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Financial risk-taking behaviour: A comparative study of Iceland and Poland

Verena Karlsdóttir[1,3*], Már Wolfgang Mixa[2], Anna Maria Wojtynska[2]

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[1]University of Akureyri Iceland, Norðursloð, Akureyri, Iceland
[2]University of Iceland, Reykjavík, Iceland
[3]ORCiD: 0000-0003-0256-6350
*Corresponding author: Verena Karlsdóttir: verena@unak.is

Abstract. This article adds to the limited empirical research integrating socio-economic and individual perspectives in studying financial risk-taking behaviour. It thereby considers the impact of national and individual characteristics on individuals' propensity for financial risk-taking. The primary objective was to demonstrate that risk propensity is not a singular construct, highlighting the necessity to account for different individual and socio-economic factors. Further, it emphasizes that financial risk-taking should be distinguished into different sub-dimensions, such as gambling and investing, concepts reasonably defined consistently in academic literature. For this research, we surveyed Polish and Icelandic business students using the Domain-Specific Risk-Taking (DOSPERT) scale. Results show that gambling decisions are predominantly influenced by individual characteristics such as gender. Investment decisions are affected by individual and external factors like nationality, economic context, and employment status. Nationality significantly impacts investment behaviour, but not gambling, whereas Polish students appear more risk-averse to investing. Further research is needed to explore the nuanced interactions between nations, the socio-financial environment, and individual financial decision-making.

Keywords: Gambling, Investing, Risk-taking, Poland, Iceland.

Introduction

Risk-taking propensity is a fundamental characteristic that reflects an individual's consistent inclination to embrace or avoid engaging in risky behaviour when confronted with uncertain situations (Sitkin & Pablo, 1992). This propensity can similarly present itself as a general risk-taking trait or be domain-specific regarding financial decision-making (Nicholson et al., 2005).

An essential aspect of risk-taking research is that individuals known for their high-risk tendencies in certain activities, such as recreational ones, may display only moderate risk-taking attitudes in different spheres, such as financial decisions (Hanoch et al., 2006). Prior research has often neglected the multifaceted nature of financial risk-taking (Deck et al., 2014; Díez-Esteban et al., 2019). This gap is noteworthy given the broad spectrum of financial risk-taking activities, which can generally be categorized into two primary categories: Gambling and investing. These two categories' diverse characteristics have recently been more commonly acknowledged (Newall & Weiss-Cohen, 2022; Sekścińska & Rudzinska-Wojciechowska, 2021; Shang et al., 2021).

Understanding financial risk-taking behaviour is essential for both economic theory and practical decision-making. While previous research has extensively assessed individual factors such as gender differences in risk preferences, less is known about how national context affects financial decision-making. This study analyses financial risk-taking across investment and gambling by comparing business students in Iceland and Poland – two countries with distinct economic histories and financial systems.

Within behavioural economics, financial risk-taking behaviour has been a focal point of inquiry (Hemrajani et al., 2023; Teodósio et al., 2021). This field primarily identifies various actions and decision-making related to monetary management and wealth creation (Baddeley, 2018; Kumar & Goyal, 2015). Here, behavioural economists have devoted considerable efforts to investigate the impact of various factors, such as psychological, social, and cognitive, on the ways individuals engage with financial risks, aiming to unravel the underlying determinants of risk avoidance and – conversely – on risk-taking propensity (Kahneman & Tversky, 1979; Thaler & Sunstein, 2008; Tversky & Kahneman, 1974). At the same time, the role of culture – defined as shared values, norms, and beliefs – in influencing financial behaviour has been increasingly accepted (Zingales, 2015). Accordingly, a growing body of research has reported differences in risk perception between countries, typically contributing to distinctive national cultures (Czerwonka, 2019; Ozorio et al., 2010), as classified by Hofstede (1980).

The primary objective of this study is to examine differences in financial risk behaviour between Poland and Iceland. These are two countries at the edge of Europe in different senses. Poland was beyond the

Iron Curtain for many decades following WW II, whilst Iceland´s location is far from its mainland. While looking separately at gambling and investing, we investigate the role of nationality and other individual factors in shaping risk behaviour. However, while many previous studies refer to the Hofstede index to explain differences between countries, we focus on socio-economic factors, such as evolving local financial landscapes, rather than Hofstede´s dimensions. The main contribution of this research is to critically engage with a certain reliance on Hofstede's classification to explain national differences in financial behaviour while not focusing on each dimension. Furthermore, since our data show that financial risk-taking is not a unitary construct, we argue that different sub-types of financial risk should be considered separately.

Thereby, this study attempts to answer the following research questions:

What are the main factors that influence financial risk behaviour among business students in Poland and Iceland concerning gambling and investing? How is nationality associated with differences in risk propensity? To what extent can the differences between these nations be attributed to predominant cultural dimensions, such as those categorized by Hofstede, or socio-economic or other relevant factors?

A cross-national study was conducted to address the research questions posed. The study utilized survey data gathered from business school students in Iceland and Poland to explore the gambling and investment behaviour prevalent within these samples. The study thus investigates self-reported risk propensity, not actual behaviour. The study is hence designed to examine decision-making frameworks and perceptions of financial risk rather than track specific behaviours. Self-reported data remain a commonly used and valuable tool in behavioural research (e.g., Eccles et al., 2006; Flisher et al., 2004; Nott & Walker, 2021), offering insight into individuals' intentions, motivations, and subjective risk perceptions –factors that are not always directly observable through behavioural data. Moreover, research has shown that stated preferences and self-reported risk attitudes often predict real-world financial behaviours (Dohmen et al., 2005; Markiewicz & Weber, 2013). Moreover, while cultural differences provide an essential context for understanding financial risk-taking, this study does not treat culture as a directly tested variable in the empirical model. Instead, national differences between Iceland and Poland are examined as a broader framework for interpreting potential variations in risk perception.

