BASEL 2 AS A DRIVER OF CHANGES IN THE COMMERCIAL BANK STRATEGIC MANAGEMENT

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Abstract

Since January 1st, 2008 a new regulatory framework Basel 2 has been valid for Slovak banking sector. The article focuses on brief genesis and description of a new regulation (including recent amendments) and results of analysis of the status of its implementation in Slovakia. Based on these results and experience that Basel 2 is so far in the stage of implementation as a „risk management/ finance project" in many commercial banks author addresses importance to start to implement a new framework comprehensively and particularly in the commercial bank strategic management. Key driver of changes which must be implemented is introduction of culture of economic capital concept and subsequently setting up strategic targets based on risk adjusted performance measurements both on the level of the bank and business units, too. Following that key/significant changes(coming mainly from Pillar 2) in processes are addressed at each phase (except implementation) of the strategic management model based on resource theory which come out from a new regulation.

Introduction

Banking industry plays a crucial role in an economy of each country. Each country has high interest in a proper functioning of this sector of national economy and due to that its regulation and financial stability assurance have belonged to key tasks for regulators both on local and international levels for the decades. Roles of regulators is strengthen and more visible especially during the turbulent times – banking and financial crisis. During the last 30 years Caprio and Klingebiel (1997) identified 112 systematic banking crises in 93 countries and 51 borderline crises in 46 countries since the late 1970s. And of course they have not counted systematic banking crises caused by current financial and economic crisis which has started in the mid of 2007 in the U.S., peaked at the second half of 2008 in Europe and has not finished yet. In July 4th, 2009 The New

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York Times published analytical article in which presented that the 79 banks failed in the US over the last 2 years (some of them were founded in years 2003,2004,2005 and even in 2006) and 371 still – operating banks are on “watch list” which means that story is not over. The estimated cost to Federal Deposit Insurance Corporation over the last 18 months is 7.7 billion US dollars and growing. Let us raise a few questions related to this issue: a/What about regulators? Regulators now acknowledge that they saw the warning signs during the most recent boom, but failed to take aggressive action. „We went through this golden age of banking and I just think that everybody lost their compass“ said Sheila C. Bair, the chairwoman of the Federal Deposit Insurance Corporation. b/ Was it moral hazard which significantly contributed to these damages? Partly yes, as it is evidence from the above referred article in The New York Times.

c/ What about better readiness for market discipline – disclosure in U.S. banks in comparison to Europe Banks which was described by Dimitris N. Chorafas in After Basel II – Assuring compliance and smoothing the rough edges (2005, p. 64) as outcome of his research as follows: “ According to certain statistics, the proportion of listed US banks producing information on their problem loans is more than twice as high as that in the Eurozone. Also, other public information for assessing banks´ asset quality is still fairly limited in the European Union, not to mention the availability of information from unlisted financial institutions. Yet another significant gap between financial institution in the US and Europe, which will need to be closed, concerns technology. Other things being equal, US banks are much more advanced in a technological sense than most of their European counterparts, including real-time systems, the development and use of mathematical models and the sense of experimentation form analytics to simulation. In the author´s experience: . a persistence in using low technology is a sign of mismanagement; and . the less technologically advanced financial institutions find it difficult to disclose more than core information, even if they want to.” In spite of this weaker position of European banks than American ones as far as their ability to disclose required information in accordance with Pillar 3 Basel 2 is there are evidences that European banking system is not doing much worse than U.S. during this crisis. One of these indirect evidences is in the Global Finance Journal which selected “The World´s 50 Safest Banks 2009”. Majority of 50 the safest banks (27) comes from Europe. Nevertheless, to stabilize financial system during this crisis meant high costs – in addition to bailout plans and different stimulus programs launched by government recapitalization of financial institutions cost more than 400 bn US dollars.[94]

[94] Interactive feature: State to the rescue . In: www.ft.com. January 28, 2009.

All of these evidences just confirmed necessity and importance of development of efficient regulation in banking system which would be beneficial for all market participants but also its full and efficient implementation into strategic and daily day management on the level of banks.

