

PRACE NAUKOWE

Uniwersytetu Ekonomicznego we Wrocławiu

RESEARCH PAPERS

of Wrocław University of Economics

271

Zarządzanie finansami firm – teoria i praktyka

Tom 2



Redaktorzy naukowi

**Adam Kopiński, Tomasz Słoński,
Bożena Ryszawska**



Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu
Wrocław 2012

Redaktorzy Wydawnictwa: Elżbieta Kozuchowska, Aleksandra Śliwka

Redaktor techniczny: Barbara Łopusiewicz

Korektor: Justyna Mroczkowska

Łamanie: Adam Dębski

Projekt okładki: Beata Dębska

Publikacja jest dostępna w Internecie na stronach:

www.ibuk.pl, www.ebscohost.com,

The Central and Eastern European Online Library www.ceeol.com,

a także w adnotowanej bibliografii zagadnień ekonomicznych BazEkon

http://kangur.uek.krakow.pl/bazy_ae/bazekon/nowy/index.php

Informacje o naborze artykułów i zasadach recenzowania znajdują się
na stronie internetowej Wydawnictwa

www.wydawnictwo.ue.wroc.pl

Kopiowanie i powielanie w jakiegokolwiek formie
wymaga pisemnej zgody Wydawcy

© Copyright by Uniwersytet Ekonomiczny we Wrocławiu
Wrocław 2012

ISSN 1899-3192

ISBN 978-83-7695-219-2 (całość)

ISBN 978-83-7695-227-7 t. 2

Wersja pierwotna: publikacja drukowana

Druk: Drukarnia TOTEM

Spis treści

Aneta Michalak: Wybrane aspekty finansowania inwestycji rozwojowych w branżach kapitałochłonnych	11
Grzegorz Mikołajewicz: Społeczna odpowiedzialność biznesu (CSR), etyka biznesu i wartości korporacyjne	23
Sebastian Moskal: Zastosowanie instrumentu <i>credit default swap</i> do szacowania stopy wolnej od ryzyka na potrzeby wyceny wartości przedsiębiorstwa	34
Krzysztof Możejko: Efektywność analizy portfelowej w zmiennych warunkach inwestycyjnych	47
Rafał Nagaj: Analysis of public finances in Poland and the EU during the financial/economic crisis in 2008-2010	60
Witold Niedzielski: Najem długoterminowy samochodów jako alternatywa dla leasingu. Studium przypadku	71
Jarosław Nowicki: Szacowanie stopy podatku dochodowego w wycenie przedsiębiorstw niebędących spółkami kapitałowymi	83
Józef Osoba, Marcin Czarnacki: Wykorzystanie <i>mezzanine capital</i> w zrównoważonym modelu struktury kapitału przedsiębiorstwa	92
Dorota Ostrowska: Sprawność zarządzania środkami finansowymi uczestników rynku emerytalnego w Polsce	107
Przemysław Panfil: Przyjmowanie przez ministra finansów środków w depozyt lub w zarządzanie. Wnioski <i>de lege lata</i>	118
Marek Pauka, Paweł Prędkiewicz: Zagadka dyskonta w wycenach zamkniętych funduszy inwestycyjnych z perspektywy inwestora	127
Agnieszka Piechocka-Kaluźna: Znaczenie współczynnika wypłacalności jako miernika bezpieczeństwa funkcjonowania banków komercyjnych ...	141
Katarzyna Prędkiewicz: Is it possible to measure a funding gap?	152
Katarzyna Prędkiewicz: Limity inwestycyjne funduszy <i>venture capitals</i> i aniołów biznesu	160
Katarzyna Prędkiewicz, Hanna Sikacz: Analiza płynności statycznej grup kapitałowych na przykładzie przemysłu metalowego	170
Anna Pyka: Zewnętrzne formy finansowania działalności operacyjnej oraz inwestycji w małych i średnich przedsiębiorstwach w okresie kryzysu gospodarczego	183
Anna Pyka: Motywy emisji „obligacji węglowych” jako specyficznych obligacji korporacyjnych opartych na świadczeniach niepieniężnych	193
Anna Rosa, Wojciech Rosa: The impact of seasonality on the level of working capital needs	203

