporate analyses complemented by the CPM may show a more proper result.

Key words: non-financial performance, corporate finance, sustainability, CSR

INTRODUCTION

After the reconstruction period of the World War II, the population of the developed world began to respect nature stronger than before. Simultaneously, green movements were established and they became more and more conscious and their activities got more and more widespread.. Western societies took the *not so green* industries under fire. While in the 1960s, real pollutant industries (such as coal mining or iron works) were attacked, in the 1990s even the fashion industry was dubbed pollutant [Elkington 1994]. Corporations attempted to adapt to the changed market situation. New theories, models, processes were added to business practices in order to make business more transparent and sustainable. The demand for measurement of non-financial performance is part of this adaption process. In line with increasing non-financial performance, concerns of possible conflicts with shareholders' value grew.

This paper examines the relationship between the traditional financial and non-financial performances and the author attempts to suggest a possible new complex measurement method. The paper is divided into three parts. In the first part theoretical approaches of sustainability are examined. The second part is about the relationship between financial and non-financial performances and their measurement. In the third part the author suggests a new complex performance measurement approach.

APPROACHES OF SUSTAINABILITY IN CORPORATE PRACTICE

Strategy and governance of a corporation is defined by its target function. In the case of corporate responsibility and sustainability we must distinguish two main approaches. The first one is called Friedman's doctrine, which promotes shareholder's primacy and the other one is the stakeholder's theory, which aims to establish a kind of democracy of stakeholders.

A Michigan court once declared that "a business corporation is organised and carried on primarily for the profit of stockholders"[1]. Milton Friedman used the agent's theory when he claimed that "there is one and only social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud" [Friedman 1970]. Friedman [1970] noted cynically that corporate responsibility was founded in a such business environment where aversion to *profit* and *soulless corporations* is usual. So it can be said that spending on responsibility is equal to purchase society's goodwill. After all, it could be interpreted as truly self-interest.

The word stakeholder first appeared in a memorandum in Stanford Research Institute (SRI). It refers to "groups who have a stake in the actions of the corporation" [Freeman and Reed 1983]. The stakeholder approach aims to maximise the stakeholder's value instead of shareholder's wealth [Phillips et al. 2003]. There are not as many conflicts between these approaches as one could expect. No corporation can survive in market conditions and in long term if interests of customers, suppliers, financiers and other third parties (i.e. stakeholders) are neglected.

The term stakeholder can be defined in a narrow or wide sense of the word. In a narrow sense stakeholders are "any identifiable group or individual on which the organization is dependent for its continued survival" (such as owners, employees, customers etc.). In wide sense everybody "who can affect the achieve-

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[1] http://www.economist.com/news/business/21695940-enduring-power-biggest-idea-business-analyse.

ment of an organization's objectives or who is affected by the achievement of an organization's objectives" (e.g. trade unions, competitors etc.) [Freeman and Reed 1983].

Similar to *traditional* financial reporting, sustainability reporting tools (SRT's) generally provide information about corporate performance in reports [Siew 2015]. According to Siew [2015], SRT's could be categorised into three groups. Sustainability reporting frameworks are similar to accounting standards. They could be interpreted as a guidance to make a report. Frameworks contain guidance to measure performance, report format and suggest KPI's. Assistance to frame contents of the report and the possibility to compare the organisation's performance are the main advantages of the frameworks. The most popular frameworks are GRI or UN Global compact. Sustainability indices look similar to stock exchange indices. The only difference is that these indices do not contain corporate *financial* performance but (some kind of) non-financial performance. The third group is called the sustainability standards. Whether frameworks or indices provide continuous criteria (KPI's), most standards are discrete – if a company meets the standard's requirements, it will get qualification, in other case it will not. In other words standards don't provide positive discrimination for overperforming companies. The main advantage of the standards is that they can substitute environmental rules in countries where the legal environmental is short [Prakash and Potoski 2014 in Siew 2015].