1. Current Banking Regulations: Development and Key Principles

Common basis of all banking regulations is to find adequate level of capital and correct mechanism of its management which, in general saying, would avoid banking crisis. Capital can be seen as a cushion which should absorb all unexpected losses as an outcome of risks which commercial banks are taking. The goal of regulators is to act effectively in setting size of this cushion according to the riskiness of each bank´s asset. To fulfill this goal is a very complicated process. Due to that in 1930 the Bank for International Settlements (BIS) has been established in the aftermath of the Great Depression.[95] The first bank capital accord - predecessor/ basis of current regulation has been launched in 1988 under the name New Basel Capital Accord (**Basel 1**). Originally in this regulation capital requirement was set to cover only **bank credit risk** and its amount was simply calculated using risk-weighting structure based on type of borrower (obligor) and not directly on the risk of losses. This regulation was amended in 1996 – extended to cover also **market risk**.[96] Basel I has been heavily criticized for being too crude, opening the door to regulatory arbitrage and of course related to the “credit crunch” of the early 1990s[97]. Due to that the reforming process of Basel 1 started and has been finalized in 2006 and new regulation has been launched under the name Basel 2.[98]

Basel 2 (B2) regulation is often described as an architecture resting on 3 pillars: **Pillar 1 - Minimum capital requirements, Pillar 2 - Supervisory review and Pillar 3 – Market discipline.**

While Basel 1 was focused only on minimum capital requirements Basel 2 has been extended on area of strengthen role of supervisors in relation to the bank risk management and duties of banks to provide sufficient information to the market.

Pillar 1 (minimum capital requirements) is focused on a new approaches for capital ratio calculation. It covers three risks: credit risk, market risk and operational risk. While credit and

[95] BIS consists of 50 members /central banks and is located in Basel, Switzerland.

[96] As the Committee is a consultative body its agreements and recommendations have no immediate executive power and have to be ratified by national/European Union authorities and as a legally binding acts issued through EU Directives translated into national regulations.

[97] See e.g. in Rochet,J.Ch.,1998, p. 258,259

[98] See Directives 2006/48/EC and 2006/49/EC and in the following key Slovak regulations: Act no 483/2001 Coll. On Banks, Decree of the NBS no 4/2007 on banks´ own funds of financing and banks´ capital requirements with the amendment Decree of the NBS no 17/2008; Decree of the NBS no. 1/2007 on disclosures by banks and branches of foreign banks; Decree of the NBS no 15/2006 on risks and risk management systems (it is amendment to the Decree of the NBS no 12/2004).

market risk have been already part of regulation in Basel 1, **operational risk is a new** in Basel 2. In **credit risk**[99] aim of the reform was focus on “old” 8% capital adequacy requirement which has to become less or more stringent according to the customers´ riskiness measured by external or internal ratings.

There are famous two approaches for minimum capital requirements calculation: standardized approach and approach based on internal rating (IRB). Second one is divided into two groups: a/foundation IRB (FIRB) and advanced IRB (AIRB). Basis of this approach is calculation of key risk parameters: PD (probability of default), LGD (loss given default), EAD (exposure in default), M (maturity). While in FIRB internal bank models are used only for PD calculation, in AIRB all 4 parameters are subject to internal modeling and calculation. As Basel 2 intention also is to significantly improve risk management (models, processes, tools) aim is to motivate banks to develop own models for risk parameters calculation it means to implement AIRB approach as soon as possible. Unfortunately, due to current crisis it might be disadvantage from level of required capital for covering of credit risk for those banks that have already implemented AIRB approach (maybe also for FIRB approach) in comparison to those which operate under standardized approach. It is due to increasing probability of default and loss given default of clients. B2 also introduced differentiation of risks for some specific assets where the old weights were not adequate e.g. for project finance, securitization products etc. As we will see later on level of this differentiation appeared not sufficient during current crisis and recommendation for improvement were published by Basel Committee in the mid of this year.

In **market risk**[100] no substantial changes in capital requirements calculation occurred in comparison to 1996 amendment.

Capital requirements calculation for **operational risk** [101]as we already mentioned is a new one. Due to complexity of operational risk itself three steps and subsequently applied approaches within them have been designed: basic approach, standardized approach and advanced measurement approach (AMA). Logic behind of implementation of these approaches is similar as for credit risk: bank should be motivated to prepare itself to implement AMA approach based on own operational risk modeling which should mean lower capital requirements than if the two lower level approaches are applied.

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[99] Credit risk is defined as the risk that customers default in fulfillment of their obligations to service debt it means to repay debt on time and at a due level.
[100] Market risk is the risk of losses arising from movements in market prices.
[101] Operational risk is defined as the risk of losses resulting from inadequate or failed internal processes, people, systems or from external events. This risk includes legal risk but excludes strategic and reputational risks.