Selecting business administration students in two countries enables the assumption of a certain degree of homogeneity, hence limiting the influence of potential other factors, such as financial literacy levels. The study analyses two groups' gambling and investing habits to identify the factors influencing their behaviour. This analysis includes examining participants' risk aversion, individual characteristics, and country of origin. The study's main conclusion is that the difference in risk-taking behaviour

between the two countries was only observed in the case of investing but was insignificant in the case of gambling. Thus, judging from the participants' self-evaluation, while gambling is more dependent on individual factors, investing is more affected by outside circumstances or specific financial landscapes. The main difference, however, lies in gender, aligning with previous studies (Czerwonka, 2019).

We begin this paper by highlighting relevant prior research on financial risk-taking. We then delve into cultural influences on financial behaviour concerning risk. This discussion is followed by an analysis of the dimensional model and differences between socio-economic contexts, which we then compare between Iceland and Poland. A data and methodology section follows, after the main conclusions. Finally, we discuss the main findings, and since this is an initial step in such comparative research with various limitations, we discuss possible additional future research needed to provide a more integrated approach.

Financial risk-taking

Financial risk-taking plays a fundamental role in the global economy, influencing everything from individual investment choices to the stability of markets worldwide (Martin & Potts, 2009; Schluter & Hodgins, 2021). At its core, financial risk-taking involves the potential for loss in pursuit of a desired financial outcome, a vital aspect of any investment decision. By distinguishing between distinct factors that influence risk-taking behaviour, one can gain insights into the complexities of financial decision-making processes. Furthermore, examining the factors influencing financial risk-taking, from individual characteristics to socio-economic aspects, provides a comprehensive understanding of how people direct risks in a constantly changing economic environment.

In this study, we distinguish between two types of financial risk-taking, gambling and investing, representing monetary domains wherein individuals seek to optimize gains while minimizing losses. These activities share several common characteristics, such as risk, voluntary participation, and a motivation for financial gains (Arthur et al., 2016). Research by Blais and Weber (2006) revealed domain-specific risk attitudes, illuminating that individuals are less willing to take risks in the gambling domain than in the investment domain. Gambling, as defined by Arthur et al. (2016), represents risky behaviour influenced by chance, typically yielding expected negative returns. Gambling activities can be broadly categorized into two groups; „non-skilled" games, like roulette or slot machines, ensure long-term losses for players (Epstein, 2012), while „skill-based" games, such as sports betting or poker, may offer the possibility of long-term earnings for some participants (Kaunitz et al., 2017).

Conversely, investing is characterized by lower risk, influenced to a certain extent by skill, especially risk diversification, and generally associated with expected positive returns. Investing entails the allocation of capital into opportunities that facilitate wealth creation and the potential for

long-term profitability. Unlike gambling, investing aims to generate added wealth, positioning it as a „positive-sum game" (Engle, 2008). It is essential to acknowledge that the distinction between these two financial activities is not merely theoretical but has practical implications. Arthur et al. (2016, p. 580) summarize this as investments having connotations with positive expected returns, while gambling has connotations of negative expected returns and being „potentially addictive and/or financially ruinous." As such, the distinction and implications can assist individuals in navigating the financial world and inform policy development, e.g., in shaping regulatory frameworks that protect consumers. In this study, we propose the following hypothesis:

Hypothesis 1: *Factors influencing individual risk-taking behaviour differ between gambling and investing due to essential differences in anticipated risk levels and expected returns.*

While some have introduced a third dimension of financial risk-taking behaviour – financial speculation (note 1) (Díez-Esteban et al., 2019; Illiashenko & Laidroo, 2020) lying between gambling and investing, this study focuses exclusively on differentiating the categories of investing and gambling. However, as previous comparative analyses of financial behaviour predominantly concentrated on solely investing (Sekścińska & Rudzinska-Wojciechowska, 2021; Vlaev et al., 2010), this study takes a more comprehensive approach by distinguishing between gambling and investing, similar to Sekścińska and Rudzinska-Wojciechowska (2021) and Vlaev et al. (2010).

Individual factors, including risk-taking tendencies, stimulus-seeking behaviour, and impulsivity, have been identified as influential determinants of investment and gambling behaviour (Jadlow & Mowen, 2010). Research indicates that individuals with higher levels of impulsivity tend to engage in more frequent gambling activities. In contrast, individuals characterized by lower risk-taking tendencies and reduced impulsivity are motivated to make safer investment decisions (Arthur et al., 2016). These insights underscore the complex interplay between personality traits and financial risk behaviour within the domains of gambling and investing.

Generally, males take more risk in most domains of life than women (Booth & Nolen, 2012; Byrnes et al., 1999). This behaviour also applies to financial risk-taking propensity (Czerwonka, 2019; Powell & Ansic, 1997), which can be attributed to differences in risk perception, financial literacy, and socialization patterns that encourage or discourage risk-taking (Garrison & Gutter, 2010). Barber and Odean (2001) concluded that men engage in trading more frequently than women and, when accounting for risk, tend to have lower earnings. This discrepancy is even more significant among single men. While subsequent studies generally support the notion that women tend to be more risk-averse, this gap might decline as wage differences between genders decrease (Brooks et al., 2019).

Culture as a factor influencing financial behaviour

Behavioural economics has traditionally operated under the premise of universality, suggesting that financial behaviours are normative and consistent across cultures (Reuter, 2011). This assumption has been challenged by cultural economics, a field that can be defined as an interface between finance and social science. It investigates how cultural norms, values, and practices influence financial decision-making processes and outcomes within various societies, indicating that cultural differences substantially shape financial attitudes and behaviour (Breuer & Quinten, 2009; Hofstede et al., 2010; Reuter, 2011). In this study, culture is considered as a contextual factor rather than a tested hypothesis within the empirical model. Recognizing cultural influences in financial decision-making helps situate the findings within a broader socio-economic framework, highlighting potential variations in financial behaviour across different national contexts.

