

Marketing Portfolio Management in a Spectrum of Marketing Assets Interaction to Maximize Holder's Utility

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crossref <http://dx.doi.org/10.5755/j01.ee.22.5.967>

A whole set of problems rises as Marketing portfolio stratum (cluster) forms: measuring the impact of marketing on business development, identifying the assets of marketing portfolio, structuring the interaction of marketing assets, selecting the quantitative models of mentioned interactions, generating the information required quantitative description by expert or other means. Finally, finding the optimal solution conditioned by marketing as complex media opportunities, what is usually done by formulating particularly complex task of stochastic programming and creating as often as not quite complex decision methods.

The article deals with the situation which can be described in the following way. It is assumed that in order to increase marketing contribution, a certain amount of capital is additionally distributed in between 4P elements seeking to achieve optimal additional increase of business results triggered by such investment. Herewith it is aimed to combine for investment the efforts with the possibility in order to spread the obtained increase realization between two segments of customers, with different profit possibilities. Additionally, one more problem appears – how to make the choice between the two creditors when it is possible to evaluate debt service imposed the present value probability distribution of possibilities to each of them.

The purpose of situation content is - to find such investment in the 4P mix, sales in A and B segments and loan between the creditor number 1 and 2 proportions which would allow to find the optimum solution, according to a certain composition of the possibility's effectiveness, reliability and subject risk. To find the solutions, Markowitz random field technique proposed by the authors was used.

Keywords: *adequate portfolio, efficient surface, marketing portfolio, marketing asset, marketing metrics, Markowitz random field.*

Introduction

The particular prime stage of portfolio concept's germs stratification can be considered H. Markowitz and co-authors development of Modern portfolio theory oriented to the investment portfolio as the media allowing to consider the interactions between investment assets and interactions with micro and macro factors, in order to create the maximum value, measured according to a certain profitability and riskness composition to the owners of the assets.

Following the investment portfolios stratum, the other strata, combining different assets and goals, also began to develop actively: product line portfolios, corporate strategies portfolios, company business portfolios, growth share portfolios, industry marketing portfolios, industrial purchasing portfolios, strategic resource portfolios, supplier-consumer relationship portfolios, marketing portfolios, etc.

Efficiency measurement principles of investment portfolios stratum of assets interaction had a significant impact on each of mentioned portfolios strata. Investment portfolio efficiency criteria are usually oriented towards the desired composition of profitability and riskness. It is true that a direct income generation is not typical for a number of strata portfolio of assets, however a possibility of the diptych efficiency-riskness remains.

Almost all strata have common features. It is the possibility when measuring both profitability and riskness average values are used: profitability average and average riskness, which is identified with the average standard deviation. And more, the best solution is searched on the generated curve of those parameters, which is usually identified as efficiency line.

In turn, in both the investment portfolios strata and in other strata are constantly examined, what should be the utility function of the portfolio owner (holder), to stimulate his interest of efficient portfolio management. One of the major shots constructing the utility function was the Sharpe ratio:

$$C = \frac{e_v - e_{r1}}{\text{Stdev}(e)} \quad (1)$$

where:

e_v – the average of portfolio profitability possibilities (distribution);

e_{r1} – the profitability of risk-free asset;

$\text{Stdev}(e)$ – the standard deviation of portfolio profitability possibilities.

We will start the conversance with marketing portfolio stratum from Ryals L. *et al.* (2007), which discussed quite in detail the origination of portfolio category in marketing, as well as specific educational issues of marketing portfolio opportunities. On the next page the issues based on Ryals L. *et al.* (2007) review will be presented, which is performed in our opinion very competently.

The research object is portfolio as a media allowing to analyse systemically the possibilities of marketing costs effectiveness increase.

The scientific problem, analysed in the article, is the necessity to develop the concept of marketing assets adequate portfolio and to propose the system of portfolio instruments application.

The pragmatical aim of the research is to apply the proposed model of marketing portfolio for thorough practical analysis of the situation, as well as in order to verify the accuracy of the presented model.

Marketing portfolio as a media for marketing assets interaction to optimize marketing efficiency measured with adequate metric

Portfolio (Asset 2011) literary means “a case for carrying loose papers” (from Latin, the imperative of *portare* “to carry” and the plural of *folium*, meaning “a sheet for writing upon”). There can be found a lot of expressions in literature where “portfolio” is a connective word, for example: a type of briefcase; portfolio (government), the post and responsibilities of a head of a government department; career portfolio, an organized presentation of an individual’s education, work samples, and skills; artist’s portfolio, a sample of an artist’s work or a case used to display artwork, photographs etc.; electronic portfolio, a collection of electronic documents; patent portfolio, a collection of patents owned by a single entity; product portfolio (business administration), separation of products by their market share and profits or growth rates portfolio, projects portfolio in project portfolio management; the portfolio of projects in an organization; Atari portfolio, a palmtop computer; *Portfolio.com*, a business magazine; minister without portfolio.