Pillar 2 (Supervisory review process - SRP) gives broader powers to regulators. The underlying aim of the Pillar 2 processes is to enhance the link between an institution's risk profile, its risk management and risk mitigation systems, and its capital.[102]

On the level of bank assessment of needed capital is called Internal Capital Assessment Process **(ICAAP**). This process is subject to Supervisory review process (SRP) which is run in accordance with "Supervisory review and evaluation process**"(SREP)** rules. ICAAP should focus on:

- Adequately identify, measure, aggregate and monitor the **institution's risks**. Banks are required to correctly assess all material risks which are exposed to: a/ in addition to the risks of Pillar 1, in pillar 2 those part of risks which are not covered by capital calculated in pillar 1 are included in pillar 2 (e.g. market risk of banking book if in pillar 1 market risk for trading book is only included). b/ business risk, strategic risk, liquidity risk, financial investment risk, real estate risk, reputational risk etc.[103]
- Hold adequate **internal capital** in relation to the institution's risk profile. While regulatory capital is a key for Pillar 1, in Pillar 2 capital categories like **economic and internal** [104]are

[102] Four internationally agreed principles underpin supervisory review:

- Institutions should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.
- Supervisors should review and evaluate institutions' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with own funds requirements. Supervisors should take supervisory action if they are not satisfied with the result of this process.
- Supervisors should expect institutions to operate above the minimum own funds requirements and should have the ability to require them to hold capital in excess of the minimum.
- Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular institution and should require rapid remedial action if capital is not maintained or restored.

[103] **Business risk** is define as loss which can occur due to adverse, unexpected changes in business volume and/or margins that are not due to credit, market and operational risks; **Strategic risk** - the risk of suffering potential losses due to decisions or radical changes in the business environment, improper implementation of decisions, lack of responsiveness to changes in the business environment, etc.; **Liquidity risk** – the risk that the bank may find itself unable to fulfill its payment obligations whether expected or unexpected without jeopardizing its day-to-day operations or its financial condition and may arise as a result of various internal or external factors…; **Financial investment risk** stems from equity holdings in companies (which are not part of the bank group) and not included in the trading book; **Real estate risk** is defined as potential losses in market value resulting from market fluctuations of the bank´s own real estate portfolio (usually own buildings not collateral); **Reputational risk** is current or prospective risk to earning and capital arising from adverse perception of the image of the financial institution on the part of customers, counterparties, shareholders, investors or regulators.

[104] **Economic capital**

- capital to cover potential unexpected risks, which is allocated for 1 year and is expected to yield a required return with required level of confidence.
- basis for calculation are the corresponding VaR-figures
- covers all risk types included in calculation of minimum capital requirements (market-, credit- and operational risk), as well as those not accounted for (e.g. interest rate risk in banking book, real estate risk, business risk, financial investment risk etc.)

Internal capital is defined **as total capital need for coverage of risks,** the bank is exposed to at execution of its activity**.** It is expressed as the **summary of aggregated economic capital adjusted by diversification effect and capital cushion.** Capital cushion might be used to cover such risks as cyclicality, model risk etc.

crucial. In addition to that level of **available own funds**[105] which are defined **as sources** for coverage of all risks are important, too.

- Use sound risk **management systems and develop them** further. This part should focus on "design" and implementation of relevant risk management processes and adequate organizational structure which ensure risk relevant corporate governance.

The result of dialog between bank and regulator used to be conclusion "yes, not, subject to…" stated by supervisor and usually is to be reviewed on annual basis.

While Pillar 1 implementation is easily standardized at each banking institution Pillar 2 is unique as each bank´ risk profile, products, processes are unique and no significant standardizations are possible.

Pillar 3 (Market discipline) in accordance with this part of regulation banks have to develop a set of disclosure requirements which will allow market participants to assess key pieces of information on the scope of application, capital, risk exposures, risk assessment processes, and hence the capital adequacy. Based on that market participants should be able to understand and subsequently judge relevance of the bank risk management and try to "discipline" risky banks by asking higher spreads for deposits or even refusing new funding these banks. Banks must disclose information on semi-annual or quarterly basis.

Even before financial crisis started Basel 2 has already been extensively criticized for being too complex; not to be enough practical in its implementation (see e.g. Rochet criticism of Basel 2 (2008, p.258)); for leading pro-cyclical behavior of the bank during downturned period, and for the other weaknesses of this regulation that appeared during current financial crisis. Due to that Basel Committee run a few initiatives results of which is enhancements to the Basel II framework and revision of some parts of market risk [106] published in July2009. In September 2009 Basel Committee published two documents at which presented additional measures as a reaction on financial crisis: those measures a/ should result over time in higher capital and liquidity requirements and less leverage in the banking system, less pro- cyclicality, greater banking sector resilience to stress and strong incentives to ensure that compensation practices are properly aligned

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[105] Available own funds, or available financial resources used to be also defined as the economic value of the bank´s equity.