A substantial body of cross-national studies applies Hofstede's classification of cultural differences to explain divergent national patterns in risk-taking behaviour (Hofstede et al., 2010). In principle, Hofstede's method employs questionnaires to measure dominant cultural values on six dimensions: power dynamic, individualism, uncertainty avoidance, masculinity, long-term orientation, and indulgence. As in our example, Hofstede´s method uses a homogeneous group instead of a broad population range. The model's strength, and a plausible reason for its extensive use, is the utility and convenience of a systematic framework that readily explains differences in risk-taking behaviour between nations. As identified in previous studies (Breuer & Quinten, 2009), individualism versus collectivism has implications for financial risk preferences. Li et al. (2013) conclude that individualism is positively associated with corporate risk-taking. We attempt, however, to demonstrate that, absent reliance on the Hofstede rubric, there exists the possibility of inferences in respect of the determinants of investment behaviour.

According to Hofstede's model, Poland exhibits characteristics of a hierarchical and masculine society, with a strong preference for avoiding uncertainty (Glinkowska-Krauze et al., 2020; Hofstede et al., 2010). Moreover, Poland is considered collectivist, suggesting a predisposition toward lower risk aversion compared to individualistic societies like the US (Czerwonka, 2019). In this respect, Iceland scores on a higher individualistic level on the Hofstede scale. Thus, we expect:

Hypothesis 2: *Icelandic students exhibit a higher propensity for financial risk-taking in investment activities than Polish students.*

Hypothesis 3: *Polish students demonstrate a lower likelihood of engaging in gambling activities than Icelandic students.*

Limitations of Hofstede model

However, the Hofstede model has been under ongoing critical scrutiny for its relatively reified understanding of culture, which is fundamentally equated with the nation-state, and so overlooking internal variances (Baskerville, 2003; Devinney & Hohberger, 2017; McSweeney, 2002). While most countries have always been characterised by different degrees of cultural diversity, the assumption of distinctive national cultures can be even more problematic and indefensible with the current globalization processes. Moreover, Ailon (2008) raised concerns about the Western-centric nature of the data used in Hofstede's studies, suggesting that these bias limits the generalizability of the findings.

One of Hofstede's assumptions is that societies only change gradually over long periods (Hofstede et al., 2010). This rigidity hardly relates to Iceland and Poland; both have transformed significantly and swiftly in the financial sense since the 1990s, as will be briefly displayed later. Cultural and socio-economic change also relates to the countries' exposure to international information, including access to news in financial markets such as CNNfn and Bloomberg Television. Both countries experienced historical times of relative isolation – Poland due to its former alignment with the Eastern Bloc, and Iceland because of its limited international connections. With the fall of communism in 1989, the advent of the Internet and accessible communication (phone and other communication apps), residents of both countries gained access to international financial information and investments, causing significant shifts in their cultural and socio-economic dynamics with both nations becoming more internationalized and integrated into the global financial system (Mixa & Vaiman, 2015).

Komor and Schumann's (2015) study critically reevaluates Hofstede's findings on Poland, pointing out the country's substantial socio-economic evolution. Their analysis reveals inconsistencies in the initial assessments, particularly regarding Poland's cultural dimensions. Notably, using the Individual Culture Value Scale (CVSCALE), they found Poland to exhibit a lower level of uncertainty avoidance than Hofstede's earlier index suggested (a score of 69 compared to 93), despite still being high compared to other nations. This adjustment reflects the dynamic nature of cultural attitudes and the importance of considering temporal fluctuations in societal values. Furthermore, Komor and Schumann (2015) observed a significant deviation in the individualistic-collectivist dimension. Contrary to Hofstede's initial classification, their findings suggest Poland leans more towards collectivism (scoring 41 versus Hofstede's 60). This insight challenges previous assumptions and indicates a potential shift in financial risk-taking behaviour, suggesting that Poles may be more inclined towards collective decision-making and risk-sharing.

Regarding Iceland, former research suggests low uncertainty avoidance of Icelanders, shaped by the unpredictable nature of their history, unstable factors such as varying fish populations and changing weather

conditions regarding fishing – one of its primary industries, and the challenging living conditions in the high north (Mixa & Vaiman, 2015). These cultural conditions foster a relaxed attitude toward time and have translated into solid optimism, excessive risk-taking, and adventurism among Icelanders, associated with a lack of self-discipline. These traits further influenced the 1990s and early 2000s events, culminating in the late 2008 economic crisis (Mixa, 2015; Vaiman et al., 2011). Before the financial crisis, Icelanders exhibited a tendency towards risk-taking in their actions and decisions, as evidenced by an Uncertainty Avoidance Index (UAI) score of 40 (Vaiman et al., 2011). This tendency appears to have altered significantly in the aftermath of the crisis, with Gudlaugsson et al. (2014) documenting a UAI score of 77, indicating an increased uncertainty avoidance. This apparent discrepancy points to the need for a better understanding of the Icelandic socio-financial context, especially considering the timing of the study in the aftermath of the economic crash.

The application of Hofstede's model is thus susceptible to the timing of the study. The variability further complicates the interpretation of cultural dimensions and their impact on a specific behaviour, particularly in a rapidly changing socio-economic context like Iceland's (Mixa, 2015) and as shown above, Poland's. This nuanced understanding underscores the variability of cultural dimensions and the need for ongoing research to capture the developing nature of societies, especially in countries like Poland or Iceland that have experienced rapid changes in recent decades.

Significantly, the extensive reliance on the Hofstede culture index results in overseeing other potential factors that might explain cross-cultural differences. As Shiller (1995) suggested, risk-taking behaviour is not solely determined by cultural factors, contending that risk tolerance variations can also be attributed to the socio-economic environment.

According to Shiller (1995), risk-taking behaviour differences stem from the cognitive processes related to human memory, mainly shaped by communication patterns within specific social groups within nation-states. These patterns often revolve around local information, encompassing elements such as political and economic stability or the prevalence of corruption within a country. Shiller (1995) further highlights how risk tolerance differs between generations, with those who have not experienced extreme economic conditions such as war times – as in the case of Poland – being more inclined to take risks. Also, Bellucci et al. (2020) show that warfare exposure during childhood is associated with added risk aversion in later life, while Verdickt (2019) concludes that investors become more risk-averse with increased discussions of war in the news. These observations resonate with the notion that exposure to certain socio-economic conditions influences individuals' risk perceptions (Campbell & Shiller, 2001). As an illustrative economic example, Shiller (1995) notes that savings rates vary significantly across countries, with this variance linked to factors such as inflation rates.