Jerzy Różański, Jakub Marszałek: Struktura finansowania firm rodzinnych na przykładzie przedsiębiorstw regionu łódzkiego	215
Jerzy Różański, Dorota Starzyńska: Finansowe i pozafinansowe czynniki rozwoju przedsiębiorstw rodzinnych w regionie łódzkim	226
Józef Rudnicki: Can stock splits generate abnormal stock performance in post-crisis era? Evidence from the New York Stock Exchange.....	237
Włodzimierz Rudny: Model biznesu w procesie tworzenia wartości.....	248
Iwona Sajewska, Artur Stefański: Źródła finansowania wybranych przedsiębiorzeń w zakresie produkcji energii z zasobów odnawialnych w Polsce	259
Alicja Sekuła: Property revenues (PRS) and expenditures of local government units (LGUS) in Poland	270
Paweł Sekuła: Empiryczny test strategii fundamentalnej.....	280
Przemysław Siudak: Wpływ Wałbrzyskiej Specjalnej Strefy Ekonomicznej na sektor finansów publicznych	290
Tomasz Skica: Efektywność działania jednostek samorządu terytorialnego .	306
Michał Soliwoda: Rzeczowe aktywa trwałe a cykl inkasa należności, obrotu zapasami i regulowania zobowiązań	317
Dorota Starzyńska, Jakub Marszałek: Bariery finansowania firm rodzinnych na przykładzie przedsiębiorstw regionu łódzkiego	327
Wacława Starzyńska, Justyna Wiktorowicz: Czy zamówienia publiczne sprzyjają innowacyjności przedsiębiorstw?	336
Artur Stefański: Przepływy pieniężne z działalności operacyjnej spółek giełdowych a cena rynkowa akcji.....	346
Igor Styn: Zakres wykorzystania funduszy pomocowych w finansowaniu inwestycji w odnawialne źródła energii w Polsce w stosunku do potrzeb inwestycyjnych	355
Alina Szewc-Rogalska: Wykup akcji własnych przez spółki giełdowe jako forma dystrybucji wartości dla akcjonariuszy	365
Piotr Szkudlarek: Inwestycje operatorów telekomunikacyjnych jako czynnik ograniczania wykluczenia cyfrowego w Polsce.....	374
Aneta Szóstek: Nabywanie nieruchomości w Polsce przez inwestorów zagranicznych.....	383
Piotr Szymański: Propozycja nowego standardu wartości uwzględniającego koszty zewnętrzne	394
Tomasz Śpiewak: Kierunki modyfikacji metody Baumola zarządzania środkami pieniężnymi – model linii kredytowej.....	406
Beata Trzaskuś-Zak: Budowa modelu prognostycznego należności spłacanych terminowo metodą harmoniczną i metoda Kleina.....	418
Dariusz Urban: Państwowe fundusze majątkowe jako inwestor finansowy ..	434
Ewa Widz: Efektywność wyceny rynkowej kontraktów futures na kurs euro na GPW w Warszawie	443

Paweł Wnuczak: Stopa zwrotu z kapitałów własnych (ROE) jako jedna z podstawowych determinant kreacji wartości przedsiębiorstwa	454
Robert Wolański: Zakres wykorzystania preferencji podatkowych w podatku dochodowym przez małe i średnie przedsiębiorstwa.....	467
Justyna Zabawa: Zastosowanie metody AHP w procesie finansowania inwestycji w odnawialne źródła energii	475
Dariusz Zawadka: Aktywność funduszy <i>venture capital</i> w ramach alternatywnych systemów obrotu	488
Danuta Zawadzka, Ewa Szafraniec-Siluta: Samofinansowanie produkcji rolniczej a poziom aktywności inwestycyjnej towarowych gospodarstw rolnych – analiza porównawcza sytuacji w Polsce na tle Unii Europejskiej.....	498
Grzegorz Zimon: Zarządzanie zapasami w przedsiębiorstwach tworzących zintegrowany system dostaw	509
Aleksandra Zygmunt: Analiza płynności finansowej spółek giełdowych branży przemysłu spożywczego w Polsce.....	519