From about 1930 it has also come to mean a “collection of securities or responsibilities held by an individual”.

Further we will be in rely with investment portfolio definition as a “pool of different investments by which an investor bets to make a profit (or income) while aiming to preserve the invested (principal) amount. These investments are chosen generally on the basis of different risk-reward combinations: from “low risk, low yield” (gilt edged) to “high risk, high yield” (junk bonds) ones; or different types of income streams: steady but fixed, or variable but with a potential for growth” but also try to tend to concept that “investment portfolio is a media for investment assets interaction to optimize investment effect measured with adequate metric”.

When we talk about marketing assets, everything is more complicated, because marketing is a means for product or service to reach the consumer therefore marketing assets often accept the elementary marketing means – advertisement stands, message texts and other; marketing MIX – as the contact points of marketing and business; consumer – as final user of business results; marketing media – as means to unfold the marketing information (Grundey 2008; Dutu, Halmajan 2009; Munteanu 2009, Armonas *et al.* 2010; Ginevicius *et al.* 2010; Rutkauskas, Ginevicius 2011). That is why we would like to pay some attention to the concepts of marketing assets and marketing metrics.

Marketing assets. There are some basic definitions what asset means:

- A resource with economic value that an individual, corporation or country owns or controls with the expectation that it will provide future benefit (What... 2011).
- Something valuable that an entity owns, benefits from, or has use of, in generating income (Business dictionary 2011).
- In financial accounting, assets are economic resources. Anything tangible or intangible that is capable of being owned or controlled to produce value and that is held to have positive economic value is considered an asset (Asset 2011).

It is not easy to define what marketing assets are as marketing tactics are not black and white like cash and debt. Marketing tactics are very dependent on objectives, customer segments and expectations.

For a marketer, an asset is a tool or a platform, something you can use over and over without using it up. In fact, it’s something that gets better the more you invest.

Asset Allocation is the process of determining optimal allocations for the broad categories of assets that suit your investment time horizon and risk tolerance (Introduction... 2011). Asset Allocation: The art and science of how money gets divided up between different asset classes to lower risk and increase returns. This is also known as optimizing an investment portfolio, making it more efficient (All... 2011). Asset allocation allows more control over how much return you'll probably get in exchange for assuming more risk.

Marketing metrics. A metric is a measuring system that quantifies a trend, dynamic, or characteristic. In virtually all disciplines, practitioners use metrics to explain phenomena, diagnose causes, share findings, and project the results of future events. Throughout the worlds of science, business, and government, metrics encourage rigor and objectivity. They make it possible to compare observations across regions and time periods. They facilitate understanding and collaboration (Farris *et al.* 2006; Angelis *et al.* 2010; Kaziliunas 2010; Melnikas 2011; Pekarskiene, Susniene 2011).

As marketers progress in their careers, it becomes increasingly necessary to coordinate their plans with other functional areas (Pranulis 2008; Urbanskiene *et al.* 2008; Virvilaite 2008; Ejdy, Flejszman 2010; Daukseviute *et al.* 2011; Petuskiene, Glinskiene 2011). Sales forecasts, budgeting, and estimating returns from proposed marketing initiatives are often the focus of discussions between marketing and finance. For marketers with little exposure to basic finance metrics, a good starting point is to gain a deeper understanding of “rate of return”. “Return” is generally associated with profit, or at least positive cash flow. “Return” also implies that something has left-cash outflow (Farris *et al.* 2006). At a time when firms are cutting costs, it is essential for all functional disciplines within the firm to be financially accountable. This introduces the need for measurement, as without measurement it is impossible to be accountable. For firms to measure the return on marketing, it is essential for them to treat marketing expenditures as an investment (Seggie *et*

al. 2007). Powell (2002) defines return on marketing as “the revenue or margin generated by a marketing program divided by the cost of that program at a given risk level.” This definition is not necessarily a measure of brand loyalty or brand equity, or a measure of awareness or preference. Powell's proposal is an economic, or financial, measure. Return on marketing must be a financial metric because: (1) finance is the language of the company, (2) companies publicly report and are evaluated based on financial measures, (3) financial metrics are a way to compare alternative and otherwise no comparable actions across markets, products, and customers, (4) financial metrics provide accountability, (5) financial metrics promote organizational learning and cross functional teamwork because they provide a common language, and (6) financial metrics are the way to answer questions about the optimal marketing mix when one is dealing with quite distinct and different marketing activities and intermediate marketing outcomes (Stewart 2009).

