INTRODUCTION

Business angels as a source of financing for startups appear both in the model of financing sources of innovative undertakings proposed by Sherman, as well as the concept of “funding-escalator” presented by Mason [Sherman 2005, Mason and Harrison 2000]. They are perceived as investors interested mainly in the initial stages of startup development (pre-seed, seed) [Mason and Harrison 2008, Croce et al. 2016, EBAN 2018].

Practice indicates, however, that startups in the initial stage of development are financed mainly by equity from the founders, loans from family and friends (the “3Fs”) and public funds. Business angels or venture capital funds come second [Mason 2005, Mason and Harrison 2008]. For example, in Germany in 2014–2017, startups were financed by public funds (32%), family or friends (31%), business angels (25.4%), venture capital (21%), bank loans (12%) and other sources [Deutcher 2017]. In Poland, according to data from 2017, startups were primarily financed from own funds, including reinvested revenues (68%), and only secondly by venture capital funds (domestic or foreign funds, 40%), EU funds 38% [PARP/NCBiR] and 33% by business angels [Beauchamp and Kowalczyk 2016, Beauchamp et al. 2017].

A high percentage of startups supported by venture capital funds in Poland may result from their increasing activity at all stages of the startup’s development and insufficient activity of business angels [Deloitte 2016]. In addition, the share of public programs in the financing of startups in Poland shows a strong upward trend. This mainly applies to funds obtained from PARP and NCRD, but also to domestic accelerators. It is there-
fore difficult for business angels to compete with public funds, mainly because these funds do not require the founders to give up any shares and are largely non-returnable. However, the fact that Polish startups prefer first venture capital funds as a source of financing rather than business angels, despite the different investment characteristics of both sources of financing, is striking. On the other hand, considering the fact that the Polish startup ecosystem is just developing, and business angels are not very active due to numerous barriers both on the demand and supply side, their roles are quite effectively taken over by venture capital funds.

This proves that there is a need to learn and explain why the activity of business angels in financing startups is low. The timeliness and significant importance of the research problem shows that the obtained results can be an important source of knowledge for all institutions interested in supporting the development of startups.

The purpose of this research is to indicate the limitations of business angel activity in the financing of startups. These limitations were considered from the supply side and from the demand side of the startup project market. The demand side is represented by business angels who report demand for investment projects presented by startups. The supply side is represented by startups themselves. The added value of this publication is a comprehensive review of the restrictions on the activity of business angels in financing startups, considering both the demand and supply sides. The research to date has had a much narrower scope than the division of restrictions on the activity of business angels which is adopted in the study.

**BUSINESS ANGELS AND THEIR INVESTMENT PREFERENCES**

The term “business angels” comes from Broadway, New York from the late nineteenth century. It was defined as rich investors who provided high-risk capital for financing the production of new musicals and theatrical plays. Business angels have become a key source of financing for risk-bearing, but promising business projects. They have financially supported many well-known entrepreneurs, such as Alexander Graham Bell (Bell Telephone) and Henry Ford [Ramadani 2009]. The pioneer of research on business angels in America is Professor Bill Wetzel from the University of New Hampshire in the USA.

The term business angels define investors interested in investments in enterprises at the initial stages of development [Wetzel 1983]. A similar definition of the subject is presented in the Cambridge Dictionary [Cambridge Dictionary] and EBAN (European Business Angels Network) [EBAN glossary 2018]. Mason and Harrison [2008] define business angels as individual investors acting independently or in formal or informal syndicates who invest their own money directly in an unlisted company with which they have no family connections. After the investment, they take an active part in managing the enterprise as advisers or members of the supervisory board.

As Preston [2004] points out, business angels play an active part in the enterprise in which they invest. Usually, these are people with extensive experience, who know the industry and the market perfectly. Their extensive contacts and commitment support innovation and building the competitive advantage of a startup. The involvement of business angels is particularly high in Great Britain, Ireland, and Central and Eastern Europe [Marro and Borg 2016].

The capital provided by business angels is referred to as "patient capital". Business angels invest on average term (from 5 to 10 years) and long term (over 10 years). They may withdraw their shares from the investment by selling shares to a trade investor, founders, venture capital fund or entering the stock exchange [Dibrova 2015, Mason and Botelho 2016, Marro and Borg 2016].