Summaries

Aneta Michalak: Chosen aspects of financing development investments in capital-consuming industries.....	22
Grzegorz Mikołajewicz: Corporate Social Responsibility (CSR), business ethics and corporate values.....	33
Sebastian Moskal: Application of credit default swap in order to estimate risk free rate in the process of company's valuation	46
Krzysztof Możejko: Effectiveness of portfolio analysis in variable conditions on capital markets	59
Rafał Nagaj: Analiza finansów publicznych w Polsce i Unii Europejskiej w czasie kryzysu finansowego i gospodarczego w latach 2008-2010.....	70
Witold Niedzielski: Long-term rent with fleet management as an alternative for lease of cars. Case study	82
Jarosław Nowicki: Estimating the income tax rate in valuation of other enterprises than limited liability or joint-stock companies	91
Józef Osoba, Marcin Czarnacki: The use of mezzanine capital in an equilibrium model of capital structure of an enterprise.....	106
Dorota Ostrowska: Quality management of the pension market participants' financial means in Poland.....	117
Przemysław Panfil: The rules of free funds transfer to the Minister of Finance in the deposit or management – attempt to assess	126
Marek Pauka, Paweł Prędkiewicz: Mystery of discount in valuations of closed-end funds from the investor's perspective	140

Agnieszka Piechocka-Kaluźna: The role of insolvency ratio in assessing safety and ability for continuance of commercial banks.....	151
Katarzyna Prędkiewicz: Czy można zbadać lukę finansową?	159
Katarzyna Prędkiewicz: Venture capital and business angels investment limits	169
Katarzyna Prędkiewicz, Hanna Sikacz: Analysis of static financial liquidity in capital groups on the example of metal industry	182
Anna Pyka: External forms of working-capital and capital-expenditure financing for small and medium-sized businesses in times of an economic crisis.....	192
Anna Pyka: The motives for issuing “coal bonds” as a specific corporate bonds based on non-financial benefits	202
Anna Rosa, Wojciech Rosa: Wpływ sezonowości na poziom kapitału obrotowego.....	214
Jerzy Różański, Jakub Marszałek: Family business financial structure analysis of the Łódź region companies.....	225
Jerzy Różański, Dorota Starzyńska: Financial and non-financial factors of family enterprise development in the Łódź region.....	236
Józef Rudnicki: Czy podział akcji może być źródłem ponadprzeciętnych stóp zwrotu w czasach po kryzysie 2007-2009? Przykład Nowojorskiej Giełdy Papierów Wartościowych.....	247
Włodzimierz Rudny: Business model in value creation process	258
Iwona Sajewska, Artur Stefański: Main sources of funding for production ventures energy from renewable resources in Poland	269
Alicja Sekuła: Dochody i wydatki majątkowe jednostek samorządu terytorialnego	279
Paweł Sekuła: Empirical test of fundamental strategy.....	289
Przemysław Siudak: The influence of “Invest-Park” – Wałbrzych Special Economic Zone on public finance sector	305
Tomasz Skica: Effectiveness of activities of local government units	316
Michał Soliwoda: Tangible fixed assets vs. receivables, turnover and payables conversion cycles	326
Dorota Starzyńska, Jakub Marszałek: Family business financing barriers analysis of the Łódź region companies.....	335
Wacława Starzyńska, Justyna Wiktorowicz: Can public procurement stimulate innovativeness of enterprises?	345
Artur Stefański: Operating cash flow of firms listed on stock exchange and the price of stocks	354
Igor Styn: The scope of aid funds use in financing investments in renewable energy in Poland in comparison to investment needs	364
Alina Szewc-Rogalska: Share repurchase by publicly listed companies as a form of value distribution for shareholders	373