There are many overlapping approaches to measure corporate non-financial performance. Scientific literature classifies corporate indicators as corporate social performance (CSP), corporate sustainability performance (CSP) or such corporate social responsibility (CSR). CSP is the most comprehensive approach. Its definition is so general that it contains elements of financial and non-financial performance as well. Margolis [2009] distinguishes two approaches of CSP. The first is "a company's efforts to fulfill multiple responsibilities — economic, legal, ethical, and discretionary" [Carroll 1979, Carroll 1999 in Margolis 2009] or "encompassing a company's principles, processes of response to rising issues, and observable practices and outcomes" [Wartick and Cochran 1985, Wood 1991 in Margolis 2009]. The above-mentioned CSR activities constitute the so called CSR pyramid [Carrol 1991 in Lentner et al. 2015] where the top layer of the pyramid signifies the most sophisticated, philantropic activities, which can be seen as the discretionary ones. The second approach "casts social performance as a function of how a company treats its stakeholders" [Clarkson 1995, Post et al. and Sachs 2002, Cooper 2004, Campbell 2007 in Margolis 2009].

A well-defined, easily interpretable and understandable approach has much more benefits in case of performance measurement. CSP could be defined as a general set of corporate performance indicators because of its general definition and

too wide explanation of stakeholder theory. Triple bottom line (TBL) and the ESG (environmental, social and governance) guidelines are the two most popular approaches of corporate performance measurement. These approaches are similar to each other, because both are based on the stakeholder theory (e.g. company's performance depends on the created value for stakeholders). The main difference between these two approaches is while ESG contains only non-financial elements, TBL covers all the corporate activities. TBL can be applied for each organisation. Its three dimensions (economic, environmental and social) are usually called as 3P (people, planet, profit) [Slaper and Hall 2011].

Corporate social performance is widely explained in the literature: some researchers regard it as a subset of CSR, others say the opposite [Margolis 2009] and there are approaches where two are synonymous [Özçelik et al. 2014]. CSR is not considered a separate paradigm [Braun 2013], so we do not have an accepted definition. According to the European Communities, CSR is "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" [Škare and Golja 2012]. WBCSD's definition says CSR can be explained "as the continuing commitment by businesses to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large" [WBCSD 1999 in Özçelik et al. 2011]. The common point of the definitions is that all of them are built on the basis of TBL [Škare and Golja 2012]. Since TBL and ESG guidelines describe similar corporate behaviour, we can say that if a corporation complies to TBL, it complies to ESG guidelines as well.

SUSTAINABILITY AND FINANCIAL PERFORMANCE

According to Friedman [1970], a corporation's one and only aim is to maximise the shareholders' wealth, every other activity decreases the shareholders' wealth. The relationship between financial and non-financial performance is subject to many hypotheses.

Slack resources theory says there is a positive correlation between firm size and social performance. In other words, bigger and financially stronger companies can afford more likely to invest in sustainability projects. These activities increase the stakeholder value and help to achieve strategic position as well. Thus the company can increase its performance in financial and non-financial dimensions together [Tsoutsoura 2004]. According to another hypothesis, only big multinational companies deal with sustainability measures because of the society's higher demand on transparency and ethical behaviour. This demand is getting higher [Tsoutsura 2004] because companies are also growing and they can af-

ford to employ as many workers as the population of some smaller European countries. Although companies use their resources to improve their non-financial performance, it can be no more than purchasing goodwill or greenwashing (i.e. pretend to operate sustainably).

Investing into sustainability projects can have three possible outcomes. Friedman [1970] claims that such decisions do not maximise shareholders' wealth (i.e. sustainable projects have negative NPV) and as the members of the management are often the shareholders' agents, they cannot even do that. According to Ullman [1985 in Tsoutsoura 2004], the relationship is neutral because positive and negative effects neutralise each other (i.e. NPV is approx. zero) or correlation is not significant either. In this case other effects cause distortions, which cannot be filtered out. Most papers write of positive and significant relationships so sustainable companies perform better than unsustainable ones [Margolis 2009].