Interestingly, Baskerville (2003) observed that Hofstede's cultural dimensions might be closely interlinked with social, political, and economic measures, such as gross domestic product (GDP), economic growth, or population density. This would further indicate that what Hofstede calls cultural values may reflect specific socio-economic environments or situations rather than intrinsic cultural traits of a given nation.

Accordingly, this article considers other socio-economic factors that may influence cross-national differences in financial behaviour. To dissect the multifaceted influences on risk behaviour, variables and factors used in this study are categorised as „individual" (e.g., age, gender) and „external" (e.g., nation or nationality). The term „nationality" encompasses distinctions between states concerning financial arrangements, social institutions, economic performance, and other relevant contextual factors. This approach acknowledges that risk-taking behaviour is shaped by individual characteristics and the broader socio-economic environment, encompassing cultural, economic, and political elements. When studying financial risk behaviour within behavioural economics, it is essential to acknowledge the intricate interplay between individual characteristics and external influences to grasp the complexities involved. In the following part, we outline the socio-economic context of Iceland and Poland that may influence financial behaviour in both countries.

Socio-economic environment of Iceland and Poland

In Iceland, the historical context plays a substantial role in shaping financial risk behaviour. Iceland's financial landscape from 1930 until 1995 was characterized by a rigid, restricted, and government-controlled environment (Mixa & Sigurjónsson, 2013). During the transformation of Iceland's financial system in the mid-1990s until the economic crash in 2008, Iceland had one of the world's lowest savings ratios (The World Bank, n.d.-b) despite high salaries (The World Bank, n.d.-a). Following the 2008 crash, trust in banks and financial institutions plummeted (Loftsdóttir & Mixa, 2018). Despite these changes, the high standard of living in Iceland and its individualistic cultural traits contributed to a culture that leaned towards financial risk-taking whereby it is crucial to note that the changes within Iceland's financial institutions were not solely attributable to core values within Icelandic culture (Mixa & Vaiman, 2015). Estimates also suggest a positive correlation between per capita gross domestic product (GDP) and investment in Iceland, aligning with the unique dynamics of the Nordic financial environment (Kristjánsdóttir, 2016).

Poland's historical and economic background provides a distinct contrast. From 1945 to 1989, Poland operated under a centrally planned economy, resulting in lowered incomes, poverty, shortages of essential goods, and a restricted financial system. After the fall of the Iron Curtain, Poland embarked on creating a monetary system from scratch, transitioning from a non-market-regulated financial landscape to a more open and liberalized one (Mixa & Sigurjónsson, 2013). Poland remained relatively

unscathed by the global economic crisis, with no bankrupt financial institutions or significant financial market tensions (Rae, 2013). The rapid neo-liberalization, however, brought changes in spending patterns and saving ideals, increasing societal indebtedness. Despite these transformations, the traditional notion of living within one's means persists in Polish society, leading to a higher savings ratio than in Iceland despite lower wages (The World Bank, n.d.-b).

This different financial history might, to an extent, reflect saving strategies among institutions. When looking at the asset allocation of Icelandic pension funds compared to other countries, Icelanders have a relatively high-risk tolerance. The percentage of equity in their total portfolio, which historically generally carries the most significant risk but also the highest returns, is among the highest in developed OECD countries (OECD, 2023a), or 42%. Icelanders, however, have among the highest percentages of their GDP in pension funds, or around twice the GDP (OECD, 2021).

Polish pension funds exhibit an extraordinary risk appetite compared to international pension funds. The percentage of equities in the Polish pension fund system is the highest in the world, around 91%, which is far higher than in the US, for example, despite the US population having a more extended experience with investments (OECD, 2023a). Interestingly, the Polish pension fund system amounts to only 7% of the nation´s GDP (OECD, 2021). The Polish government, however, provides most pension income with a pay-as-you-go-through system (OECD, 2023b). While this high percentage in equity can be largely attributed to restrictive legislation concerning domestic bond investments in 2014 (Dopierała & Mosionek-Schweda, 2021), the fact that such legislation, which increases risk and volatility, strongly indicates risk-seeking within a country.

It has been shown that people with more money should have a higher risk tolerance simply because they can better grapple with losses (Guiso & Paiella, 2008). According to The World Bank (n.d.-a), Icelanders per capita have over 50% higher purchasing power than Poles. From this perspective, Icelanders should be more risk-taking people. This assumption is not straightforward and, if anything, muddled. Payne et al. (2017) suggest that increased income inequality might motivate higher risk-taking, pointing to a higher risk-taking culture in Poland than in Iceland. Illiashenko and Laidroo (2020) point out that bankers in collectivist countries tend to take more risks than in individualistic countries, in line with the assumption that collectivist societies are more likely to help members of their social networks if risks lead to failures, which contradicts the findings of Mixa and Vaiman (2015) on Icelandic bankers during the prelude to the 2008 economic crash, and other similar studies (Li et al., 2013; Mourouzidou-Damtsa et al., 2019).

The unusually high percentage of Icelanders who own pension funds may influence their risk perception, especially regarding long-term

investment choices. Icelanders also have an additional safety net financially through the government, which ensures people receive money in their old age to keep a home, even if their pension funds rights are insufficient to do so. Additionally, Icelanders invest considerably more money in individual retirement accounts (IRAs) than most other countries (Central Bank of Iceland, 2023). While the latest figures date back to 2017, when it was estimated that 77% of Icelanders had such accounts, the percentage is likely higher today, following media discussions about the benefits of these savings schemes (RÚV, 2024). Complicating the picture, Icelanders might be less willing to invest in stocks following the 2008 financial crisis when a large chunk of the stock market value was erased within days. The combination of Icelandic individuals owning both solid pension savings and IRAs, along with memories of the 2008 financial crisis, may influence their risk-taking decisions in financial matters. Jónsdóttir and Gústafsdóttir (2019) point out that the general public as investors had a very low stake in stocks following the 2008 crash.