Piotr Szkudlarek: Telecommunication operators' investments as a factor limiting the digital exclusion in Poland	382
Aneta Szóstek: Acquiring properties in Poland by foreign investors	393
Piotr Szymański: The idea of a new standard of value which takes into account the external costs.....	405
Tomasz Śpiewak: Directions of modifications of the Baumol cash management model – line of credit model.....	417
Beata Trzaskus-Żak: Construction of the prognostic model of paid-in-term receivables using the harmonic method and the Klein method.....	433
Dariusz Urban: Sovereign Wealth Funds as a financial investor	442
Ewa Widz: Efficiency of market valuation of euro futures on the Warsaw Stock Exchange.....	453
Paweł Wnuczak: Return on equity (ROE) as one of fundamental determinants of company's value creation	466
Robert Wolański: The scope of the use of tax expenditures in income tax for small and medium enterprises.....	474
Justyna Zabawa: The application of the AHP method in the process of financing renewable energy sources projects.....	487
Dariusz Zawadka: Venture Capital activity in alternative investment markets	497
Danuta Zawadzka, Ewa Szafraniec-Siluta: Self-financing of agricultural production vs. the level of commercial farms' investment activity – comparative analysis of the situation in Poland on the basis of the European Union	508
Grzegorz Zimon: Inventory management in enterprises creating an integrated supply system.....	518
Aleksandra Zygmunt: Financial liquidity analysis of quoted enterprises belonging to food industry in Poland	531

Katarzyna Prędkiewicz

Wrocław University of Economics

IS IT POSSIBLE TO MEASURE A FUNDING GAP?

Summary: The paper addresses the problem of inadequate access to capital for SMEs, often referred to as the ‘funding gap’. The main issue addressed here is the question whether a funding gap can be measured accurately, taking into account the reasons for gap occurrence and the measuring methods used for its evaluation. The first section presents various definitions related to the phenomenon under study (funding gap, equity gap, financing gap) as well as an attempt at organizing the material. Section two is an overview of the existing methods of identification and measurement of funding gap. The last section is an evaluation of identification and measurement methodologies.

Keywords: funding gap, equity gap, small and medium enterprises, access to capital.

1. Introduction

Inadequate access to capital, as observed in the sector of small and medium-sized enterprises (SMEs), is generally regarded as one of the most important barriers to entrepreneurship development. This phenomenon, commonly referred to as the “funding gap” (or equity gap), is typically described in terms of information asymmetry theory [Ang 1992, p. 185-203], credit rationing theory [Storey 2004, p. 401-422], or credit discrimination theory [Stiglitz, Weiss 1981, p. 393-409]. A number of instruments and mechanisms have been developed to address this problem, including subsidies, government guarantees and other instruments of financial engineering [*Mechanizmy inżynierii...* 2010; Prędkiewicz 2010, p. 395-405], resulting in enormous state budget expenditures in nearly all economies of the modern world. The most important rationale cited behind those decisions is the undeniable role of the SME sector in boosting the economic growth, coupled with the belief that improving SMEs’ access to capital will bring direct benefits in terms of workplaces and GDP. For the most part, before such a decision to spend public funds on improving access to capital in the MSP sector is made, the issue is studied extensively by governmental agencies, local administration authorities and independent experts, with the purpose of identifying such gaps and assessing their extent [*The Supply of Equity Finance...* 2009; Tamowicz, 2007, 2008].

This paper adopts the following thesis: accurate measurement of the funding gap is not viable.

The main purpose of this paper is to demonstrate weaknesses of the methodology employed by various institutions for identification and evaluation of the funding gap. For this purpose, supplementary objectives are adopted, as follows: (1) organizing the definitions related to the concept of funding gap (funding gap, equity gap, financing gap), (2) description of the methodology used in measuring the funding gap.

2. Definition of funding gap

The problem of funding gap was first identified in 1931 by members of Macmillan Committee formed by British government [Macmillan 1931]. Hence, it is often referred to in professional literature as Macmillan gap. The findings and recommendations of Macmillan Committee were presented in a report on British financial system in 1931. The authors observed that, while the access to short-term capital among UK companies was, at the time, sufficient, medium- and long-term credits were limited, with access to capital in the range of 5 thousand – 200 thousand British pound being the most pronounced problem. Small amounts of capital, i.e. up to the margin of 5 thousand British pound, could be acquired via local banks, while large capital (above the 200 thousand margin) was made viable through the emission of securities. Therefore, the gap in the aforementioned range was notable.