The expectations of business angels regarding the average rate of return on investment varies depending on the country. In Austria, Germany and the countries of Central and Eastern Europe, they are higher than in other regions of Europe and range from 30 to 41% on average [Marro and Borg 2016]. The investors prefer entities from the Fintech sector (25.2%) and ICT (21.3%) [EBAN 2017]. Although less than a decade ago the ICT sector was the main sector preferred by business angels in Europe, other sectors such as health care, Biotech, Mobile, Energy, Finance and Business Services constituted a small percentage among startups financed by business angels (less than 10%) [Mason and Harrison 2008, EBAN 2010].
In some countries, finding business angels is very difficult. This is because business angels prefer local investments due to the ease of business management or the ease of performing due diligence [Preston 2004]. This is also confirmed by the studies of Marro and Borg [2016] and the EBAN 2017 Statistics Compendium. However, Devigne et al. [2013] gives a different opinion. The authors argue that nowadays the choice of business angel investment location is practically unlimited due to the globalization of financial markets [Devigne et al. 2013].

Great importance is given in the financing of startups not only to individual angels, but also to their groups or associations (networks). These groups are perceived by angels as having many advantages. Business angels can combine their capital to make larger investments, enable diversification of investment risk, undertake costly analysis of potential investment projects as a group, and reduce the burden on individual members. Additionally, these groups are generally more visible to entrepreneurs, and can finance more transactions, which is an important factor. Groups are also often led by leaders who are the most sophisticated and active business angels in a given region, which affects investment decisions and their effectiveness [Kerr et al. 2014, Bonini et al. 2018].

Wetzel noted that “both the scale of investment activity and the total number of business angels are unknown and probably impossible to learn” [Wetzel 1983]. Collecting statistical information on the investment activity of angels is extremely problematic due to the fact that the business angel market is unorganized and invisible to other investors, as well as to startups. Not all individual investors perceive themselves as business angels. A significant number prefer to preserve their anonymity. They are not identified. There is no business angel certification system.

**RESEARCH METHODS**

The article is a review article. The documentary method of literature review was used to implement the research problem. The use of the above-mentioned method was aimed at enriching knowledge about the limitations on the activity of business angels. The most important element of the study was the search for similarities and differences in the scope of restrictions on the activity of business angels in the world. This subject is mainly discussed in countries where the activity of business angels has been the largest so far, i.e. in the United States and Great Britain.

Limitations on business angel activity occur on the side of demand for investment projects represented by business angels, as well as on the projects presented by startups – the supply side [Wieczyński 2011]. Limitations on the demand side are presented in Table 1.

| Limitations on investment activity of business angels – demand side |
|---------------------------------------------------------------------|
| Lack of capital from business activities [Wieczyński 2011]          |
| Lack of knowledge, experience and competence in searching for projects and conducting investments on the private market |
| Lack of tax incentives [Saublens 2007, Witblank 2009, Wieczyński 2011, Marro and Borg 2016] |
| Diverse legal regulations. Frequent changes of law (including tax regulations) and bureaucracy [AFME 2017] |
| Lack of information available about business angels [Marro 2016, Engineer et al. 2018]. The lack of a single market for business angels; significant fragmentation of national and local ecosystems for startups [AFME 2017] |
| No exit strategy [Saublens 2007, Masonai Botelho 2016] |
| Lack of understanding of technology and startup potential arising from technology [Ewens and Rhodes-Kropf 2015, Plummer et al. 2016, Cambosu 2018] |
| Issues related to the protection of intellectual property and patents [Maro 2016] |
and the lack of knowledge, experience and competence in searching for projects and conducting investments on the non-public market [Wieczyński 2011]. The activity of business angels according to Saublens is very strongly dependent on taxes on private investment, capital gains or losses [Saublens 2007]. Marro and Borg [2016] indicate that the domestic fiscal system is the main obstacle for the investment of business angels. Investors from Italy, Luxembourg, Poland, the Netherlands, Croatia, Bulgaria, Ukraine, Denmark and Finland particularly complain about the high level of taxation in their country.