[106] See: http://www.bis.org/publ/bcbs157.htm

with long-term performance, prudent risk-taking and b/ should improve cross-border banking regulation via recommendations coming from Cross-border Bank Resolution Group[107].

Brief description of the new regulatory framework and issues which appeared during period of financial crisis confirmed again that to design right regulatory framework is difficult and continuous process. However, on the other side practical experiences has proved importance of full and correct implementation of the regulatory framework in commercial bank if it should operate efficiently.

2. Basel 2 and Status of its Implementation at the Slovak Banking Sector

Since January 1st, 2008 Basel 2 regulatory framework started to be valid also for the Slovak Banking Sector. The first information on level of its implementation has been analyzed based on 2008 Annual Reports and 2008 and 2009 disclosed information semiannually and quarterly in line with Pillar 3 requirements.[108]

The results of this analysis are following:

a/ Slovak banks successfully managed implementation of Pillar 1 and Pillar 3 of Basel 2 but the different story is with Pillar 2 implementation:

b/ none of the key Slovak banks has published its level of economic capital; all banks publicly presented results of capital management based on regulatory approach for Pillar 1 risks and logically following that

c/ none of the key Slovak banks has published performance results based on risk adjusted performance measurements approaches; only traditional performance indicators ROE and ROA have been published.

d/ the only one branch of the foreign bank has published mother company consolidated results which used risk adjusted performance measurements (RAROC) and declared using of economic capital and its allocation to single business lines,

e/ In the part of their reports devoted to risk management systems and Basel 2 implementation analyzed Slovak banks also referred to their project activities in the area of Pillar 2

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[107] On the Sept. 7th, 2009 the Central Bank Governors and Heads of Supervision reached agreement on the key measures to strengthen the regulation of the banking sector as a reaction on financial crisis (see: http://www.bis.org/press/p090907.htm) and improvement of the cross-border banking regulations see http://www.bis.org/publ/bcbs162.htm.

[108] The Slovak Banking Sector consists of 24 banks (as of June 30th, 2009). Ten major banks have been subject of analysis. Their total assets represent approx. 89% of market share.

and their work-in progress on economic capital calculation and stress testing. This information allow us to assume that banks are at some stage of “exercise” as far as introduction of concept of economic capital is but they are definitely coping with many challenges as far as its comprehensive implementation is. Local banks also declared their close relationships with mother companies as far as implementation of the project Pillar 2 is.

In spite of fact that regulatory framework for Pillar 2 has been sufficiently created and published in documents referred at previous parts of this paper and local regulator (National bank of Slovakia) is highly demanding as far as its implementation is there is a clear evidence that : a/ room for improvement as far as Pillar 2 implementation is and based on that b/ change of strategic management processes in commercial banks will ask for longer time period and will have to overcome many challenges which the most advanced financial institutions (including also some mother companies of local banks) in the world has already cope with a decade before.

3. Key Changes in the Commercial Bank Strategic Management Processes

As it is clear from the previous parts Basel 2 is a very comprehensive and complex regulation and its correct and efficient implementation in the commercial bank to use opportunities in favor of all stakeholders asks for: a/ leaving current common practice in many commercial banks : top management understanding of Basel 2 as a “project” which has to be implemented due to regulatory requirements and it is mainly issue and responsibility of CRO/CFO [109] areas b/ including impact and implementation of Basel 2 in the framework of strategic management model and its main processes with the aim to identify key changes which has to be done in the the commercial bank.

Key driver of changes in the commercial bank strategic management is introduction **of culture of economic capital concept** and subsequently **setting up strategic targets based on risk adjusted performance measurements both on the level of the bank and business units, too.**

As available capital is a “scarce” resource and correct implementation of the above mentioned concept asks for the other bank´s resources, too the application of general model of the

[109] CRO- Chief Risk Officer, CFO-Chief Financial Officer.