Because of this complexity, marketing metrics often raise as many questions as they answer (Farris *et al.* 2006). Despite so many different marketing metrics, we need to concentrate and learn to pay attention to metrics related not only to marketing and finance, but also as Farris, Bendle, Pfeifer, and Reibstein (2006) concluded that marketing metrics are needed to give a complete picture of business's health. Financial metrics focus on money and periods of time, telling us how profits, cash, and assets are changing. However, we also need to understand what is happening with our customers, products, prices, channels, competitors, and brands.

All kinds of measurement in marketing deal with a wide range of variables and includes subjective matters that bring us to conclusion that the task to measure how costs effect on business outcomes requires expert analysis.

At the approach of marketing spend optimization. Considering the fact that marketing activity results are not the object of official accountability (Rust *et al.* 2001), as well as there are not enough analytical research to reveal how the influence of marketing creates shareholder value (Doyle 2000; Dobbs 2005; Lukas *et al.* 2005), the role of marketing assets goes to different changes of business income caused by the efforts of marketing activity therein the efforts of risk management. Therefore in literature continuously proceed the discussions – could Modern Portfolio Theory (MPT) be analysed in marketing (Cardozo *et al.* 1985) and especially for risk impact assessment.

Financial portfolios use MPT, which deals with the problems of risk and return, to make investment allocation decisions. The impact of MPT on business decision-making has been substantial; major capital spending projects, for example, are now routinely assessed for risk as well as return. This message has not yet been taken up by marketing. If marketing calculations take no account of risk, decisions about resources and how to prioritise marketing spending may be sub-optimal (Dhar, Glazer 2003).

So, can MPT be applied to marketing? Marketing spend allocation decisions can be viewed as portfolio investment decisions (Anderson 1981), whether the portfolio is considered in terms of customers or customer segments (Rust *et al.* 2001; Libai *et al.* 2002; Dhar, Glazer 2003),

products (Bordley 2003) or brands (Petromilli 2002). However, as Devinney *et al.* (1985) point out, unlike financial portfolios, investment marketing assets is expected to affect the returns from those assets. Thus, MPT would need modification before it could be applied to marketing (Cardozo *et al.* 1985).

Despite ongoing interest in the notion of marketing portfolios and the emergence of portfolio management tools such as the Boston Matrix, Directional Policy Matrix, and StratPort, risk and return has received relatively little consideration in the marketing literature. Previous discussion of the management of marketing portfolios has tended to focus either on profit maximisation (Larreche, Srinivasan 1981, 1982) or on customer lifetime value maximisation (Lemon *et al.* 2001; Galiniene, Butvilas 2010). An early exception is Kotler (1971), who uses variance of returns as a proxy for risk. However, MPT views risk as depending in large measure on the covariance of its component investments (Anderson 1981); in other words, diversification reduces portfolio risk. More recently, Srivastava and Reibstein (2004) consider risk in terms of volatility of cash flows, and Dhar and Glazer (2003) have revived the argument for using financial portfolio theory to address marketing portfolios, stressing the importance of understanding risk.

In the Ryals L. *et al.* (2007) the application of MPT to marketing through a model that takes into account risk and return is demonstrated. First, MPT is applied to marketing portfolio made up of customer segments. However, MPT does not apply literary to marketing portfolios since returns on financial portfolios are generally considered to be determined by the market and therefore independent of spend allocation, which is not the case in marketing. Therefore in Ryals L. *et al.* (2007) MPT is applied to a particular conditions in marketing, in which returns are affected by the allocation of marketing spend and allows to optimize risk and returns.

Straight forward application of modern portfolio theory

In this chapter we will analyse the earlier mentioned marketing portfolio (Ryals *et al.* 2007) where marketing segments are initiated as marketing assets and which will be approached as direct appliance of MPT.

Analysing the basics of MPT we should note that our conceived portfolio concept – portfolio is a media for the assets interaction to realize holders' interests measured with adequate metric and supply information for behaviour strategies – become universal to different portfolios.

Applying MPT to marketing the authors suggest that optimal marketing portfolios are those for which:

1. no other combination of customer segments will yield higher returns with the same level of risk; or
2. no other combination of customer segments will yield the same returns with lower risk.

Realistically, many combinations of customer segments portfolios are possible and their risk/return positions can be plotted. Those that satisfy the conditions of optimality will lie on what is known as the efficient frontier (Sharpe 1981).

MPT was developed in the 1950s throughout the early 1970s and was considered an important advance in the

mathematical modelling of finance. Nevertheless there remains the set of fundamental results up till now, which maintain their power and perfectly fit for the marketing. Of course since then, a lot of theoretical and practical criticism has been levelled against it.

The main features and possibilities of MPT could be understood throughout understanding the concept and main mathematical relations of MPT.

The fundamental concept behind MPT is that the assets in an investment portfolio should not be selected individually, each on their own merits. Rather, it is important to consider how each asset changes in price relative to how every other asset in the portfolio changes in price.