Tax incentives seem to have a large impact on business angel investment decisions. According to Wiltbank’s research [2009], 24% of business angel investments would not have been made without tax incentives. As Wieczyński and others [2011] point out, high taxes, no tax breaks, and frequent changes of law and bureaucracy are a major obstacle to angel activities in Poland. Even though Wieczyński’s analysis took place eight years ago, the situation in Poland has not fundamentally changed. According to the author, there is no private capital or incentives to invest for individual investors on risky projects at early stages of development.

Tax aspects seem to be one of the most significant restrictions closing the investment market in startups for individual investors, leaving only large funds as investment options. Similarly, Marro [2016] indicates that tax aspects are the most important limitations on investment activities of business angels in Europe. Other constraints such as the national legal framework and the excessive bureaucracy that investors must face at the start of the investment are of slightly less importance.

Engineer et al. [2018] shows that the lack of available information about individual business angels is the main limitation of the activity of business angels. The authors believe that the arduous search for business angels by entrepreneurs is a consequence of a purposeful strategy: that business angels prefer to provide as little information as possible so that they are not flooded with proposals by inefficient entrepreneurs.

Another limitation that can affect the level of future business angel activity is the lack of exit strategies. These restrictions were indicated by Saublens [2007], Masona and Botelho [2016], as well as the authors of the Finance for Europe report The Shortage of Risk Capital for Europe’s High Growth Businesses [AFME 2017].

An important limitation on the demand for startup projects reported by business angels is the lack of understanding of technology and the potential of the startup resulting from technology. Due to the complexity of the startups, deep tech startups especially have much more difficulty obtaining financing. It is difficult to attract an investor who is competent and able to read the enterprise’s potential and also understand the technology offered by the startup [Cambosu 2018]. The lack of understanding of the potential of radical innovation and technology, which leads to a reduction of interest on the part of investors, is also indicated by Plummer, and Ewens and Rhodes [Ewens and Rhodes-Kropf 2015, Plummer et al. 2016].

In addition, among the limitations on business angel investment, the following are also mentioned:

- no information available regarding business angels,
- the lack of a single market for business angels,
- significant fragmentation of national and local ecosystems,
- diverse legal regulations, including tax regulations [AFME 2017],
- issues related to the protection of intellectual property and patents,
- the potential of the international market in the short term,
- the negative impact of the product on the environment,
- the ethical dimension of the undertaking,
- social responsibility,
- discrimination based on sex [Marro 2016].

LIMITATIONS ON THE INVESTMENT ACTIVITY OF BUSINESS ANGELS – THE SUPPLY SIDE

The main factor limiting the investment activity of business angels from the supply side is the failure of startups to meet the investment criteria imposed by business angels on projects submitted for funding. Limitations on investment activity of business angels on the supply side are presented in Table 2. A too-high
risk of enterprise failure as the main factor limiting the activity of business angels is indicated by the EBAN report from 2018 [EBAN 2018].

From research by Mason and Harrison [2000] and Carpentier [2015], it appears that about 3–5% of projects are funded. The lack of faith and trust in the founder or board of the enterprise as well as lack of motivation and faith in the success of the enterprise, in the management team, or a weak entrepreneurial spirit are also a limitation of the activity of business angels [Maxwell and Lévesque 2014, Murnieks et al. 2016, Warnicki et al. 2018].

Crocket et al. [2016] and Mason et al. [2017] indicate that, among the limitations on investment activity of business angels, is a lack of experience and business competences of founders or startups in raising funds from business angels, including lack of knowledge of so-called investment readiness, which is the capacity of an enterprise to understand and meet the specific needs and expectations of investors [Aminoff 2018]. According to Carpentier [2015], if a startup is not managed by a management team with industry-related competence, it will not get financing by business angels. Saublens [2007] mentions that among the limitations of the activity of business angels in startup finance are: high transaction costs, too-low investment value, unrealistic project budgets, dilution of shares in subsequent financing rounds, different perception of project innovation by both parties, and also projects that are replicas of foreign projects.