Typical benefits of sustainable corporations are better reputation and consumer's goodwill in the case of expected sustainable brands [Tsoutsura 2004]; decreased probability of corruption, bribes, environmental damages and thus paid fines and reputation losses [Škare and Golja 2011, Vitezić et al. 2012, Brine et al. 2007 in Özçelik et al. 2014]; motivated, loyal and thus productive employees, smaller fluctuation [Tsoutsoura 2004]. In some cases sustainable projects lead to direct cost cuts for example due to more efficient use of raw materials [Tsoutsoura 2004]. Sustainability reports improve transparency so information asymmetry between parties are getting lower, which negatively affects company's risk premium so its cost of capital are also getting lower [Ng ad Rezaee 2015]. These examples show only a *menu* from which companies can choose the most appropriate measures to achieve their own strategic targets. We can conclude that corporate sustainability is not necessarily irrational.

COMPLEX PERFORMANCE MEASUREMENT MATRIX

This paper's aim is to elaborate a method, which shows corporate complex (i.e. financial and non-financial) performance. Complex performance measurement (CPM) matrix is a possible method to do this.

Corporate complex performance can be measured by data analysis (for example in a composite index [Dočekalová and Kocmanová 2015] or by a set of KPI's. CPM matrix belongs to the latter group. Since the most important requirement was to create a fast and easy tool, data analysis was no more an option. Fast and easy tool means that result can be quickly reached based on available data, which are easy to present and understand (by for example managers or stakeholders).

Isaksson and Steimle [2009] examined information content of GRI reports on a basis of four aspects. A set of KPI's is relevant when it refers to every notable

information of the effect (see materiality principle of accountancy). Clarity of level means that a corporate performance should be compared with a competitor's. Clarity of improvement requires to show the progress of KPI's. A KPI contains much more information when its trend is shown. The last aspect, system view, means that "benchmarks have been defined in such a way that it is possible to relate indicators to objective sustainability requirements" [Isaksson and Steimle [2009].

Isaksson and Steimle [2009] mention two objective sustainability indicators. True Sustainabiliy (TS) means that "a social structure can be maintained profitably and indefinitely, without degrading the systems on which it depends" [Newton 2003 in Isaksson and Steimle 2009]. True Sustainable Development (TSD) "as the rate required from the current level to the target level within the time span available" [Isaksson and Steimle 2009].

Information content of CPM matrix almost fulfils the above-mentioned criteria. Since these criteria are used to appraise corporate sustainability reports and not for comprehensive appraising tools (like CPM matrix), we can say that an analysis complemented by CPM matrix may show a more proper result.

CPM matrix uses two quadrants of a coordinate system. Since that it is virtually incorrect to use the term "matrix". There are such KPI's in the coordinate system whose lower and upper bounds are defined in a way that the figures of KPI's should fall in an interval between 0 and 1. Appraised corporations are grouped on the basis of KPI's. From that aspect CPM matrix looks like BCG matrix. Contrary to BCG, the category boundaries could not be defined previously because they may be different among sectors or time spans.

Performance is measured in three dimensions: organisation size, environmental and economic performance. The angle of environmental performance is fixed so other dimensions are shown together with it.

In CPM matrix there are no social dimensions thus it virtually does not comply to TBL. According to the virtue matrix [Martin 2012] it does not have to be in CPM matrix if there are some methodical constraints. Virtue matrix helps to categorise corporate sustainability activities into four groups on the basis of their benefits and motivations to perform them. The bottom two quadrants (civil foundation) contain activities, which are required in the country. Bottom left quadrant is choice, because when engaging in these activities, the companies are not pressurised by laws or regulations but social norms and customs. Engagement does not cause any benefit but absence may have disadvantages. Bottom right quadrant is compliance, which consists of rules and laws which are mandated to comply. The upper two quadrants are called frontier. These activities are not mandated in any aspect. Top left quadrant, called strategic frontier, contains activities, which may have benefits for companies engaged in them so they can decide to compile

a cost-benefit analysis afterwards – if NPV is positive, it is worth to engage in them. Structural frontier consists of activities which do not have any benefit but companies may engage in them voluntary.