Professional literature describes the gap using a variety of terms, such as equity gap, funding gap, financing gap. The notion of "equity gap" would suggest limited potential for supplementing company equity for financing company development. In fact, the gap under study should be examined in terms of both equity capital and outside capital (mainly borrowed capital), hence the terms "funding gap" or "financing gap" seem more appropriate in this context. The notion of "equity gap" may still be useful to describe supply shortage of capital derived from venture capital sources or angel investors.

In principle, no single, coherent definition of "funding gap" can be presented. The most important definitions present in subject literature are cited below, but one should bear in mind that some of them are very general in the sense that they address accessibility to both equity and outside capital, while others are limited solely to equity capital or bank loan capital.

R. Cressey postulates two definitions – normative and positive [Cressey 2002, p. F2]. Funding gap in positive approach is defined here as "an equilibrium, in which the volume of lending is below that which would emerge in a competitive capital market with costless and complete contracting, no private information and rational expectations". In normative sense, funding capital is defined here as "market failure, the appropriate policy response to which is an increase in the volume of lending".

Hence, the notion of "funding gap" is defined in terms of permanent market failure to set a fixed price that would result in equilibrium between capital demand

and capital supply [Łuczka 2001, p. 91]. Consequently, economically viable companies are unable to acquire capital from commercial markets despite their potential to employ such capital to good (effective) use. Reasons for this inability are varied, including legislative regulations, monopoly and state interventions on interest rates [The SME Financing... 2006, p. 16].

In the OECD approach [The SME Financing... 2006, p. 9], "funding gap" affects a large group of economically significant small and medium-sized enterprises, preventing access to funding from banks, capital markets or other sources. In addition, 1) many entrepreneurs and SME actors are capable of effectively employing such capital, but 2) due to structural constraints, the formal financial market does not offer capital for financing such enterprises.

Polish National Capital Fund¹ defines *equity gap* as permanent discontinuity on the supply side of the market, manifested in the form of inability to acquire funding for investment projects in certain volume range and/or coming from certain groups of companies (sectoral limitations in equity access). Due to the fact that the cost of preparing and monitoring a small investment project (e.g. in the range of 1 million euro) is comparable with that of a large project, the profitability of small investments is markedly lower. Consequently, the PE/VC funds tend to avoid investing in small projects. At the same time, small investment projects are characterized by elevated risk, but – in many cases – offer high return rates.

Gdańsk Institute for Market Economics [Mechanizmy inżynierii... 2010, p. 37] defines equity gap as inability to acquire outside financing of investment projects for companies in their early stages of development. Here, equity gap is defined as the difference between capital supply and demand for capital in a certain volume range.

The two definitions of funding gap by R. Cressey, as quoted above, apply solely to debt financing. In the light of the OECD definition, the problem of capital accessibility applies both to debt financing and shareholder loans. KFK definition focuses on equity capital accessibility, while IBnGR, despite reaching for the term of "equity gap", emphasizes the inaccessibility of external forms of financing, but in their approach, these include both equity financing and outside financing sources. As seen from the analysis of the above definitions of funding gap, the problem under study may take on narrow meaning when applied solely to internal (equity) or debt financing (bank credits). In broad approach, the funding gap applies to external sources of financing, both equity and outside capital.

¹ Krajowy Fundusz Kapitałowy – KFK, established on July 1, 2005 in accordance with the parliamentary Act on National Capital Fund, is a central fund of PE/VC funds, offering financial support for PE/VC funds operating on the market. Statutory operation of KFK is funded from central budget, EU structural funds and other sources, such as foreign institutions. The KFK mission is to alleviate the equity gap through financial support for capital funds (venture capital/private equity) that invest in SMEs of innovative character, offering vast development potential. (www.kfk.org.pl).

Moreover, based on the above definitions as well as analyses of numerous reports identifying the funding gaps [*SME Access to Finance...* 2008; Tamowicz 2008; 2007], it may be observed that the notion of funding gap involves:

1. Defining the volume of projects that face financing problems, i.e. setting the range or thresholds of the actual funding gap (for example, a conclusion that the funding gap involves projects in the range of 2-10 million PLN should be interpreted that projects falling within this range face funding problems).