While one could argue that Icelanders should exhibit a higher risk tolerance due to their higher income and substantial savings within the pension fund system, other factors may cancel out this difference and even yield contradictory results.

Data and Methodology

Research instrument and data collection

We surveyed the risk-taking behaviour of young business students from Poland and Iceland in 2022. It used the Domain-Specific Risk-Taking (DOSPERT) scale developed by Blais and Weber (Blais & Weber, 2006), in which 30 items were included to assess risk-taking behaviour in different life domains (ethical, financial, health/safety, social, and recreational risks). The DOSPERT scale was chosen due to its strong validity and reliability in measuring domain-specific risk attitudes (Shou, Olney, & Wang, 2023). Unlike general risk assessments, which may fail to capture the nuances of financial decision-making, the DOSPERT framework allows for a more precise evaluation of financial risk-taking by distinguishing it from other risk domains. The scale utilized a seven-point rating system, ranging from 1 (extremely unlikely) to 7 (extremely likely). Given the study's focus on financial decision-making, only the six financial risk items were included, further classified into three items related to gambling and three related to investment. Financial risk-taking is considered distinct from other risk domains, making these items the most relevant for assessing perceptions of risk in investment and gambling behaviours. While risk attitudes in other areas may also influence financial decision-making, this study prioritizes financial risks to maintain conceptual clarity.

We collected individuals' background information to examine factors associated with risk-taking behaviour, including gender, nationality, age, working level, and living arrangements. A previously translated version of the DOSPERT scale in Polish was used for the study. We further

translated the scale into Icelandic for Icelandic students. The survey questions were pretested among several students to ensure linguistic and cultural suitability. In Poland, we distributed the survey across ten different Facebook groups of business undergraduate students. University professors collaborated and shared the survey with their students to increase participation. In Iceland, professors distributed the survey among undergraduate students at the University of Iceland and the University of Akureyri.

Participants

The survey was administered through the *QuestionPro* platform, with 485 participants accessing the survey and 302 students completing it. The participants were from two groups - one group consisted of Icelandic students from the University of Iceland and the University of Akureyri, while the other group comprised Polish students from various universities in Poland. All participants belonged to the field of Business Administration.

Table 1 shows the demographic details of all participants. Further, the socio-demographic information of participants is split into Polish and Icelandic participants. The gender distribution was skewed, with around 67.9% of respondents being women. This gender disproportion aligns with the general trend where women participate more frequently in surveys (Curtin et al., 2000; Groves et al., 2009). In terms of nationality, 49.5% of participants were Polish. Analysing the age distribution revealed a positively skewed pattern, with the majority falling within the 21-25 age range, constituting 65.7% of respondents.

Regarding living arrangements, participants were categorized into two groups: those living at home, i.e., with their parents, and those not living at home. Of the participants, 48% reported living not at home.

Table 1
Socio-demographic information of participants (N = 302)

Variable (all)	Counts	% of Total	Variable (Poland)	Counts	% of Total	Variable (Iceland)	Counts	% of Total
Female	188	67.9 %	**Female**	109	75.2%	**Female**	79	59.8%
Male	89	32.1 %	**Male**	36	24.8 %	**Male**	53	40.2 %
Polish	149	49.5 %	/			/		
Icelandic	152	50.5 %						
Not living at home	142	48.0 %	**Not living at home**	66	45.2 %	**Not living at home**	75	50.3 %
Living at home	154	52.0 %	**Living at home**	80	54.8 %	**Living at home**	74	49.7 %
Not working (less than 8hrs)	139	46.8 %	**Not working (less than 8hrs)**	87	59.2 %	**Not working (less than 8hrs)**	52	34.2 %
Working (more than 8hrs)	158	53.2 %	**Working (more than 8hrs)**	60	40.8 %	**Working (more than 8hrs)**	97	63.8 %
20 years or younger	49	16.5 %	**20 years or younger**	25	17.0%	**20 years or younger**	24	16.1%
21-25 years	195	65.7 %	**21-25 years**	107	72.8%	**21-25 years**	87	58.4%
26-30 years	36	12.1 %	**26-30 years**	9	6.1%	**26-30 years**	27	18.1%
31 years or older	17	5.7 %	**31 years or older**	6	4.1%	**31 years or older**	11	7.4%

When comparing the demographic information of the two countries (table 1) it becomes evident that the Polish sample contains more female participants than the Icelandic sample (75.2%; 59.8%). This gender imbalance is consistent with the overall sample composition, where women are overrepresented.

What is more, the Polish sample consists of slightly lower proportion of participants living at home (54.8%; 49.7%), do work less (59.2%; 34.2%), and are younger on average (90% are 25 years or younger, compared to 75% in the Icelandic sample). The age difference between Polish and Icelandic students in our sample is likely due to Polish students typically entering university directly after high school. In contrast, Icelandic students often take gap years, work, or pursue additional preparatory education before starting their studies, resulting in an older average age.

Measures

We collected data regarding financial risk-taking with six questions based on the DOSPERT scale (Blais & Weber, 2006). These questions were in the form of statements where participants were given answer possibilities on a seven-point Likert scale, indicating the likelihood of their engagement in specific behaviour, ranging from „extremely unlikely" (1) to „extremely likely" (7). To obtain two dependent variables, or principal components that measure gambling and investing, the principal component analysis (PCA) was used. *Investing* risk-taking was measured by the likelihood of engaging in high-risk investment activities, and *gambling* risk-taking, was measured

by the possibility of engaging in gambling activities (see also Table 2). These dependent variables are crucial for understanding the different dimensions of financial risk-taking behaviour among the participants, allowing to analyse the influence of various individual and socio-economic factors on these distinct types of financial risk activities. The independent variables encompass measurements at both the external and individual levels. Individual factors include *gender*, represented as women (0) and men (1), as well as *age*, measured in four categories (see Table 1). We created a dummy variable with 25-year-old students or younger, measured as (0), and 26-year-old or older students, measured as (1). Younger individuals tend to have a higher risk propensity, while family responsibilities often constrain older people and exhibit more conservative investment decisions (Ofosu & Kotey, 2019). Overconfidence makes younger individuals more inclined toward risk-taking (Samanez-Larkin et al., 2020).