"resource based theory of strategy"[110] will be appropriate. We will focus on identification of key strategic decision processes which have to be considered in the individual phases of strategic management process (but implementation) of the commercial bank and are primarily related to Pillar 2 implementation.[111]

3.1. Vision, Mission, Strategic goals

The key strategic changes which come from Basel 2 implementation are related to formulation of **risk appetite of the bank.** Top management together with shareholders has to agree on clear strategic targets in the following areas:

a/ capital targets which take into consideration **both economic capital** measures and **regulatory requirements**. They must be set up in such way that maintains an overall balance between available capital and bank risk profile:

aa/ target credit/debt rating/confidence level which bank/group wants to keep/achieve and is important input for level of economic capital calculation. If bank wants to achieve higher rating it means is more risk averse and expects higher credibility in the market but on the other side has to keep also higher level of equity capital.[112]

ab/ relation between minimum **regulatory required capital (RC)[113], Tier 1 capital and economic capital**. This is important strategic decision in case if calculated economic capital by internal models is lower than minimum regulatory required capital. In this case both top management and shareholders have to decide whether they want to accept regulatory and reputational risks coming from this situation in spite of fact that shareholders would be ready to promptly react in a case if losses higher than economic capital would be necessary to recover. Usually this risk is too high therefore generally is valid that decision in this case is that internal capital is higher than regulatory capital[114]. Therefore banks usually set up as a target level of **Core Tier 1 ratio.**

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[110] See in: Papula,J: Vývoj teórie strategického manažmentu pod vplyvom meniaceho sa prostredia, Bratislava: Kartprint 2004, p. 223-227.

[111] In this article we just want to address key processes which has to be introduced in the strategic management process as part of the Basel 2 implementation, we will not go through the whole process and each phase, and we also assume that in analyzed phases there are the other processes which are traditionally run and we assume that will be applied in full scope during cycle of the strategic management model application .

[112] Many internationally recognized banks used to have as a target Aa3 Moody´s rating class which means one year probability of insolvency 0,03% and confidence level 99,97%.

[113] In our understanding RC is minimum capital requirements calculated in accordance Pillar 1 (8%).

[114] See more on this topic in reference 18, p.667-670.

ac/ risk taking capacity – is ratio which takes into consideration bank´s available own funds to internal capital ratio. This ratio is discussed in part 3.3.

b/strategic performance and sustainable growth goals for the bank as whole and for business units based on a value creation principle: traditional targets set as performance measurements based on **ROE** (Return on Equity) are replaced by **RAROC (risk adjusted return on capital**) calculated as: Risk adjusted income /Economic Capital at risk[115]. This is a typical indicator for setting up targets in the banking industry. Critical strategic decision for setting these goals is also **cost of equity** which depends on market conditions and has to be agreed with shareholders. Banks also use **EVA** (economic value added) for deriving targets for sustainable growth.

c/ **Liquidity targets –** in addition to capital targets liquidity targets are also very important parts of strategic decisions for recognition and acceptation of the bank by market. Bank should set up targets for short-term liquidity (e.g. cash horizon for short-term/ in days) and medium term targets (e.g. loans/deposits ratio above 1 year of maturity etc.).

d/ **Reputational/Operational/ Strategic risks targets** – it is important for the bank to set up also targets for areas which are not quantified by economic capital (non-capitalized risks) but could create severe damages and losses for the bank due to neglecting them (e.g. absolute limit on operational losses per each year of strategic period).

However, to correctly set up targets means to have in disposal outcomes of relevant analysis, too.

3.2. Analysis of Internal Resources and their Capability to Create Competitive Advantage

In this phase it is crucial to extend traditional analysis of internal resources (applying relevant methods like SWOT etc.) by results which come from risk management experts and:

a/ are related to implementation plan/roll-out plan for introduction of advance methods for capital calculation in Pillar 1 (FIRB, AIRB for credit risk and AMA for operational risk). Analysis

[115] Risk adjusted income=Net interest income + Net fees and Commision – Direct Costs – Indirect Costs – Expected Losses(Provisions) for key risks (Credit risk, Market risk, Operational Risk etc). + Return of Required Economic Capital; Economic capital (see also definition in footnotes 11) in practical calculation means covering of unexpected losses by calculation of economic capital which is required to cover worst-case lost due to market, credit and operational risks multiplied by credit risk factor. As concept of economic capital is a new one there are a numerous literature dealing with different issues related to measurement and application both economic capital and risk adjusted performance measurements. See e.g. literature.: 7,8,10.

is important to be taken into consideration as it influences future bank capital requirements and therefore has to be involved in strategic decision process.

b/ come from ICAAP[116] run by responsible units (usually Risk management and Finance). Following our focus let´s have a look more in detail on the key processes: risk identification and risk profile assessment.

