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THE FINANCING RISK OF A BANK'S OPERATING ACTIVITIES

Introduction

Banks are financial market institutions that are regarded by real economy actors, such as businesses and households, as first contact points for loans. Lending constitutes each bank's primary area of activity, and a wide range of loans and credit facilities offered enables it to cater to all sorts of financing needs, be it daily operations or investment. Lending by a bank is conditional on a borrower's creditworthiness as well as on the bank's own capital, which must be large enough to sustain financing of the loan. Funds can be raised by banks from a variety of sources, while their suitable combination provides for an adequate capital structure, i.e. one that represents an optimum given the bank's costs and financial risk exposure.

Within their operating activities, construed as their core activities aiming at producing a profit, banks have to manage not only active risk, to minimize losses on lending operations, but also – and just as importantly – passive risk which is characteristic of re-financing operations. Risk management at a bank must be effective, ensuring that liquidity is at all times maintained at a required level, since any failure could threaten the bank's safety and its ability to achieve the expected rate of profit.

1. Financing Instruments for the Operating Activities of a Bank

For a bank to be able to perform its operating activities, it is necessary to have an adequate amount of capital. In the banking sector, equity capital accounts for not more than approximately 10% of the balance-sheet total, which means that banks tend to rely on the use of debt capital. Although a steady growth of equity figures has been reported in recent years, stemming from prudential measures imposed on banks, the proportion of own funds still seems far from adequate if it is realized that this growth has been fed by profit accumulation and therefore has not produced any cash flows. As a result, banks are involved in

activities aimed at raising funds in the financial market and rely on liabilities toward the financial sector and the state budget (see Table 1).

Table 1

Primary sources of financing for operating activities (PLN bn)

	Dec 2006	Dec 2007	Dec 2008	Dec 2009	Dec 2010
Total capital	59.2*	68.3*	88.1	103.3	116.2
Total liabilities, including:	Not available	Not available	947.2	954.1	1041.8
Financial sector deposits and loans	123.9	161.4	230.8	216.8	244.5
Non-financial sector deposits	383.9	428.2	499.0	567.2	620.4
Public sector deposits	32.5	44.7	52.7	52.0	53.0
Liabilities due to own debt issue	15.9	12.4	12.5	19.4	24.4
Subordinated debts			7.6	8.9	9.7

* Including subordinated debt.

Source: *Raport o sytuacji banków w Polsce w 2010 r.* (2011, p. 29); *Raport o sytuacji banków w 2008 r.* (2008, p. 85).

In choosing the financing source, banks follow certain strategies for covering the costs of their own activities. Three financing strategies are distinguished: one based on deposits, one based on foreign sources of funding, and a mixed one. Within the deposit-based strategy, most capital (around 70%) comes from deposits placed by the bank's customers; under this strategy, other sources of financing account for a small proportion of the bank's liabilities and include debt toward domestic and foreign financial institutions, debt attributable to transactions with the central bank, equity capital, and other liabilities. The foreign financing strategy, on the other hand, is characterized by a sizeable proportion (55-70%) of capital contributed by foreign financial institutions. Mixed strategies are combinations of the former two, where the proportions of funds from the two financing sources are fairly balanced (*Raport o stabilności systemu finansowego*, 2010, p. 67).

Banks are free to choose their financing strategies. The adoption of a specific strategy depends on the bank's position in the financial market as well as on its links with foreign banks and on foreign participation in its capital stock. Hence, Getin Noble Bank S.A., whose capital is 100% Polish-owned, will probably follow a different strategy than Bank Pekao S.A., which is wholly controlled by an Italian investor.

Whatever financing strategy is selected, at banks debt capital is chiefly represented by deposits, primarily from the non-financial sector, which are conducive to capital mobilization and allocation. A cash deposit with a bank is com-

monly identified with funds received by a bank from its customer and placed in an account on agreed terms, but it has not been defined as such in Polish legal regulations. Articles 725-726 of the Civil Code (*Ustawa z dnia 23 kwietnia 1964 r. Kodeks cywilny*, 2004) only define the bank account contract, at the same time authorizing the bank to use funds deposited in the account in transacting its own business, while Article 49 of the Banking Law (*Ustawa z dnia 29 sierpnia 1997 r. Prawo bankowe*, 2002) stipulates that bank accounts may be kept as either time deposit accounts or time savings accounts.