Business students often expect high lifetime earnings, yet many have low current income, which may affect how they interpret financial risk in relative terms. Additionally, income perception within this group varies, as some students rely on loans or parental support while others earn income through part-time jobs. Yet, the analysis explicitly considers employment status to account for this variability. Thus, the question „Are you currently employed while pursuing your studies, and if yes, what is the average number of hours you work weekly?“ aims to assess financial independence or employment status. This inquiry sought to determine whether participants had jobs during their studies and the average hours they worked each week. Those working fewer than 8 hours per week were categorized as „not working” (0), while those working more than 8 hours were considered as „working” (1). The employment status indicates more available financial resources and more extensive financial knowledge. Williams et al. (2022) suggest that higher-income individuals display a greater propensity for risk-taking, contrasting with those experiencing higher economic uncertainty or little to no income. Research by Guiso and Paiella (2008) further indicates that individuals more likely to encounter income uncertainty or become liquidity-constrained demonstrate increased risk aversion.

Additionally, we measured *living situation*s, i.e., whether students still lived at home with their parents (1) or had already moved out (0) and lived independently, indicating potentially fewer financial resources and greater independence. Lastly, we measured *nationality* or country depending on which language participants answered the survey: Polish (0) or Icelandic (1).

Data analysis

Data analysis was performed using Statistical Package for Social Science (SPSS) version 26. During the initial stages of data processing, responses were reviewed, and invalid answers were excluded, resulting in a dataset comprising 302 valid responses.

To identify overarching components based on financial risk-taking behaviour, we employed a PCA (Hair et al., 2019). Promax rotation and Kaiser normalization were utilized for the component analysis to interpret the factors better. Subsequently, we conducted a reliability analysis (Cronbach's α) to assess the measurement properties and scale reliability, ensuring that our constructs were valid and reliable.

Given the complexity of financial risk-taking behaviour, we conducted three sets of multivariate regression analyses: one for all respondents, the second restricted to responses from Polish participants, and the third limited to responses from Icelandic participants. This approach allowed us to examine individual and country-specific factors' specific and combined effects.

Each regression analysis included two models:
Model 1: This model included only gender as a control variable to establish a baseline understanding of its effect on financial risk-taking behaviour.
Model 2: This model added nationality (in the combined sample only), allowing an initial assessment of cross-cultural differences beyond gender. This model was not applicable to country-specific analyses where nationality does not vary.
Model 3: This model incorporated gender and all other variables (employment status, living situation, and age) to examine their combined significance and relative importance.

Additionally, the first set, including all respondents, featured a third model incorporating nationality. Combining these variables in the second model is grounded in understanding how multiple individual and socio-economic factors influence financial risk-taking. This approach provides a more comprehensive view of the predictors of financial risk-taking behaviour instead of analysing each variable in isolation. We compared the variance explained (adjusted R^2) across the models to assess the relative importance of varied factors. This comparison allowed us to determine the additional explanatory power gained by including the complete set of variables. The interpretation of the models' results also considered the statistical significance of the individual coefficients and the theoretical relevance of the variables. The R^2 value for each block was used to determine the proportion of variance explained by the predictors. The change in R^2 from the first to the second block was calculated to quantify the incremental variance explained by adding nationality to the model. This procedure allows for an understanding of the relative contribution to the overall model

In all model assessments, we employed regression diagnostics to evaluate the satisfaction of modelling assumptions. Kurtosis and skewness values predominantly fell within the conventional range of ±1.96 (Ghasemi & Zahediasl, 2012), suggesting that the data was approximately normally distributed and appropriate for regression analysis. It is, however, important to acknowledge the empirical strategy employed. Adjusted R^2, though

useful in accounting for the number of predictors in the model, may not fully capture the complexity and nuances of the relationships between variables, especially when the changes in R^2 are minimal or when the significance of individual coefficients varies (Nathans et al., 2012).

Descriptive statistics

This chapter includes summary statistics, such as means, standard deviations, and the correlation table. The study aims to investigate the risk-taking behaviour of young adults by examining various aspects of financial risk-taking, measured by six different statements. Here, Table 2 shows the six different statements that measure financial risk-taking ordered according to the highest mean: Among these items, the one in which respondents were least likely to take risks was „Betting a day's income at the horse races, "displaying the lowest mean (M = 1.67, SD = 1.34). Conversely, the item in which respondents were most likely to take risks was „Investing 10% of your annual income in a moderate growth diversified fund" (M = 3.83, SD = 1.83). Generally, the three variables with the highest mean belong under the investing category (F/I), whereas the three lowest mean variables belong under the gambling (F/G) category.

In the next step, PCA was used for dimension reduction, i.e., to reduce the number that measures financial risk-taking behaviour into two main categories or principal components: gambling and investing, which serve as two dependent variables for the following analysis.

The results of the PCA are displayed in Table 2, highlighting the composition of the two dependent variables: risk-taking in gambling and investing. Each of these variables encompasses three different items. It is important to note that the number of responses slightly varies among components due to the inclusion of partial respondents (pairwise deletion). Promax rotation (Finch, 2006) was used as the underlying factor, while gambling and investing are expected to be correlated (Mosenhauer et al., 2021). For example, Deck et al. (2014) found a medium-strong positive correlation between gambling and investing with a correlation coefficient of r = 0.45.