2. Difference (gap) between supply of particular form of capital and the demand for said capital (for example, by stating that venture capital supply in Poland is estimated at 73.6 million euro, while the demand for it reaches 258 million euro).

3. Identifying the stage of company development that is typically associated with most problems in funding (the most frequently identified stages are: seed and start-up).

4. Identifying the forms of economic activities that face most pronounced funding problems (typically: innovation companies and high technology companies).

3. Methodology of study on funding gap – general overview

Studies prepared by various agencies of central and local administration in respect to the identification and measurement of funding gap are typically focused on 1) identification of inadequate supply of equity-type capital provided by venture capital funds, angel investors and other credit/loan organizations (identification of gap limits), and 2) determination of both supply and demand for this type of capital. Such studies may take on a narrow approach, identifying solely the supply of equity-type capital, or a wide approach, addressing also various debt instruments and public resources. Since subsidies, guaranteed loans and other financing instruments should, in effect, contribute to limitation of the gap, the analyses may focus on the factual potential of public resources of alleviating the gap problem and improving access to capital in the SME sector.

In principle, specific and reliable methodologies of assessing the extents of funding gap are unavailable. The characteristics of the methodology of assessing the extent of funding gap, as presented below, is based on available expert analyses and reports, both domestic and foreign.

The methodology of assessing *equity gap* comes down to the analysis of supply side of the equity capital market targeting the SME sector (such as VC, PE, BA) and involving studies of present investment offer, the volume of capital available, binding investment limits and preferences of sectoral investors [Tamowicz 2007, p. 14; *Mechanizmy inżynierii...* 2010, p. 37]. The second step (or an alternative approach) is to gather reports from entrepreneurs applying for such capital (i.e. the demand side) and determining the number of rejected projects, i.e. the number of companies that were refused financing or those unable to accept the conditions associated with financing. The analysis of demand side of the equation is problematic, since there

are no reliable methods of identifying potential entrepreneurs who abandoned their plans due to the lack of funding. Even if such identification was possible, the reliability of such an analysis would suffer from the selection bias, i.e. the problem of distinguishing the cases of factual equity gap from those that failed simply due to poor quality of the projects.

A similar approach is employed in the analyses of funding gap as manifested in loan capital. On the one hand, the supply side of the market is analyzed in such aspects as: the number of institutions offering credit and loan services, their distribution by region (outlet accessibility), its capital base (factual and potential) and the quality of services on offer. The latter aspect is especially important, since by analyzing the supply offer alone, one may distinguish groups of entrepreneurs that will face problems in the acquisition of funds (e.g. companies with operation history below certain threshold, say 6 or 12 months). This, in turn, helps establish the size of potential groups facing the risk of falling into funding gap (determination of the demand side of the equation).

The analysis of funding gap per region should be supplemented by an overview of capital supply volume by category (loans, credits, equity in the form of VC, BA, etc.) against the capital demand volume per each capital category. Only then one may identify the areas particularly affected by the funding gap problem, and attempt to construct specific instruments to address the problem.

The analyses of funding gap per country or region should be conducted regularly, since the problem of funding gap may be strongly affected by business cycles. In the periods of recession, company access to external funding sources is limited. At the same time, the number of economically viable investment projects is significantly reduced, since the entrepreneurs keep their plans in store, in anticipation of the economic boost and prosperity. The analysis of funding gap should be aimed at the identification of stable discontinuity on the capital supply side, independent from business cycles. Apart from the identification of capital supply discontinuities and difference between capital demand and supply, the analyses should also aim to identify present and potential determinants of the gap, to help anticipate its future behavior. Hence, the analyses of funding gap should be predominantly prospective [*Mechanizmy inżynierii...* 2010, p. 38-39].

The most essential problem in the assessment of funding gap extent, both in Poland and abroad, is related to the availability, quality and compatibility of statistical data. It must be noted that the problem at hand is more pronounced with regard to countries outside OECD [*The SME Financing...* 2006, p. 11]. Statistical data, for the most part, must be gathered directly from various institutions (banks, statistical offices, VC funds, BAs or BA associations).