Table 1 shows that in 2010 non-financial sector deposits represented nearly 60% of liabilities in the banking sector. Most banks offer a rich array of deposit options, however, they need to yield a certain rate of return to be attractive. The value of deposits collected by a bank is not merely a function of the interest rate. The volume of deposits placed with banks also reflects the condition of the capital market, since an economic recession accompanied by a slump on stock exchanges will normally compel investors to divest of stocks and investment fund units in favor of bank deposits. Households are another factor stimulating the growth of bank deposits, because they tend to save part of their incomes to hedge against a decline in their financial standing in anticipation of an economic downturn. On the other hand, the value of corporate deposits is contingent on their financial performance, the amount of liquid cash on hand, as well as on the lending policies of banks themselves. Under stringent credit policies, the volume of funds deposited with banks will diminish, as companies are forced to increasingly employ their own money toward the financing of their operations.

Among the ways available to commercial banks to raise capital in the market, interbank deposits play a central role. Interbank deposits are defined as operations whereby a bank receives from, or hands over to, another bank an amount of money for a given time at an agreed price (Cichy, 2010, p. 141). Interbank deposits can be either unsecured or secured against, in most cases, foreign currency and short-term securities. This distinction is vital for any bank that entrusts its funds to another bank. In case the other bank suffers financial distress, the underlying collateral, whether currency or securities, may be sold in the financial market to recover the deposited funds.

Interbank deposits allow banks to raise large amounts of finance, for different periods, both short-term (up to one month) and long-term (from two to twelve months), with the largest share of the market held by overnight (O/N), tomorrow next (T/N) and spot next (S/N) deposit facilities. The supply side of the interbank deposit market is dominated by large banks with extensive branch networks, while demand is fueled by small banks with a modest volume of deposits from the non-financial sector.

An alternative method of fund raising by a bank is to issue debt securities, i.e. bank securities issued under the provisions of Banking Law (Article 89) and debentures issued in compliance with the Bonds Act (*Ustawa z dnia 29 czerwca 1995 o obligacjach*, 2001). Such securities are designed to raise stable financing in terms of time period for which the money is held.

Bank securities issue is designated as a banking operation *sensu stricto* (under Art. 5 (1) (5) of the Banking Law), and its terms are subject to public disclosure, where the issuing bank is obliged to notify the Polish Financial Supervision Authority of the intended issue at least 30 days prior to the projected issue date, reporting the terms of issue and the amount issued. Securities can be basically issued by banks in the form of deposit notes or certificates of deposit.

Deposit notes are usually issued as bearer securities and dedicated to retail customers. Their basic advantage over regular deposits is that they can be sold by an investor before maturity without losing the interest. Certificates of deposit are defined as a negotiable, non-public money market instrument, which a bank can use in collecting funds to finance its daily business, primarily to be able to continue lending (*Rynek pieniężny i kapitałowy*, 2003, p. 97). Certificates typically have large denominations and short maturity dates (no longer than 12 months). Among its features, banks most appreciate the flexibility it permits in organizing issues, in terms of size and timing, to suit the bank's requirements. Since certificates cannot be redeemed before maturity, banks are not obliged to keep liquid reserves in the event an investor wishes to withdraw from the investment prematurely. Certificates are usually issued by banks with high credit ratings, but so far have not been employed much in raising capital.

When a bank needs stable long-term funding, it may also choose to issue debentures, whose issuer acknowledges indebtedness toward its holder and undertakes to repay the debt on specified terms. Although the Bonds Act does not specifically name banks among potential bond issuers, they actually, being legal entities and conducting business activity, fall within the category of corporates. The Bonds Act (Art. 9) entitles banks to issue bonds through public sale to a minimum of 100 persons or to unspecified recipients, while the bonds may be or may not be publicly tradable, or through a private issue addressed to no more than 99 investors.

Obviously enough, bonds are supposed to generate cash flow required to finance long-maturity assets or, possibly, to modify the liabilities structure. However, under Art. 127 (3) of the Banking Law, funds raised through a bond issue may be, on certain conditions stipulated by the Law and on the KNF's (Polish Financial Supervision Authority) permission, treated as part of a bank's supplementary funds.

This right is increasingly often exercised by cooperative banks which, upon the adoption of relevant amendments to the Act on the Operations of Cooperative Banks and Their Affiliation (*Ustawa z dnia 1 lipca 2009 r. o zmianie ustawy o funkcjonowaniu banków spółdzielczych*, 2009), and on Affiliating Banks, were authorized to issue bank securities (Art. 7), on the respective affiliating bank's consent, and to incur liabilities linked to securities issues (Art. 8).