Investing is a tradeoff between risk and expected return. In general, assets with higher expected returns are riskier. For a given amount of risk, MPT describes how to select a portfolio with the highest possible expected return. Or, for a given expected return, MPT explains how to select a portfolio with the lowest possible risk (the targeted expected return cannot be more than the highest-returning available security, of course, unless negative holdings of assets are possible.)

MPT is therefore a form of diversification. Under certain assumptions and for specific quantitative definitions of risk and return, MPT explains how to find the best possible diversification strategy.

Figure 1 is an obvious scheme to solve this problem. Only in the case of two customer segments when in segment A the average of profitability possibilities is 0.08 and the standard deviation is 0.04, and in segment B analogically 0.14 and 0.08, we have here points A and B connecting, and in this case, the coincident possibilities sets of effective portfolio values. Any point in the set of portfolio values uniquely describes the diversification ratio, which is required to obtain this value. Thus, the optimal possibility is strongly related to the diversification ratio or portfolio structure.

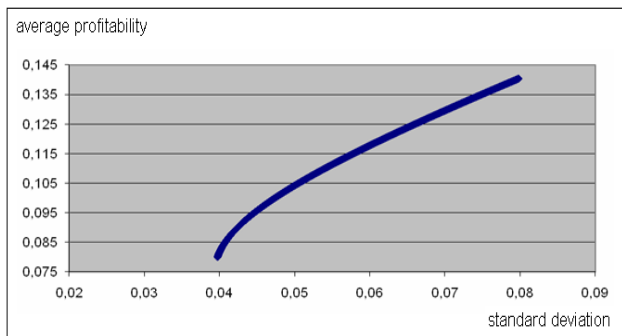


Figure 1. Profit possibilities map (portfolio value set and efficiency line) when sales can be distributed between two customer segments

Adequate portfolio as intention to commensurate and integrate profitability, reliability and risk

Function of fundamental modern (Markowitz) portfolio and its further amplifications (Fabozzi, Markowitz 2002; Reilly, Brown 2003) is an intention to commensurate investment profitability and risk objectively

and to give an opportunity to select a portfolio taking into consideration investor’s indifference curve. Efficiency line of portfolio values is fundamental mean of such choice and optimization (Sharpe 1964). However, evaluation of the aimed profitability’s reliability and along with general commensuration of profitability, risk, and reliability levels, the essence of which discloses analytically through designing an effective surface in three-dimensional – profitability, risk, reliability – space is of premium and natural importance for today’s investor. Efficient surface, which is formed as an intersection of survival functions of portfolio possibilities values and iso-guaranties, not only contributes for such a commensuration, but also becomes a set of constraints searching for the possibility of the highest profitability for an investor, in other words a criteria invoking his utility function, that depends on profitability, risk, and reliability. Here the word risk is distinguished in order to stress the principal difference between the riskness of investment possibilities’ and investor’s risk, which depends also on individual features of an investor.

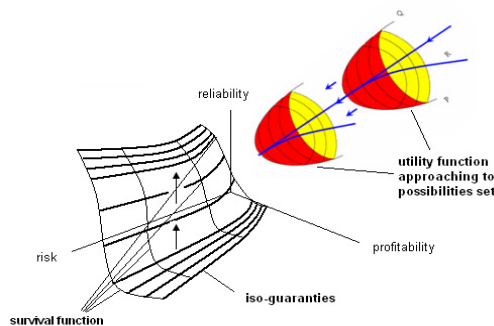


Figure 2. A scheme of efficient surface

Detailed presentation of adequate portfolio anatomy one could find in Rutkauskas, Stasytyte (2011a) and final picture is presented in Figure 2.

On the efficient surface, i.e. in three-dimensional space, the role of efficiency lines is assigned to iso-guaranties. Here it is possible to analyse the selection of utility possibilities measured in three parameters: profitability, reliability of profitability and risk with the help of three-dimensional utility function.

Practical application of utility function to the set of possibilities to find an optimal solution. The configurations of possibilities’ set (efficiency zone) and utility (objective) function and their inter-position, as well as analytical expression of our applied utility function points out that the magnitude of the possibility, as well as the increase of reliability of possibility both positively influence the growth of utility. However, the analytical expression of the utility function being used provides that the increase of risk negatively influences the growth of utility:

$$U = \exp\left(\frac{p}{r}\right) \times g \tag{2}$$

where:
U is the utility level of possibility,
p denotes profitability,
r is the risk and *g* – the guarantee.

Such specification of utility function and decision-making procedure is analytically meaningful, because it allows to solve a complex stochastic programming task with the help of imitative technologies and graphical decision-making methods.