The authors of the OECD report [2016] pointed out that limitations on business angel activity could be found in poor business models combined with a lack of business strategies, flawed financial planning, and lack of communication skills from entrepreneurs. The above-mentioned limitations are confirmed by the authors of the expert opinion from the Ministry of Economy. The majority of investment projects in Poland worth up to several million PLN are, among other things, inadequately prepared in terms of substance, have unjustified valuation expectations, and exhibit excessive concentration on technical aspects. The lack of experienced managerial staff [Wieczyński et al. 2011] is still a part of these limitations. Similarly, in the EBAN 2018 report, the authors indicated that business angels decide not to invest due to, among other reasons:

Table 2. Limitations on investment activity of business angels on the supply side

| Limitations on investment activity of business angels on the supply side |
|---|
| Too high risk of venture failure [EBAN 2018] |
| Lack of faith, motivation and trust in the founder or board [Maxwell and Lévesque 2014, Murnieks et al. 2016, Warnicki et al. 2018] |
| Lack of communication skills [Crocet et al. 2016, Mason et al. 2017] |
| Lack of experience and business competence of the founders [Crocet et al. 2016, Mason et al. 2017] |
| High transaction costs [Saublens 2007] |
| Too low investment value [Saublens 2007] |
| Too low rate of return |
| Unrealistic project budget [Saublens 2007] |
| Bad business models combined with a lack of business strategies [OECD 2016] |
| Overpriced valuation [EBAN 2018] |
| Excessive focus on technical aspects [EBAN 2018] |
| Omission of market-related factors [EBAN 2018] |

Source: Author’s own study.
poorly prepared projects, unjustified valuation, low return on investment. Excessive focus on product and technology, bypassing market-related factors, such as proven demand and clear competition landscape, also effectively deter investors [EBAN 2018].

CONCLUSIONS

Business angels can play an important role in financing startups if appropriate steps are taken to reduce restrictions on both the demand and the supply side of startup projects. Among the many factors limiting the activity of business angels on the demand side for startup projects are lack of capital, knowledge, competence and experience, and above all the lack of tax incentives for investment activities and complex tax law. The fiscal system seems to be a factor that, thanks to properly created tax incentives, as research in the United Kingdom shows, is able to effectively increase the activity of business angels. Approximately 24% of business angel investments would not have been realized in the UK without tax incentives [Witblank 2009]. In Poland, there are no studies on tax incentives for business angels, but tax issues – high taxes, no tax incentives for business angels, frequent changes in law, including tax laws – are a very significant obstacle to business angel activity.

A factor limiting the activity of business angels which is increasingly emphasized in the literature is the lack of understanding of technology and the startup’s potential resulting from a given technology. This is particularly true for technology startups. Due to the complexity of startups, especially deep technology startups, it is much more difficult to attract an investor who is competent and can read the startup potential resulting from modern technology.

Factors limiting the activity of business angels on the supply side of projects reported by startups can be broadly described as factors influencing the failure to meet investment criteria imposed by business angels. The shape of these factors is largely influenced by startups themselves. These factors range from too-high venture risk to a lack of knowledge, experience and competence of management boards/founders to strictly economic factors, such as: high transaction costs, low return on investment, unjustified project valuation.

Restrictions on business angels are the result of poor-quality projects submitted by startups. No business angel will be interested in a project in which a weak business model or lack of business strategies, or faulty financial planning and lack of communication skills on the part of entrepreneurs, will appear.

Based on the review of factors limiting the activity of business angels on both the demand and supply sides, it is not possible to effectively reduce these restrictions without interference from public institutions.