Therefore, a bond issue can help raise liquid funds as well as increase own capital, which makes banks more capable of expansion and ensures safety pursuant to regulatory requirements.

Banks can raise capital not only by incurring liabilities, but also through changes in their asset structures. Art. 92a of the Banking Law empowers banks to transfer some types of assets to a securitization fund under a receivables transfer agreement or a participation agreement, or to a capital company with a view to an asset-backed securities issue by that company (i.e. issue of securities backed with securitized receivables). This financing method allows banks to remove specific types of loans off their balance sheets and raise additional funds. At the same time, besides their financing function, such operations make it possible for banks to shift away the credit risk inherent in the assets, which helps improve a bank's prudential ratios, primarily the capital adequacy ratio and the total capital (ratio) requirement.

In choosing among financing options and, even more importantly, determining their respective proportions in the bank's liabilities, managers have to be guided by their perceptions of acceptable costs and risk exposures. On the other hand, banks are financial institutions that thrive on high levels of trust from their customers, which is why, on depositors' presumed consent, the cost to acquire available funds only slightly exceeds the rate of inflation. The position of banks in their business environment makes them capable of easily raising capital from a variety of sources, including refinancing loans from the central bank; however, these loans are relatively expensive and are taken as a last resort, in dire need to improve financial liquidity rather than to boost business.

2. Liquidity as a Precondition for Sustainable Banking Operations

Regardless of where they come from, capitals are used to finance a bank's assets, whose maturity dates usually differ from those of the funds borrowed. As a consequence of the differences in maturity, as well as between the amount of capital employed by the bank and the amount of capital raised (i.e. between loans and deposits), a financing gap emerges*, which can assume a negative or

* Financing gap is defined as a factor relating the difference between non-financial sector loans and deposits to that sector's deposits.

a positive value depending on the difference between loans and deposits. A short-term* (up to 1 month) negative gap (where loans/assets are smaller than deposits/liabilities) is particularly dangerous, since it may lead to excessive liquidity risk and have an adverse effect on the bank's ability to meet liabilities related to deposits received or loans granted.

Liquidity is a fundamental statutory precondition for the performance of banking activities, accounting for the credibility and solvency of a bank, as well as its safety, sufficient profitability, and funding self-reliance, for a bank that maintains balance between loans and deposits does not need to seek refinancing facilities in the interbank market.

Banking practitioners differentiate between three notions of liquidity:

- financial liquidity, which corresponds to the ability to timely execute payments orders from customers and to continue lending without interruptions,
- payment liquidity, understood to mean the bank's ability to perform customers' orders; pursuant to Art. 8 of the Banking Law, payment liquidity must be suited to the size of the bank and to the type of activity it pursues,
- structural liquidity, construed of as an equilibrium between raising and using capital, which has to meet certain requirements concerning its volume, structure and maturity (Capiga, 2010, p. 83-84).

Considering the importance of liquidity for every bank's operating activities and the need to ensure operating safety, banks have to comply with the liquidity standards established by Resolution No. 386/2008 of the Polish Financial Supervision Authority (*uchwała nr 386/2008 Komisji Nadzoru Finansowego...*, 2008) as well as with the rules for financial liquidity monitoring prescribed in the so called Recommendation P (*Rekomendacja P...*, 2002).

Applicable liquidity measures vary with the size of the bank as expressed by its balance-sheet total, the boundary value being set at PLN [Polish zloty] 200m (see Table 2).

Table 2

Supervisory liquidity measures

Liquidity measure	Content/Explanation	Minimum value required
Banks* with balance-sheet total above PLN 200m		
Short-term liquidity gap (M1)	The sum of primary (assets receivable within 7 days) and supplementary (assets receivable in 7 to 30 days) liquidity reserves less the value of unstable external funds	0.00

* In this instance, a one-month liquidity gap is defined as the difference between the value of assets with a maturity of up to 1 month and the value of liabilities due within 1 month.

Table 2 cont.

Short-term liquidity ratio (M2)	The ratio between liquidity reserves, both primary and supplementary, and the total of unstable external funds	1.00
Non-liquid assets to own funds coverage ratio (M3)	Non-liquid assets are identified with assets not arising from banking operations listed in Art. 5 of the Banking Law	1.00
Non-liquid and limited liquidity assets to own funds and stable external funds ratio (M4)	Limited liquidity assets comprise assets arising from banking operations conducted outside the wholesale financial market alongside assets in inconvertible currencies deemed as insignificant by the bank. Stable external funds encompass the deposit base, the bank's own securities not included as part of its own funds, and other liabilities with maturities of above 12 months which the bank intends to keep and which have not been included in its own funds	1.00
Banks with balance-sheet total up to PLN 200m		
Ratio of primary and supplementary liquidity reserves to total assets (M1)		0.20
Non-liquid assets to own funds coverage ratio (M3)		1.00

* Banks must apply all of the requirements, while branches of credit institutions are only obliged to observe short-term liquidity measures M1 and M2.