Figure 3 exhibits a formed set of portfolio values – efficiency surface (*a* section), utilities function family (*b* section) and mutual position of efficient surface with utility surface under certain utility level (*c* section), and *d* section discloses that there is intersection of two continuous and convex to each other surfaces

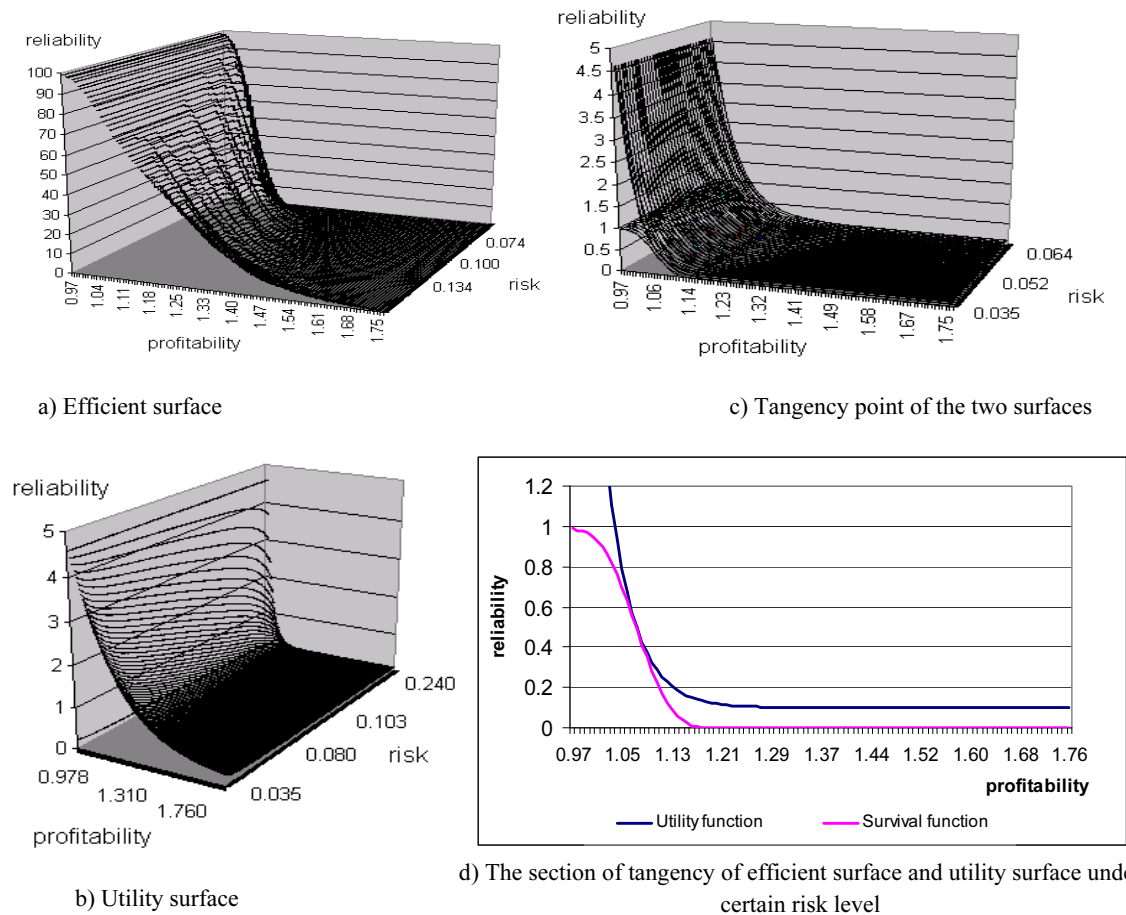


Figure 3. Anatomy of optimal portfolio investment decision

Indeed, when utility degree of utility function is decreasing, one of the sections of efficient surface, perpendicular to the abscissa axis *OX* and, passing through certain survival function, is first to touch the utility function itself, along with that touching one of iso-guarantees, while the respective sections of the higher or lower risk levels do not reach their survival functions. In Figure 3 is the case presented right in the beginning of the next chapter.

As it was already mentioned in the paper, the quantitatively formulated situation is perceived as a complex stochastic optimization problem. The authors have used Markowitz Random Field technique in order to solve it. The concept of Markowitz Random Field and its application possibilities are thoroughly described by the authors in (Rutkauskas, Stasytyte 2011b).

Marketing portfolio integrating different classes's marketing assets return possibilities to maximize holder's utility

In this chapter we will integrate the issues covered in chapters 3 and 4. In chapter 4, we analysed the issue how

to divide the marginal investment unit between the different elements of the marketing structure - P_1, P_2, P_3, P_4 that, designed total return amount would be the most effective. Based on conclusions provided by experts we use the estimates that an additional return from unitary investment can be described by Normal probability distributions: $N_1(1,032; 0,04)$, $N_2(1,11; 0,09)$, $N_3(1,17; 0,2)$, $N_4(1,22;0,28)$. Graphical view of problem solution is presented in Figure 3.