In this context, one should also take into account frequent criticism against the viability of attempts directed at capital gap measurement. Some experts hold that empirical studies as such cannot be used as a sole instrument for the estimation of the gap's extent and trend. The unsatisfied demand for capital cannot be measured

ex-post, since there is no viable method to establish a number of potential companies that failed to enter the market due to lack of funding. Moreover, potential lenders lack information on capital requirements of the SME sector, or, at the least, such information is scarce. Consequently, the factor of information asymmetry between capital-seeking SMEs and potential lenders, as mentioned above, comes into play. In addition, the cost of acquiring information on SMEs' capital requirements is significantly higher than that of large companies [Łuczka 2001, p. 20, 80]. Another current of criticism is based on the argument that the funding gap phenomenon is related to the cost of capital acquisition. Since financing is made available to projects offering profitability in excess of the cost of capital, some projects simply cannot be accepted. In the case of high-risk projects, typical for *seed* and *start-up* phases of company development, such a situation is fairly common. "The founding gap exists – but its existence is manifested in the high cost of capital, and not in the factual lack of funding resources as such" [Michalski 2008].

4. Comments on the methodology of funding gap studies

Studies of the methodologies employed in the analysis of funding gap in Poland present the following conclusions:

- a. there is no systematic, unified methodology of funding gap examination,
- b. reports provide a variety of statistical data to characterize the supply side of capital market, but they often lack synthetic overviews to clearly identify the supply volume of individual forms of capital,
- c. reports are often based on derivative data, earlier reports and other studies; consequently, they present historic value and low accuracy,
- d. most analyses of funding gap focus solely on the supply side of the equation, failing to address the demand for individual forms of funding; in effect, the comprehensive analysis objective is not met,
- e. analyses of demand for individual forms of capital, if any, are based on unsubstantiated numbers of companies that may potentially profit from a given form of funding – no methodology for evaluation is given, no sources for such data are offered.

Hence, the majority of reports addressing the extent of funding gap are of historical value. To serve the purpose, they should provide prospective value. Due to a multitude of assumptions and the ever-changing conditions of the market (such as the impact of investment limits and investment policy upon the operation of VC funds), as well as the vague character of information available to angel investors in Poland, the reported volume of capital supply may be highly distorted.

This distortion is even more pronounced in respect to capital demand estimates. Capital requirements of companies change in time. In the case of small enterprises, this is further obfuscated by other determinants, such as behavioral unpredictability inherent in formation of capital structure and selection of funding sources. In respect

to attempts at assessing capital demand on the part of potential entrepreneurs who never entered the market due to capital access restrictions, the methodology suffers from problems in accessing the group of respondents who intend to enter the market (the problem of sample selection). In addition, even if such a sample was accessible and subject to query, one must face the problem of assessing whether the reported demand for capital needed to start the company and develop operational activity is adequate to market conditions. As shown in the studies of reasons for company bankruptcy, one of the causes of insolvency in the early stages of company development is the inadequate assessment of capital requirements [Bardley 2000, p. 7].

5. Conclusions

In the light of the above deliberations, it seems reasonable to resort to the thesis presented in the introductory paragraph, stating that accurate measurement of the funding gap is not a viable task. However, the analyses of funding gap are indispensable as a tool for monitoring the determinants that influence capital access on the part of SME sector, regarded by many as the fundament of market-based economy. Such analyses will help devise a range of instruments aimed at alleviating the extent of funding gap. For this to be effective, there is an urgent need for systematization of the data acquisition stage. Furthermore, a comprehensive methodology of such studies is needed, to ensure that reports presented by various experts in regard to the extent and boundaries of funding gap are comparable in time.