Due to activities of social dimension is performed by every company (compliance) and their impacts appear in their economic performance (choice, strategic frontier), there is no need for a separate measurement. According to Ng and Rezaee [2015], one of the three dimensions of ESG guidelines does not affect the cost of capital significantly. The social dimension impact is significant only together with the profitability. The different civil foundation of different countries may be the bottleneck of CPM matrix. The result of CPM matrix is proper only when the analysed companies operate in such a country where the civil foundation is identical or at least very similar. Another constraint is, since civil foundation is sector--specific [Martin 2002], that companies have to operate in the same sector.

These constraints are not too strict for an analysis framework because competitors operate in the same sector and civil foundations converge due to the law harmonization of countries (for example by trade treaties) and globalisation. That is why a German, a Polish and a Hungarian bus producer can easily be analysed within one framework.

KPI's must be picked after consideration of sectoral and corporate characteristics. When for example some main competitors are private firms, market capitalisation should not be picked as KPI of organisation size. Since literature does not suggest any KPI to measure organisation size [Škare and Golja 2012], each sector-specific KPI can be used (e.g. logarithm of total assets [Özçelik et al. 2014], or market capitalisation). In case of economic performance, Tsoutsoura [2004] claimed that ROA correlates stronger with CSP than ROE but it is not a general rule because there can be such sectors where this relation does not exist. Measuring environmental performance is the most problematic one. Isaksson and Steimle [2009] suggest using eco-efficiency.

Eco-efficiency means "delivery of competitively-priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life-cycle to a level at least in line with the earth's estimated carrying capacity. In short, it is concerned with creating more value with less impact" [WBCSD 2000 in Isaksson and Steimle 2009]. Thus it is the ratio of produced value and caused harm. In wide sense eco-efficiency means only maximising the ratio but in the narrow sense of the word, corporations have to decrease the volume of harm parallelly with stagnant volume or increasing value [von Hauff et al. 2005 in Isaksson and Steimle 2009]. Value per harm ratio (at least in wide sense) has a very important disadvantage since it consists of two figures, which may compensate each other. For example a bigger coal plant, simply due to its larger scale, produces much more

value with more harm, so its ratio will be smaller without any sustainability measures. This disadvantage attributes each dimension reduction method even if it is based on data analysis.

KPI's of CPM matrix are normalised in consideration to its relation to the best performer and competitor presented in the analysis in each dimension. If, for example, the bigger company's KPI is 1, then the half the size company's figure is 0.5. Based on KPI patterns, the market position of companies can be properly analysed in two quadrants of CPM matrix.

CPM matrix does not contain generally useful thresholds to establish if a company's performance is "good" or "bad". Making conclusions is the analyst's task who should know the market conditions well. The conclusion is fairly clear only if there is/are company(ies) in corners. The eight corners show companies that significantly under/overperform the market. They show quite obvious situations while other areas, where most corporations are expected, must be analysed. In this case the examination is based on a position that is related to the competitors.
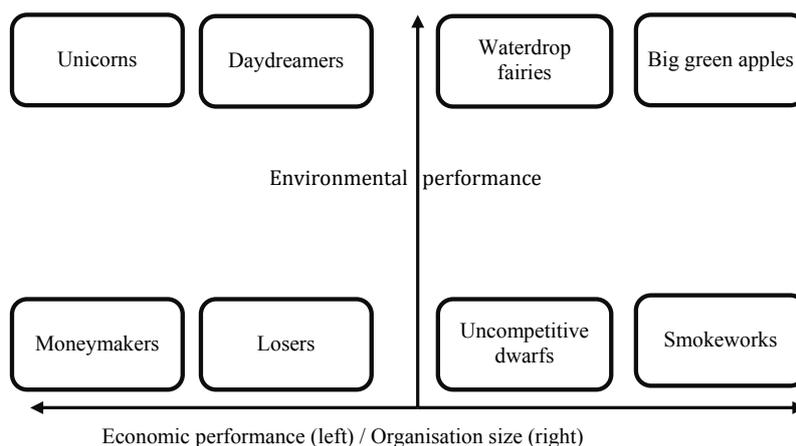