Table 2
Two components of risk-taking behaviour: Investing and Gambling

Name of component	N	Number of items	Items	Cronbach's α	Mean	Component mean	SD
Investing	302	3	Investing 10% of your annual income in a moderate growth diversified fund. (F/I)	0.731	3.83	3.16	1.83
	299		Investing 5% of your annual income in a very speculative stock. (F/I)		3.12		1.91
	298		Investing 10% of your annual income in a new business venture. (F/I)		2.52		1.73
Gambling	297	3	Betting a day's income on the outcome of a sporting event (F/G)	0.795	2.13	1.84	1.74
	301		Betting a day's income at a high-stake poker game. (F/G)		1.73		1.41
	300		Betting a day's income at the horse races. (F/G)		1.67		1.34

We conducted a reliability analysis to assess the reliability of these items in measuring the same latent variable or dimension of risk-taking. The results indicated a Cronbach's α value of 0.731 for the triad of items related to investment-related risk behaviour. Concurrently, the items structured to measure gambling-related risk tendencies yielded a Cronbach's α of 0.787. These coefficients are deemed acceptable based on the criteria Tavakol and Dennick (2011) outlined. Such statistical validation underscores the reliability of these items in forming a coherent scale that appropriately reflects the intended construct of risk-taking.

A subsequent analytical step focuses on a more detailed exploration of these risk-taking behaviour, emphasizing their display across different national backgrounds. Table 3 offers a broad exposition of the descriptive statistics, presenting gambling and investing behaviour, and separating the data by nationality.

Table 3

	Nationality	N	Missing	Mean	SD	Minimum	Maximum
Gambling	Polish	145	4	1.82	1.08	1	6
	Icelandic	149	3	1.87	1.42	1	7
Investing	Polish	148	1	2.73	1.25	1	6
	Icelandic	149	3	3.57	1.55	1	7

Descriptive statistics and correlations for all variables are presented in Table 4. Generally, gambling and investing have a moderately positive relationship (r = 0.414). Gambling also shows a weak positive correlation with gender (r = 0.285). The dependent variable, investing, exhibits a similarly weak positive correlation with gender (r = 0.298) and, additionally, with nationality (r = 0.287) and whether students are employed (r = 0.138). Living situation and age show no significant correlation with either gambling or investing.

Table 4
Measures of central tendency and dispersion and Pearson's r correlation for all variables in the model

	Mean	SD	N	1	2	3	4	5	6	7
Dependent Variables										
1 Gambling	1.844	1.261	295							
2 Investing	3.159	1.468	298	.414***						
Independent Variables										
3 Nationality	0.505	0.501	301	0.021	.287***					
4 Working	0.532	0.500	297	0.108*	.138**	.243***				
5 Living at home	0.520	0.500	296	0.084	0.056	-0.051	-0.036			
6 Gender	0.321	0.468	277	.285***	.298***	.164***	0.001	.127**		
7 Age	0.178	0.384	297	0.058	0.039	.200***	.155***	-.292***	0.012	1

***. Correlation is significant at the 0.01 level (2-tailed).

**. Correlation is significant at the 0.05 level (2-tailed).

*. Correlation is significant at the 0.1 level (2-tailed).

Results

This chapter presents the results of multiple linear regression analyses examining financial risk-taking behaviour in gambling and investing. Specifically, we explore how various predictors influence the propensity for risk-taking in these two domains. The findings are discussed in detail, highlighting significant predictors and their implications for financial behaviour.

Gambling

Table 5 presents the results of multiple linear regression analyses exploring the relationship between gambling as a component of financial risk-taking behaviour and several predictor variables. The analysis was conducted across three separate groups: the entire sample of participants (analysis 1), only Polish participants (analysis 2), and exclusively Icelandic participants (analysis 3). The dependent variable in each analysis was the propensity for gambling-related risk-taking. In contrast, the independent variables included gender, employment status, living situation, age, and nationality in analysis 1. Across all models, gender emerged as the strongest

and only statistically significant predictor: The model including all participants (N = 270) showed that gender significantly predicted gambling behaviour (B = 0.769, β = 0.290, $p \leq 0.01$), indicating that male students reported higher gambling risk-taking than female students. The model was statistically significant, $F(5, 264) = 5.952$, $p < .001$, explaining 10.1% of the variance (adjusted $R^2 = .084$). The standardized beta coefficient further confirms that gender has a moderate effect on gambling risk across the entire sample.

To examine whether the national context influences gambling behaviour, separate models were run for Polish and Icelandic participants. In Poland (N = 140), gender remained the main predictor of gambling behaviour (B = 0.624, β = 0.263, $p \leq 0.05$). The full model was statistically significant, $F(4, 135) = 4.474$, $p = .002$, explaining 11.7% of the variance (adjusted $R^2 = .091$). Additionally, age (B = 0.566, r = 0.061) and living situation (B = 0.283, r = 0.106) were close to significance. While not statistically significant, the positive B-values suggest that older students and those living independently may have a greater propensity for gambling risk.

In Iceland (N = 131), gender was the only significant predictor (B = 0.891, β = 0.305, $p \leq 0.01$), showing a stronger relationship between gender and gambling behaviour in Iceland compared to Poland. The model was significant, $F(4, 125) = 3.820$, $p = .006$, accounting for 10.9% of the variance (adjusted $R^2 = .080$). No other variables approached significance, indicating that gambling risk-taking in Iceland is primarily influenced by gender, with little impact from age, living situation, or employment status.

These findings confirm that men are more likely to engage in gambling risk than women in both countries, but the strength of this relationship varies. The impact of gender was slightly stronger in Iceland (B = 0.891, β = 0.305) compared to Poland (B = 0.624, β = 0.263), suggesting that gender plays a more dominant role in predicting gambling risk among Icelandic students. In Poland, additional socio-demographic factors such as age and living situation may also influence gambling behaviour, though they did not reach statistical significance. Nationality was not a significant predictor, underpinning that gambling behaviour is shaped more by individual-level characteristics than broad national differences.

While the effect sizes (β-values) indicate a moderate influence of gender, the relatively low R^2 values suggest that other unmeasured factors – such as cultural attitudes, financial resources, or gambling accessibility – may contribute to gambling risk-taking. The near-significant role of age and living situation in Poland suggests that greater financial independence might be linked to increased gambling risk, a relationship that needs further investigation. We stress that the features we listed regarding the strong safety net that Icelanders enjoy might still influence the outcome.