Note: the data used in paragraph 2 are taken from scorecard of real situation and the data here obtained in expert way with the description presented by R. Gineviecius *et al.* (2011).

Meanwhile, in chapter 3 the problem was solved how to distribute sales volume between A and B customers' segments hoping to get the most effective according to the return rate and risk return possibility, when the profitability possibility in segment A is described by the Normal distribution - $N_A(m = 8\%, \sigma = 4\%)$ and in segment B by Normal distribution - $N_B(m = 14\%, \sigma = 7\%)$.

Now we understand the task tackled in the presented situation in the following way: how to distribute invested marginal unit between the elements of marketing structure

and resulted additional product’s realization between segments A and B to distribute the way to get the maximum utility measured by the adequate utility function. Frequently used function (2) can be understood as improved Sharp ratio.

We have chosen an adequate portfolio optimization as decision methodology, which is described in detail in chapter 4 and which here can be explained as follows:

1. Four ways of investing - P_1, P_2, P_3, P_4 , and two received additional product’s realization segments A and B define eight “investment and realization” ways, covering all possibilities of situation:

$$P_1 \cap A; P_2 \cap A; P_3 \cap A; P_4 \cap A; P_1 \cap B; P_2 \cap B; P_3 \cap B; P_4 \cap B$$

The return possibilities of each invested unit for every mentioned way can be described with random variable – $N_i(a_i, \sigma_i) * N_j(a_j, \sigma_j), i = 1, 2, 3, 4; j = A, B$.

2. Selecting all additionally invested capital division proportions between “investment and realization” opportunities $W_k > 0; W_1 + W_2 + W_3 + W_4 + W_5 + W_6 + W_7 + W_8 = 1$ we obtain effective surface of additionally invested capital earned profitability, where each possibility is set out by return rate, the guarantee of this rate and the risk linked to such possibility.

3. According to the utility functions of the portfolio owner we determine, which possibility is the most effective and what configuration ensures such possibility.

$$W_i \geq 0; \sum_i^8 W_i = 1 \tag{3}$$

The graphical illustration of decision finding process is in Figure 4; in the right side section a we have the set of portfolio value possibilities, section b – the view were touches that set and utility and section c – selection of the optimal decision possibility.

Plus debt services expenses. In the above-described situation, it was accepted to invest a certain capital

(defined as the unit) in the 4P mix, borrowed from two banks B1 and B2, with quite adequately evaluable probability distributions of present values of debt service expenses. In this case, profitability distributions are described as follows:

$$N_{B_1}(a_1 = -0.05; \sigma = 0.005) \text{ and } N_{B_2}(a_2 = -0.06; \sigma = 0.01)$$

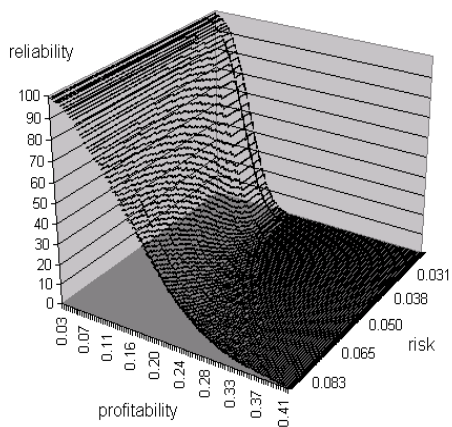
Thus, understanding that the debt service costs would be the factor which will reduce the final net profit of the project, we will seek to integrate the debt service the most efficiently, considering the possibilities to choose between two creditors and, of course, the profit possibilities bringing under their size, reliability and relevance. Decision anatomy and the solution itself are presented in Figure 4. right side is analogous to the left side for gross profit assessment.

Figures 3 and 4 present in full the optimization way. Figure 3 section d shows the point of maximum efficiency with coordinates: efficiency $e = 1.073$, reliability $g = 0.49$, riskness $r = 0.042$. This point is given by the following portfolio structure: $S_1=0.66; S_2=0.2; S_3=0.04; S_4=0.1$.

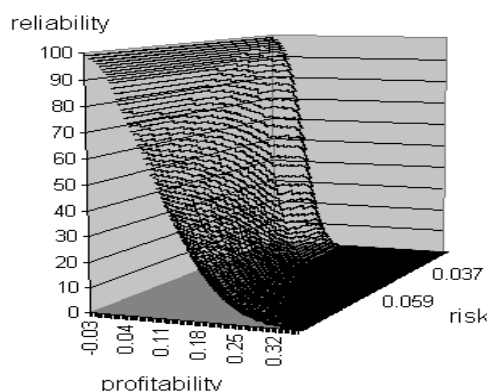
When we are looking for its total profit maximum, then two more elements of the portfolio structure attach to: N_1 and N_2 . Now efficiency $e = 0.104$, reliability $g = 0.53$, riskness $r = 0.032$ and the optimal point is given by the new structure: $S_1=0.2824; S_2=0.0664; S_3=0.2658; S_4=0.1329; S_5=0.0954; S_6=0.0224; S_7=0.0898; S_8=0.0449$.