ba/. **Risk identification** –results of this analysis is to identify both on the level of bank and strategic business units all material risks[117]/risk types (not only credit, market and operational risks which belong to Pillar 1) which can influence bank. Bank has to apply a proper assessment methodology based on which either in quantitative (applying quantitative risk indicators/ratio observed in the past) or qualitative ways assesses level of all potential risks and decides whether their impact is material or immaterial for its performance. Those risks which are identified as material ones should be categorized as high, medium and low to correctly decide the level of required capital which is needed for covering of unexpected losses. The matrix of the commercial bank material risk mapping example see in the following table:

Table 1: Risk types

				Other Risk Types					
Bank/Business Unit	***Credit Risk***	***Market Risk***	***Operational Risk***	***Business Risk***	***Real Estate Risk***	***Financial Investment Risk***	***Liquidity Risk***	***Strategic Risk***	***Reputational Risk***
Bank	*x*	*X*	*x*	*x*	*x*	*x*	*x*	*x*	*x*
Corporate	*x*		*x*	*x*				*x*	*x*
Retail	*x*		*x*	*x*				*x*	*x*
Private	*x*		*x*	*x*				*x*	*x*
Treasury	*x*	*X*	*x*	*x*			*x*	*x*	*x*

bb/ Risk profile assessment

Risk profile means degree at which individual risk types are significant for the bank. It can be calculated as a ratio (%) of economic capital required by relevant risk type and bank aggregated level of internal capital.[118]

[116] More details see e.g.Guidelines on Bank-Wide Risk Management: Internal Capital Adequacy Assessment Process.OeNB; http://www.oenb.at; http://www.fma.gv.at.

[117] Review and definition of the key bank risks see in footnote 12.

[118] Risk profile for commercial bank is usually driven by credit risk (cca 60-70%) , the other risks might participate from 5 – 15%.

In this phase the following main strategic decisions have to be taken by top management and shareholders:

bba/ **how individual risk types should be treated** : for risk types which are quantitatively measured (usually credit risk, market risk, operational risk, business risk, real estate risk, financial investment risks) economic capital is calculated with regard to decided level of confidence[119]. Risk types which are not quantifiable by bank (due to shortage of data, tools, qualified personnel or risk itself etc.) are usually covered by "capital cushion" and are subject to setting rules and limits through which are managed (e.g. liquidity risk, reputational risk, strategic risk).

bbb/ **how inter-risk correlation/ diversification should be treated both on the level of bank and business units.[120]** This is one very important strategic decision which top management must be involved in as it influences over/under estimation of economic capital which bank/ business unit needs. This decision is especially sensitive for motivation of business units on one side but for the bank capital "security" on the other side. This decision is heavily influenced by data history which is general problem for banks in Central and Eastern Europe.

bbc/ **level of capital cushion** also belong to the important strategic decisions as it is also related to risk averse on one side and efficiency of capital management on the other side. Capital cushion is primarily used to mitigate issue of economic capital cyclicality - to smooth its cyclical effects and to cover risk related to potential modeling errors. It can also be used to cover some non quantifiable risks.

c/ **analysis of the other resources which are related to development and implementation of internal models and change relevant processes.** This analysis has a few dimensions: time framework within which bank is able to do implementation taking into consideration human resources (quantity and quality point of view) or external consultancy support; technical capacity (including IT systems) investments and costs which bank can afford to spent in relation to expected benefits etc.

All of these "new aspects" related to risk management must be included into the whole internal analysis with the goal to assess capability of these resources to contribute to the competitive advantage of the bank in relevant time period.

[119] See in footnote 12.