FIGURE. Structure of the CPM matrix

Source: Own elaboration.

The eight corners are as follows:
1) The big green apples have heard voice of times and have spent resources on reducing emissions which may lead to strategic advantages. If the *green* operation does not cause unreasonable losses, this position will be sustainable.
2) Smokeworks are large companies which do not deal with their emissions. Their activity is unsustainable since the legal environment and the social attitudes tend to get stricter thus they have to change as long as their operations are profitable. In other case they might easily get into crisis, which may lead to

insolvency. In the globalised economy it is no more a real option to outsource operations into third countries.

3) Uncompetitive dwarfs are environmentally underperforming small enterprises. If they do not have other competitive advantages that can compensate their losses, they may lose their market positions. According to corporate lifecycle, smokeworks may turn into dwarfs if their positions cannot be held.

4) Waterdrop fairies have excellent environmental performance. That means such technological competitive advantages, which may lead to significant growing opportunities in the future. These companies are very likely small but innovative thus they can be good target for big but *not so sustainable* companies' acquisitions or can grow organic into a big green apple. Nevertheless fairies are extremely risky because if their profitability is shallow, they cannot stay alive in the long run.

5) Losers underperform both economically and environmentally. In the case their size is relatively small, they can easily go bankrupt.

6) Daydreamers look like fairies because of their environmental performance and their growing potential. If a large company is a daydreamer, it should be analysed in order to find out reasons of relative economic underperformance.

7) Moneymakers make big profits with big environmental footprint. They are very likely big companies (i.e. smokeworks) but if it is not true, they should be analysed.

8) Unicorns are named because not many of them are expected to appear in the market. If a unicorn is a green apple (or at least relatively big), in the other quartile it is very likely that its competitive advantage is very strong in mid-term. Medium-sized unicorn enterprises are expected as aggressive firms, which want to be market leaders and they have a good chance to reach this position. Small enterprises may be a good target for acquisitions.

CPM matrix can also be used as a portfolio analysis tool if the same-sector constraint is altered. In this case the performance of each division of a company should be related to its biggest or most significant competitor. It is, however, a real danger that inappropriately chosen competitors may distort the results. The result of portfolio analysis shows the relative market performance of each division.

It is very important to analyse the data of as many years as available in order to identify market trends. If we have any available supplementary information such as corporate lifecycles or market trends, this matrix can be helpful in market analysis or making prognoses. We should also bear in mind that if companies' frequency in a small area of the matrix is high or if there is a relatively big and permanent lag between the most profitable and other companies.

CONCLUSION

The aim of this paper is to establish a fast and easy tool in order to measure companies' financial and non-financial performance. This tool, called CPM matrix, has three dimensions, organisation size, economic performance and environmental performance. CPM matrix can be used in case of large or medium sized enterprises and also for some NGO's or other organisations. CPM is based on sector-specific KPI of such organisations, which are related to their competitors. It is essential to choose KPI's and other organisations properly otherwise the result of the analysis can be plain vanilla. CPM matrix is not an oracle or a unique weapon but it may complement other analysing tools well.

Since there is no empirical experience using CPM matrix, its weaknesses are latent at the moment. In case CPM results are hard to explain, they are problematic to use or its results do not carry any additional information, it should be developed or if it is too difficult or vain, it should be completely rejected. If CPM is empirically tested and will be proved, it should be improved.

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