REFERENCES

AFME (2017). The Shortage of Risk Capital for Europe’s High Growth Businesses. Retrieved from: https://www.afme.eu/portsals/0/globalassets/downloads/publications/afme-highgrowth-2017.pdf [accessed 26.12.2018].
Aminoff, J. (2018). Business Angel Financing. An EU Perspective. European Investment Fund, Luxembourg. Retrieved from: https://tem.fi/documents/1410877/7325723/1nJuo+a+Minooff+EIF/oa2d270b-7f3d-401d-8b 5f-69bab9d40e4/Juho+Aminoff+EIF.pdf [accessed 27.12.2018].
Beauchamp, M., Kowalczyk A. (2016). Raport Polskie Start-upy 2016. Fundacja Startup Poland, Warszawa.
Beauchamp, M., Kowalczyk, A., Skala, A. (2017). Polskie Startuty Raport 2017. Fundacja Startup Poland, Warszawa.
Beauchamp, M., Krysztofiak-Szopa, J., Skala, A. (2018). Polskie Startupy Raport 2018. Fundacja Startup Poland, Warszawa.
Bonini, S., Capazzi, V., Valletta, M., Zocchi, P. (2018). Angel network affiliation and business angels’ investment practices. Journal of Corporate Finance, 50, 592–608.
Cambridge Dictionary. Retrieved from: https://dictionary.cambridge.org/dictionary/english/business-angel [accessed 10.12.2018].
Carpentier, C., Sere, J.-M. (2015). Angel group members’ decision process and rejection criteria: a longitudinal analysis. Journal of Business Venturing, 30, 808–821.
Croce, A., Tenca, F., Ughetto, E. (2016). How business angel groups work: Rejection criteria in investment evaluation. International Small Business Journal: Researching Entrepreneurship, 35 (4), 405–426.
Deloitte (2016). Diagnoza ekosystemu startupów w Polsce. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/pl/Documents/Reports/pl_Deloitte_rap ort_startupy.pdf [accessed 20.12.2018].
Devigne, D., Vanacker, T.R., Manigart, S., Paeleman, I. (2013). The Role of Domestic and Cross-border Venture Capital Investors in the Growth of Portfolio Companies. Small Business Economics, 40 (3), 553–573.

Dibrova, A. (2015). Business Angel Investments: Risks and Opportunities. Procedia – Social and Behavioral Sciences, 207, 280–289. Retrieved from: http://linkinghub.elsevier.com/retrieve/pii/S1877042815052301 [accessed 10.12.2018].

EBAN (2010). Statistics Compendium 2010. Brussels. Retrieved from: http://www.eban.org/wp-content/uploads/2013/10/EBAN-Statistics-Compendium-2010.pdf [accessed 15.2.2018].

EBAN (2016). EBAN statistics compendium European Early Stage Market Statistics 2016. Retrieved from: http://www.eban.org/wp-content/uploads/2017/11/Statistics-Compendium-2016-Final-Version.pdf [accessed 02.01.2019].

EBAN (2018). EBAN Why Business Angels Do Not Invest. Retrieved from: https://www.eban.org/wp-content/uploads/2018/02/EBAN-Report-Why-Business-Angels-Do-Not-Invest.pdf [accessed 02.11.2019].

EBAN glossary. Retrieved from: http://www.eban.org/glossary/business-angel [accessed 10.12.2018].

EBAN Statistics Compendium 2017 (2018). European Early Stage Market Statistics. Retrieved from: https://www.eban.org/statistics-compendium-2018-european-early-stage-market-statistics/ [accessed 28.12.2018].

Engineer, M.H., Schure, P., Vo, D.H. (2018). Hide and seek search: Why angels hide and entrepreneurs seek. Journal of Economic Behavior and Organization, 157(C), 523–540. https://doi.org/10.1016/j.jebo.2018.10.007

Kerr, W.R., Lerner, J., Schoar, A. (2014). The consequences of entrepreneurial finance: Evidence from angel financings. Review of Financial Studies, 27 (1), 20–55.

Kollmann, T., Stöckmann, Ch., Hensellek, S., Kensbock, J. (2017). Deutcher Startup Monitor 2017. Mut und Machter. KPMG, Berlin. Retrieved from: https://deutscherstartupmonitor.de/fileadmin/dsm/dsm-17/daten/dsm_2017.pdf [accessed 21.21.2018].

Marro, P., Borg, L. (2016). Understanding the Nature and Impact of the business angels in Funding Research and Innovation. Retrieved from: http://www.eban.org/wp-content/uploads/2017/11/Final-Report_Understanding-the-Nature-and-Impact-of-the-business-angels-in-Funding-Research-and-Innovation_FV.pdf [accessed 20.12.2018].

Mason, C., Harrison, R.T. (2008). Measuring business angel investment activity in the United Kingdom: A review of potential data sources. Venture Capital, 10 (4), 309–330.