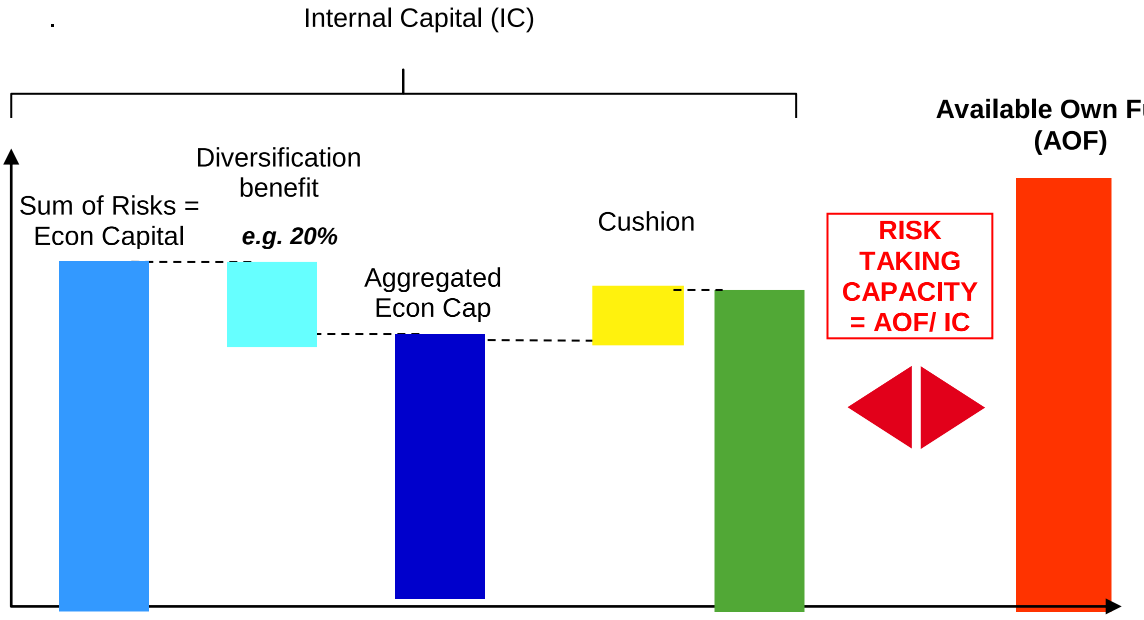
[120] On diversification issue see more in ref. 2,6,18.

3.3. Integrated approach towards valuation capability of internal resources to create competitive advantages and External Environment Analysis.

In this part a traditional valuation should be extended by comprehensive view on valuation of **risk taking capacity on the level of bank**[121] and how much capital should be allocated to **individual business units in** accordance with their contribution to value creation of the bank..

As we described above concept of economic capital allow us to integrate different risks which commercial bank copes with and after a few adjustments (diversification benefit, cushion) allows to do further strategic decisions related to **risk taking capacity (**concept see in chart 1) like target risk taking capacity limit which can be basis for setting additional limits inevitable for efficient capital management.

Chart 1: Risk Taking Capacity



Output (risk appetite parameters/goals) of key strategic decisions related to concept of economic capital on the level of the bank creates framework/input which should be integrated into **individual business units/ segments**. Key tasks of this phase are related to strategic **allocation of capital** to individual business units with regard of **their riskiness** with the aim to create values which are acceptable by shareholders. These tasks are basis for **risk adjusted performance measurements systems on the level of business units** based on which will be clear which part of the bank creates

[121] It is important to stress that in this process models and risk management methodologies and tools are applied. Very important part of these processes is stress testing of the level of capital on different scenarios which are designed by the bank. More on stress testing see reference 14.

value and which just absorbs those resources (destroys value) which could be used more efficiently in another way in the bank and of course due to that decreases competitiveness of the bank. However, it is necessary to stress that this phase and capital allocation policies belong to the most challenging and complicating ones and can bring one of the most serious changes in **structure of the bank business portfolio**.

Very interesting, comprehensive and useful thoughts about **capital allocation policy** are presented by Resti, A. and Sironi, A. (2007, p. 693,694) and can be summarized as follows:

. capital allocation must be able to **translate the final objective of shareholders´ value creation** into a set of clear, transparent, and accepted criteria **supporting the strategic and operating decisions** of the entire bank's management at all levels,

. there must be a set of rules and **incentives** aimed at generating a healthy **competitio**n inside the bank and among banks within financial group,

. however, this competition can **create a climate of conflict** therefore this process of capital allocation must be introduced gradually and all involved units must understand criteria based on which their results are measured.

. capital allocation must not be based on rigid rules and automated processes. In spite of fact that process of risk measurement and level of capital allocation of individual units is based on models and criteria defined by bank's risk management (and finance, too) must always be **performed within a broader view for example long – term profitability business unit outlook and senior management involvement.**

. senior management involvement is important both for defining **"rule of the game" but** also to use results **for strategic and operational purposes.** This involvement shouldn't be understand as an exercise but rather affect the way in which the range of businesses in which the bank is involved is recalibrated and redesigned so that the businesses and segments with the greatest growth and profit potentials are identified correctly.

A Few Thoughts towards External Environment Analysis

In part 2 we have analyzed current status of implementation of Basel 2 in the Slovak Banking Sector. Outcome of this analysis presents that due to status of implementation Pillar 2 in banking industry external environment currently doesn't provide us with direct relevant comparative information based on which we could analyzed competitiveness of the bank taking into consideration economic capital concept.