Source: *Uchwała nr 386/2008 Komisji Nadzoru Finansowego...*, 2008; *Raport o stabilności systemu finansowego...*, 2009, p. 53-55.

As at the end of 2010, only 4 cooperative banks and 1 branch of a credit institution failed to meet all of the relevant liquidity standards. Assets held by these institutions represented a negligible 0.1% of total assets in the banking sector (*Raport o sytuacji banków w Polsce w 2010 r.*, 2011, p. 44), which means that their default would have no impact whatsoever on the stability of Poland's banking sector. The applicable liquidity measures are influenced not only by a bank's liabilities structure, but also by the values and types of assets in its portfolio, which suggests that decision makers should be concerned with how funds are used just as much as with how and where they are raised.

The liquidity of specific banks too hinges on the development of the financial market as well as on how much mutual trust there is on the market. Distrust among actors in a particular financial market, coupled with uncertainty about macroeconomic developments, has a detrimental effect on the market actors' willingness to enter into transactions with long maturity dates.

The 2007-2009 crisis clearly demonstrated that mutual trust in the interbank market can be very fragile. Some banks, deprived of access to financing in the market, were forced to "go to battle" for deposits, increasing interest rates to 10% per annum or more. What banks should learn from that lesson is that they need to always aim at improving the stability of their financing sources.

3. Assessment of the Use of Funds and of the Criteria for the Selection of Financing Sources

Insofar as the ability to raise funds from the financial sector furthers diversification of financing sources by banks, they should never become solely dependent on this sector, as being too active in their acquisition of financing in the interbank market increases a bank's vulnerability to the volatilities of the domestic and global financial market. There are, nevertheless, banks that are already highly dependent on funding from the domestic or global financial market. Most of these are small banks or branches of credit institutions with a limited area of operation and – by design – reliant on funding from their parent companies, or banks with an aggressive lending/credit policy but an underdeveloped deposit base, or, last but not least, banks suffering from a short supply of deposits that do not suffice to offset the demand for loans.

Financing policies that rely on funds obtained from foreign parent institutions are usually long-term, which is a factor reducing the financing risk, which is particularly understandable if one realizes that most foreign shareholders declare support for their daughter companies' liquidity and for their expansion plans (*Raport o sytuacji banków w 2009 roku*, 2010, p. 3). Yet, the ongoing crisis has shown that support is only given if the parent company itself is in good financial health. Otherwise, daughter banks will sooner or later suffer the same financial difficulties as their shareholders, while their financing will wholly depend on the liquidity of the national financial market and the confidence of the non-financial sector.

The confidence of the non-financial sector constitutes an essential contingent factor for a bank's ability to acquire stable sources of financing in the form of deposits. At the same time, the deposit growth dynamics is also conditional on a number of factors that have been discussed earlier in this paper. In addition, what matters critically for a bank is the maturity structure of deposits, since the longer their maturity dates, the greater the stability of financing. This, however, potentially involves higher costs of financing, even though some banks actually offer lower interest rates for deposits with a long maturity. It could especially be the case if a bank expects a downward trend in market interest rates.

Since customers will normally appreciate it when funds deposited with banks retain a degree of liquidity, a large proportion of these is seen in current accounts. Although the cost of such capital is affordable, funds deposited in current accounts are subject to too much fluctuation, which generates financing risk. In an effort to reduce the risk and increase the stability of deposits, banks offer savings accounts that yield a higher interest but at the same time mitigate the risk of fluctuations in the account balance by introducing charges on e.g. subsequent withdrawals and/or payment orders.

In the context of a large proportion of foreign currency loans in banks' balance sheets, the problem of currency mismatches in the sources of financing, construed as the difference between foreign currency liabilities and foreign currency assets, emerges as vitally important. As at the end of 2010, the currency mismatch for the entire banking sector totaled PLN 67.9 bn and involved mostly the Swiss franc, which was the preferred currency for loans. On the other hand, mismatches did not occur to a similar extent on the liabilities side of the balance sheet (see Table 3).