Finally, when we combine the conditions of debt optimization between two creditors, the net profit is $e = 0.1059$, reliability $g = 0.46$, riskness $r = 0.035$ and the most valuable result is given by the final structure $S_1=0.6084; S_2=0; S_3=0; S_4=0.3357; S_5=0.0361; S_6=0; S_7=0; S_8=0.0199; S_9=0.944; S_{10}=0.056$.

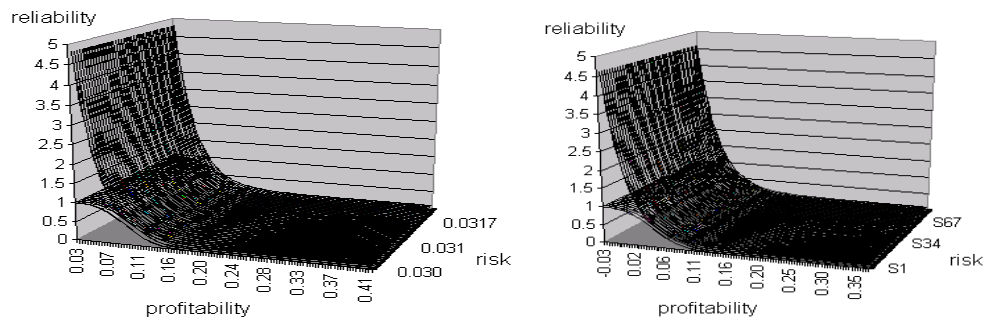
It should be clearly understood, that the next stage should not and cannot repeat the components of the first structure, since sales possibilities do not correlate with investment possibilities and so on.



a₁) Efficient surface

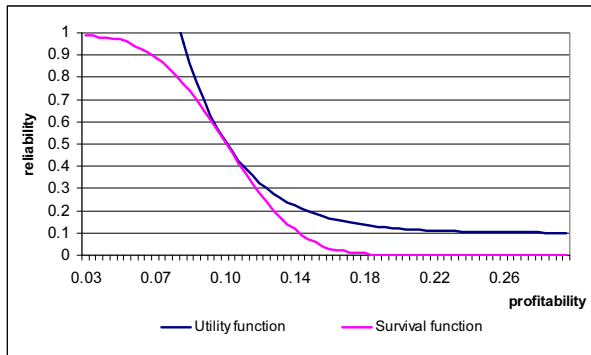


a₂) Efficient surface

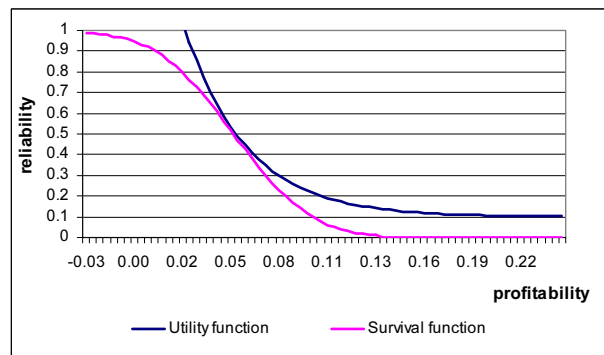


b₁) Tangency point of the two surfaces

b₂) Tangency point of the two surfaces



c₁) The section of tangency of efficient surface and utility surface under certain risk level



c₂) The section of tangency of efficient surface and utility surface under certain risk level

Figure 4. The decision search anatomy: the left side – the general profit extent of unitary investment; the right side – the absolute profit extent (clearing debt service expenses). Sections a₁ a₂ – efficient surface; b₁, b₂ – tangency point of efficient surface and utility surface; c₁, c₂ – the tangency of efficient surface and utility surface under the certain risk level.

Conclusions and suggestions

1. Marketing portfolio is a particularly effective tool for both structuring marketing assets, and highlighting the most effective moments of actives' interaction.
2. Integrating, i.e. combining the interaction of different marketing asset groups and considering the formation of the resources they need, portfolio management requires particularly complex technique of stochastic process management.

3. Full-rate quantitative description of marketing and business interactions requires to form in principle a new understanding of marketing assets as appropriate evaluation metrics of the impact those assets provide for business.
4. Experimental calculations have shown that Markowitz random field analytical possibilities are sufficient to understand the complex tasks of marketing portfolio management.