Literature

- Ang J.S., *On the theory of finance for privately held firms*, "The Journal of Small Business Finance" 1992, no. 1(3).
- Bardley D.B., *Lack of Financial and Location Planning Causes Small Business Bankruptcy*, <http://www.sbaer.uca.edu/research/asbe/2000/10.pdf>.
- Bridging the finance gap: a consultation on improving access to growth capital for small businesses*, Treasury and the Small Business Service, 2003.
- Cressy R., *Funding gaps: a symposium*, "The Economic Journal" 2002, no. 112.
- Dostęp MŚP do finansowania w regionie Wielkopolski. Ewaluacja Okresowa*, Urząd Marszałkowski Województwa Wielkopolskiego, Poznań 2008.
- Mechanizmy inżynierii finansowej w podnoszeniu efektywności absorpcji środków UE i ich znaczenie w polityce spójności po 2013*, Instytut Badań nad Gospodarką Rynkową (IBnGR), Gdańsk 2010.
- Macmillan H., *Report of Committee on Finance and Industry Committee on Finance and Industry*, London 1931.
- Michalski G., *Debt & Equity Costs Determinants in Small Enterprise: JEREMIE Fund Influence on Financial Situation of Small and Middle Enterprises*, Proceedings of 4. Mezinárodní Konference Řízení a Modelování Finančních Rizik, Ostrava 2008.
- Łuczka T., *Kapitał obcy w małym i średnim przedsiębiorstwie. Wybrane aspekty mikro- i makroekonomiczne*, Wydawnictwo Naukowe PWN, Warszawa-Poznań 2001.

- Prędkiewicz K., *Nowe Instrumenty finansowania odnawialnego dla sektora MŚP w ramach inicjatywy JEREMIE*, [in:] *Efektywność – rozważania nad istotą i pomiarem*, ed. T. Dudycz, G. Osbert-Pocięcha, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu nr 144, Wydawnictwo UE, Wrocław 2010.
- SME Access to Finance in Dolnośląskie Region. Interim Evaluation study*, Urząd Marszałkowski Województwa Dolnośląskiego, Wrocław 2008.
- Stiglitz J., Weiss A., *Credit Rationing in the Market with Imperfect Information*, American Economic Review 1981, no. 71(3).
- Storey D.J., *Racial and Gender Discrimination in the Micro Firms Credit Market? Evidence from Trinidad and Tobago*, "Small Business Economics" 2004, no. 23(5).
- Tamowicz P., *Analiza luki finansowej w województwie pomorskim w zakresie dostępu przedsiębiorców do zwrotnych instrumentów finansowych w kontekście realizacji działania 1.3 poza-dotacyjne instrumenty wsparcia MŚP w ramach regionalnego programu operacyjnego dla województwa pomorskiego na lata 2007-2013 w drodze inicjatywy JEREMIE*, Urząd Marszałkowski Województwa Pomorskiego, Gdańsk 2008.
- Tamowicz P., *Zapotrzebowanie mikro-, małych i średnich przedsiębiorstw (MŚP) na finansowanie kapitałem private equity/venture capital (PE/VC)*, Ministerstwo Gospodarki, Gdańsk 2007.
- The SME Financing Gap*, vol. 1: *Theory and evidence*, OECD Publishing, 2006.
- The Supply of Equity Finance to SMEs: Revisiting the "Equity Gap"*, Department for Business, Innovation and Skills, URN 09/1573, 2009.

CZY MOŻNA ZBADAĆ LUKE FINANSOWĄ?

Streszczenie: Artykuł dotyczy problemu słabej dostępności kapitału dla MŚP, czyli zjawiska występowania tzw. luki finansowej. Identyfikacja obszarów luki i jej pomiar są istotne z punktu widzenia instytucji, które dążą do zmniejszania jej rozmiarów. W opracowaniu podjęto przede wszystkim próbę odpowiedzi na pytanie, czy stosunkowo precyzyjny pomiar luki finansowej jest możliwy, biorąc pod uwagę przyczyny jej powstawania oraz dotychczas stosowaną metodykę wyznaczania. Artykuł składa się z trzech części. W pierwszej zaprezentowano różne definicje luki finansowej i podjęto próbę ich uporządkowania. Część druga to zarys ogólny stosowanej metodyki w zakresie identyfikacji i pomiaru luki finansowej. W ostatniej części przedstawiono uwagi w zakresie stosowanej przez różne instytucje (rządowe, samorządowe) metodyki identyfikacji i pomiaru luki finansowej i przedstawiono argumenty przemawiające za brakiem możliwości jej precyzyjnego pomiaru.

Słowa kluczowe: luka finansowa, luka kapitału, małe i średnie przedsiębiorstwa, dostęp do kapitału.