On the other side we have to stress that similar as Sironi and Resti identified for the bank itself is valid for market, too. Introduction of this concept must also take into consideration competitors´ behavior mainly at which extend they introduce this concept and how and when they transfer risks (through allocated capital) related to concrete segments to customer’s pricing. If too aggressive approach is applied by the bank at not right timing and for not proper segments then bank can suffer decline of revenues due to outflow of customers which might become competitive disadvantage.

3.4. Strategy Formulation

The previous parts of this paper provide enough evidences that an economic capital concept is inevitable input in the phase of strategy formulation, too. As we already presented the commercial bank “risk appetite” is built-in strategic targets. Based on that the following alternatives related to defined types of capital can occur:

Alternative 1:

a/ AOF > IC > RC

where : Available own funds (AOF), Internal capital (IC) and Regulatory capital (RC) are categories already defined.

In this case the bank carries excess of capital (own funds) with all pros and cons. If it is part of the bank so called “**low risk appetite strategy**” then strategic consideration on excess of capital must be taken to allocate capital in such way that the additional value for shareholders will be generated. The following strategic alternatives can be considered:

.to reconsider more risk acceptance either through **acquisition or investing** into business which has appropriate RAROC and market opportunities exist.

. increasing **dividends pay-out or buy-back shares**.

. bank can its risk profile change via increasing of IC (through economic capital) by e.g. **increasing of risk of concentration** (which is not part of Pillar 1 – minimum capital requirements) if business opportunities exist.

Alternative 2:

b/ AOF < IC > RC

In this alternative bank carries shortage of capital (own funds). This situation might be part of so called "**high risk appetite strategy"**. The following options to solve this situation are available:

. to **increase shareholders equity** – which would be allocated to those businesses that have higher RAROC than opportunity cost of equity. Of course this strategy might be very complicated particularly at time when market has no appetite for banking risks (this has been a case since 2007 due to crisis) or cost of equity is very high. Due to that "easier" and faster strategy .

. to apply **credit risk transfer strategy** through tools like credit derivatives, securitization, selling loans. Those are a new methods for hedging/decreasing of risk and need of capital. Of course they are highly sophisticated and it is important to do complete quantification of their impact on capital of the bank but also on profitability.

. to reduce risk profile through **strategy of divestment** from assets and **business units** with low RAROC and high requirements on economic capital.

It is important to stress again that each of the presented strategies must be consider in the framework of the whole commercial bank strategy formulation where also the other aspects are taken into consideration (e.g. market conditions, business opportunities, financial group strategy and goals etc.). I has to be part of complete analysis of alternatives prepared by strategic management team and based on chosen criteria the most favorable strategy for the bank must be taken and further implemented.

Conclusion

It has been written a lot of books, articles and papers on a new regulatory framework Basel 2.

It has been organized many conferences, workshops and discussion forums on this topic. But there is still a long way in front of us while this comprehensive and complex regulation will be fully implemented into commercial bank management. There are a few reasons for this status:

l. top management in many commercial banks understands Basel 2 as a risk/finance areas project but not as a new approach to the management of the bank which brings a new opportunities but also threats and changes strategic and operative management.

2. there is a lot of literature which deals with regulatory aspects, risk management models, tools, methodologies in relation to Basel 2 but missing literature which would on high level helped top management to understand impact of Basel 2 on managerial processes in the bank.

3. there is still missing a new risk culture in commercial bank which would change risk management role from loss decreasing to value adding both on the level of the bank as whole and also individual business units and which role risk management plays in strategic and operational decision making processes.

4. there are still many open theoretical and practical issues which experts have to find solution for and they are mostly related to a key driver of changes – economic capital concept and its implementation. Let's address a few of them:

. missing data history e.g. for Credit Var models, business risk calculation, correlation matrix, calculation of capital cushion. On the other side certain "proxy" how this shortage of data temporary overcome exists.

. missing experience how to set up risk appetite and risk adjusted targets.

. missing methodologies and experiences how to allocate economic capital.

.missing experts and other resources (financial, I.T.) which would be necessary for successful implementation this regulatory framework.

The aim of this article is to contribute to fill the gap which exists in managerial literature and describe how key Basel 2 processes influence individual phases of the commercial bank strategic management process. As it has been described above there is a room for further research which could support faster and efficient implementation of this regulatory framework into strategic and daily day commercial bank management.

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