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Marketingo portfelis kaip marketingo kuriamos naudos valdymo priemonė

Santrauka

Nors Marketingo etiketė nusako, kad marketingas – tai kiekvienos veiklos sparnai, tačiau neretai diskutuojama, ar marketingas visavertiškai vykdo savo funkcijas ar efektyviai naudojami jam skirti ištekliai. Norint atsakyti į šiuos klausimus, reikėtų tai įvertinti. Tačiau diskusija prasideda ankščiau negu tai galima įvykdyti. Pagrindiniai abejonių motyvai: marketingas kaip veikla, puoselėjanti gaminių ir paslaugų sąnaudų efektyvumą, pati nėra apskaitos objektas, ir dėl to sunku įvertinti marketingo efektą veiklai, kuriai jis naudojamas ir pačiam marketingui panaudotų sąnaudų efektyvumą. Taip pat nepakanka analitinių, ypač kiekybinių, tyrimų, leidžiančių bent eksperimentiškai įvertinti šį efektą ir efektyvumą. Tačiau didžiausias trūkumas yra todėl, kad marketingas kaip veiksmų ir priemonių visuma neturi tyrimo sistemiškumo koncepto ir adekvačios kiekybinio pažinimo metodikos.

Straipsnyje pateiktas portfelis kaip marketingo priemonė ir jį naudojant tarpusavyje susieti investicijų optimalaus paskirstymo tarp tam tikrų marketingo aktyvų, pardavimų paskirstymo tarp pavienių pirkėjų segmentų, kapitalo pritraukimo iš skirtingų kreditinių ir rinkos dalies tarp pirkėjų segmentų optimizavimo principai.

Portfelis straipsnyje suprantamas kaip medija, kurioje galima vertinti minėto efekto ir panaudotų marketingui išteklių efektyvumą pirmiausia akcentuojant tai, kad kiekviena efekto galimybė yra nustatoma trijų indikatorių – galimybės dydžiu, to dydžio patikimumu (garantija) ir subjekto, susieto su pastangomis, tikėtinos netekties, t. y. Rizikos, galimybė.

Marketingo aktyvais straipsnyje yra pasirinkti agreguoti marketingo priemonių kompleksai (pvz., 4P) ir jų komponentai. Tai atitinka ir bendrąją investicinio aktyvo sąvoką.

Kiekybinė informacija, kuri yra reikalinga priklausomybėms tarp veiksmų ir rezultatų nustatyti, buvo formuojama iš statistinių duomenų ar kuriami pasitelkiant ekspertus.

Gauti įvertinimus apie pardavimų pelningumo pokyčius atskiruose pirkėjų segmentuose ar pelno pokyčius didinant jau turimą segmentų dalį – tai užduotys, kurios išsprendžiamos ir naudojant stebimus duomenis, tačiau neapsieita be ekspertinio vertinimo bandant nustatyti kiekybines priklausomybes tarp papildomų investicijų į agreguotą aktyvą ir gautino produkto ar paslaugos pokyčio. Ekspertiniai vertinimai, generuojant reikiamą informaciją sprendimams priimti, tampa neatsiejama ne tik marketingo, bet ir daugelio sistemų sudedamąja dalimi.

Straipsnyje nagrinėjama situacija, kai skolintas (iš dviejų kreditorių) kapitalas investuojamas į marketingo aktyvus, ieškant optimalaus padalijimo ir tarp tam tikrų aktyvų, ir tarp pardavimo santykio atskiruose pirkėjų segmentuose, ir atsižvelgiant į rinkos dalies didinimą.

Finansiškai nagrinėjama problema galima suformuoti taip: investuojame skolintą iš dviejų skirtingomis sąlygomis skolinančių kreditorių kapitalą į marketingo aktyvus, siekdami padidinti verslo ribinį efektyvumą. Padidėjimo galimybes vertiname šiais būdais:

- visi rodikliai įeinantys į vertinimą priimami kaip stochastiniai dydžiai;
- gautas optimalus sprendinys – tai galimybė, kuri nusakoma trimis parametrais: gamybos pelningumo dydžiu, jo patikimumu ir investuotojo rizika. Esant minimaliai galimybei surandama ir portfelio struktūra, teikianti šią galimybę;
- gautino grynojo pelno iš skolinto kapitalo investicijų galimybes skaičiuojame sujungiant vertinimus, kaip turi būti dalijama investicija tarp tam tikrų aktyvų, kaip gautos ribinės pardavimų galimybės turi būti paskirstytos tarp dviejų pirkėjo segmentų, kaip turi būti panaudota rinkos dalies efekto, padidėjus rinkos daliai, galimybė.

Raktažodžiai: *adekvatusis portfelis, efektyvusis paviršius, marketingo portfelis, marketingo aktyvas, marketingo metrikos, Markowitzo atsitiktinis laukas.*

The article has been reviewed.

Received in June, 2011; accepted in December, 2011.