Mason, C., Botelho, T. (2016). The role of the exit in the initial screening of investment opportunities: The case of business angel syndicate gatekeepers. International Small Business Journal, 34 (2), 157–175.

Mason, C., Botelho, T., Zygmunt, J. (2017). Why business angels reject investment opportunities: Is it personal? International Small Business Journal: Researching Entrepreneurship, 35 (5), 519–534.

Mason, C., Harrison, R.T. (2000). The size of the informal venture capital market in the United Kingdom. Small Business Economics, 15(2), 137–148.

Maxwell, A.L., Lévesque, M. (2014). Trustworthiness: a critical ingredient for entrepreneurs seeking investors. Entrepreneurship Theory and Practice, 38, 1057–1080.

Murnieks, C.Y., Cardon, M.S., Sudek, R., White, T.D., Brooks, W.T. (2016). Drawn to the fire: the role of passion, tenacity and inspirational leadership in angel investing. Journal of Business Venturing, 31 (4), 468–484.

OECD (2016). Financing SMEs and Entrepreneurs 2016: An OECD Scoreboard. OECD Publishing, Paris. http://dx.doi.org/10.1787/fin_sme_ent-2016-en

Preston, S.L. (2004). Angel investment groups, networks, and funds: a guidebook to developing the right angel organization for your community, 2014th ed. Ewing Marion Kauffman Foundation, Kansas City.

Ramadani, V. (2009). Business angels: who they really are. Strategic Change, 18, 249–258.

Saublens, C. (2007). All Money Is Not the Same! SME Access To Finance. Guidebook for Public Decision-Makers and Intermediaries. EURADA.

Warnick, B.J., Murnieks, C.Y., McMullen, J.S., Brooks, W.T. (2018). Passion for entrepreneurship or passion for the product? A conjoint analysis of angel and VC decision-making. Journal of Business Venturing, 33, 315–332.

Wetzel, W.E. Jr. (1983). Angels and Informal Risk Capital. Sloan Management Review, 23–34.

Wieczyński, P., Jura, P., Bijas, A., Dąbrowska, E. (2011). Raport Bariery w rozwoju rynku aniołów biznesu w Polsce. Ministerstwo Gospodarki, Warszawa, 1–74.

Wilbank, R. (2009). Siding with the Angels: Business angel investing – promising outcomes and effective strategies. NESTA/ British Angels Business Association. Retrieved from: https://www.effectuation.org/?research-papers=siding-with-the-angels-business-angel-investing-promising-outcomes-and-effective-strategies [accessed 20.12.2018].

Wilbank, R., Boeker, W. (2007). Returns to Angel Investors in Groups. Ewing Marion Kauffman Foundation, Kansas City.
OGRANICZENIA AKTYWNOŚCI ANIOŁÓW BIZNESU W FINANSOWANIU STARTUPÓW

STRESZCZENIE
Artykuł ma na celu identyfikację ograniczeń aktywności aniołów biznesu w zakresie finansowania startupów. Anioły biznesu są najważniejszym źródłem kapitału zewnętrznego dla startupów, oprócz rodziny i przyjaciół. Jednak aktywność aniołów biznesu jest ograniczona nie tylko w Polsce, ale także w innych częściach świata. Ograniczenia te wynikają z wielu warunków dotyczących zarówno popytu, jak i podaży. Badanie pogłębiają teoretyczne rozważania o ograniczeniach aktywności aniołów biznesu w finansowaniu startupów z punktu widzenia barier popytowych i podaży. Artykuł uzasadnia, że od strony popytowej największymi ograniczeniami aktywności aniołów biznesu w finansowaniu startupów jest brak zachęty podatkowej dla działalności inwestycyjnej i skomplikowane prawo podatkowe. Z kolei od strony podaży jest to niespełnianie kryteriów inwestycyjnych narzuconych startupom przez anioły biznesu. Na podstawie przeprowadzonych badań można stwierdzić, że bez interwencji instytucji publicznych trudno będzie skutecznie zmniejszać ograniczenia aktywności aniołów biznesu w finansowaniu startupów.

Słowa kluczowe: źródła finansowania, finanse przedsiębiorstw, startup, anioł biznesu, inwestycje aniołów biznesu