Table 3 shows that the Swiss franc (CHF) mismatch was higher than the total currency mismatch, exposing banks to excessive currency risk that could easily materialize e.g. in case a significant drop in the Swiss franc exchange rate took place. In an effort to reduce the mismatch, banks should, on the one hand, attempt to acquire more of the same currency which finances their lending activity (unless the currency is in short supply in the financial market) and, on the other, to reduce the growth rate of loans denominated in foreign currencies, mostly housing loans – which actually happened as an upshot of the recent economic crisis. Of course, when the loan currency goes up, the bank will be exposed to increased credit risk, since the borrower will have to repay higher installments; however, as long as the credit risk remains stable, the bank reaps higher profits from exchange rate fluctuations.

Table 3

Currency structure of the balance sheet including currency mismatch between assets and financing sources (PLN bn)

	Dec 2008	Dec 2009	Dec 2010
Currency assets	294.1	271.0	313.8
including: CHF	156.4	151.5	164.5
Currency liabilities	214.7	206.2	245.8
including: CHF	68.7	73.9	89.1
Assets unmatched to mismatched with financing sources Currency mismatch	(79.4)	(64.8)	(67.9)
including: CHF	(87.7)	(77.6)	(75.3)

Source: *Raport o sytuacji banków w Polsce w 2010 r.* (2011, p. 33).

In the context of financing, it should be noted that, notwithstanding the advantages of debt financing, banks barely utilize debt securities, which is reflected in the very modest proportion of liabilities relating to such instruments in the banking sector's balance-sheet total. This may indicate that banks are not fully exploiting other potential sources of financing.

One more alternative to the financing methods and sources that have so far been discussed in this paper is an equity issue. Yet, banks cannot really be expected to use this type of financing on a regular basis as long as the market does not pressure them to do so and the cost involved is substantial (dividend). Besides merely raising funds, a share issue also enlarges the capital base, thus improving the bank's stability, increasing its ability to sustain potential losses, and providing sound foundations for safe expansion and the pursuit of active policies. After all, no bank will be able to expand its business unless financing sources, whether in the financial or non-financial sector, are available.

Summary

Operating in a highly competitive market such as the banking market definitely is, banks have to learn to make optimal decisions on their sources of capital, taking into account the availability of each option, the time period for which funds can be held and used, and its cost. Embracing these factors is crucial for any bank that strives to expand and maximize the efficiency of its operating activities such as, in the first place, lending and investing in securities. Being aware of the competitive pressure from the stock exchange, investment funds, SKOK* or treasury securities, banks are bound to create a system of incentives that would foster an increase in the volume of savings, predominantly long-term savings, thus helping stabilize financing derived from the non-financial sector. Another priority would be to keep monitoring macroeconomic variables and the situation in financial markets with regard to unfavorable developments that could have an impact on the availability of capital, the conditions and methods of capital raising, the risk involved in the process, and its costs. An ideal match, in terms of both value and maturity, between assets and their sources of funding provides for a bank's liquidity, which is a critical success factor, alongside acceptable risk, and at the same time satisfies all requirements laid out by supervisory bodies.

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* SKOK (Spółdzielcza Kasa Oszczędnościowo-Kredytowa) – a cooperative savings and credit union.

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RYZYO FINANSOWANIA DZIAŁALNOŚCI BANKU OPERACYJNEGO

Streszczenie

Działalność operacyjna to podstawowy rodzaj działalności banku, której celem jest wygenerowanie zysku. Głównym centrum zysku są operacje aktywne, a ich realizowanie jest uwarunkowane posiadaniem kapitału w odpowiedniej wielkości. Wymusza to na bankach podejmowanie decyzji dotyczących finansowania ich działalności, biorąc pod uwagę koszty oraz ryzyko, które jest uzależnione od indywidualnych decyzji deponentów, a także niekorzystnych zmian makroekonomicznych mających wpływ na zachowanie rynków finansowych.

Ryzyko finansowania wpływa na płynność banku, której odpowiedni poziom jest koniecznym, wymaganym przez KNF, warunkiem bezpiecznego jego funkcjonowania. Dlatego też bank powinien zarządzać nie tylko posiadanymi aktywami, ale także dostępnymi kapitałami w taki sposób, aby optymalizować ich strukturę pod względem wartości, rodzajów i terminów wymagalności.

Artykuł ma na celu analizę źródeł finansowania banku z punktu widzenia ekonomicznych uwarunkowań ich wyboru, w kontekście minimalizacji ryzyka występującego przy jego finansowaniu.