Table 5
Multiple regression models for predicting risk-taking behaviour (Gambling)

	Variable	Both countries			Poland			Iceland		
Model		**B**	**β**	**SE**	**B**	**β**	**SE**	**B**	**β**	**SE**
1	**Constant**	1.555***		0.217	1.606***		0.257	1.487		0.365*
	Gender	0.782***	0.295	0.155	0.672***	0.284	0.193	0.891***	0.305	0.246
2	**Constant**	1.575***								
	Gender	0.790	0.298	0.157						
	Nationality	-0.048	-0.019	0.147						
3	**Constant**	1.374		0.475	1.388		0.533	1.190		0.850
	Gender	0.769***	0.290	0.158	0.624**	0.263	0.195	0.946***	0.324	0.253
	Nationality	-0.116	-0.047	0.154						
	Working	0.201	0.081	0.150	0.060	0.028	0.176	0.375	0.126	0.255
	Living at home	0.194	0.078	0.155	0.283	0.136	0.174	0.060	0.021	0.269
	Age	0.226	0.069	0.209	0.566	0.159	0.300	0.029	0.009	0.306
1	**R^2**		0.087			0.080			0.093	
	Adjusted R^2		0.084			0.074			0.086	
	F-Statistics		25.583***			12.072***			13.141***	
2	**R^2**		0.088							
	Adjusted R^2		0.081							
	F-Statistics		12.802***							
3	**R^2**		0.101			0.117			0.109	
	Adjusted R^2		0.084			0.091			0.080	
	F-Statistics		5.952***			4.474**			3.820**	

*$P \leq 0.1$. ** $p \leq 0.05$. *** $p \leq 0.01$

Investing

Table 6 presents the outcomes of multiple linear regression analyses aimed at interpreting the association between investment activities as another critical aspect of financial risk-taking and a set of predictive variables. Like the analysis regarding gambling, these analyses encompass three distinct units: the entire sample of participants (analysis 1), exclusively Polish participants (analysis 2), and only Icelandic participants (analysis 3). The dependent variable studied across each analysis was the tendency towards investment-related risk-taking, with the independent variables including gender, employment status, living situation, age, and in analysis 1 also, nationality.

All regression models were statistically significant, with gender appearing as the strongest and most consistent predictor of investment risk-taking. The overall model, including all participants (N = 270), showed that both gender (B = 0.924, β = 0.300, $p \leq 0.01$) and nationality (B = 0.695, β = 0.241, $p \leq 0.01$) significantly predicted investment risk-taking, indicating that male students took more investment risks than female students and Icelandic students took more risks than Polish students. Notably, gender

alone explained 62.3% of the total explained variance, while nationality contributed an additional 37.7%, suggesting that while gender remains the primary factor, national differences also play a meaningful role in investment behaviour.

To further explore cross-national differences, separate models were run for Polish and Icelandic participants. In Poland (N = 143), the initial model with gender alone was significant, $F(1, 141) = 10.474$, $p = .002$, explaining 6.3% of the variance in investment behaviour. Gender was the only significant predictor ($B = 0.751$, $\beta = 0.263$, $p \leq 0.05$). No other predictors, including age, employment, or living situation, were statistically significant.

. Also, the full model was significant, $F(4, 138) = 2.899$, $p = .024$, explaining 7.8% of the variance (adjusted $R^2 = .051$).

In Iceland (N = 131), the gender-only model was significant, $F(1, 129) = 10.627$, $p = .001$. Gender remained a significant predictor ($B = 0.934$, $\beta = 0.301$, $p \leq 0.01$)., explaining 7,6% of the variance(adjusted $R^2 = .069$).

The full model was also significant, $F(4, 126) = 4.234$, $p = .003$, explaining 11.8% of the variance (adjusted $R^2 = .091$). Thereby, unlike in Poland, employment status also played a significant role ($B = 0.600$, $\beta = 0.189$, $p \leq 0.05$), suggesting that working students in Iceland exhibited a higher propensity for investment risk-taking than non-working students. The presence of employment status as a significant predictor in Iceland indicates that investment decisions in this context may be influenced by broader economic factors, such as financial independence or income stability, beyond gender alone.

These findings highlight that while gender is a common determinant of investment risk-taking across both countries, its relative influence differs. In Poland, gender was the sole predictor, whereas in Iceland, employment status also contributed to explaining investment behaviour. This suggests that investment decisions in Iceland may be more closely linked to financial independence. Although the overall explanatory power of the models remains moderate, the results provide important insights into how both gender and national context shape financial risk-taking in investment decisions. The more substantial effect of nationality in the full model further suggests that institutional or economic factors specific to Iceland and Poland, many of which have been listed in this paper, may contribute to investment behaviour, justifying further investigation into these contextual influences.

Table 6
Multiple regression models for predicting risk-taking behaviour (Investing)

	Variable	Both countries			Poland			Iceland		
Model		B	β	SE	B	β	SE	B	β	SE
1	Constant	2.789***		0.101	2.508***		0.117	3.169***		0.166
	Gender	0.924***	0.3	0.178	0.751**	0.263	0.232	0.857***	0.276	0.263
2	Constant	2.494***		0.120						
	Gender	0.808***	0.262	0.175						
	Nationality	0.695***	0.241	0.164						
3	Constant	2.328***		0.168	2.511**		0.182	2.583***		0.301
	Gender	0.794***	0.258	0.177	0.737**	0.258	0.238	0.934***	0.301	0.266
	Nationality	0.643***	0.223	0.172						
	Working	0.223	0.078	0.168	-0.044	-0.018	0.214	0.600**	0.189	0.269
	Living at home	0.140	0.049	0.173	0.088	0.035	0.211	0.207	0.068	0.283
	Age	0.046	0.012	0.233	-0.299	-0.072	0.357	0.280	0.080	0.323
1	R^2	0.090			0.069			0.076		
	Adjusted R^2	0.086			0.063			0.069		
	F-Statistics	26.829***			10.474**			10.627***		
2	R^2	0.146								
	Adjusted R^2	0.140								
	F-Statistics	23.257***								
3	R^2	0.154			0.078			0.118		
	Adjusted R^2	0.138			0.051			0.091		
	F-Statistics	9.766***			2.899**			4.234**		

*$P \leq 0.1$. ** $p \leq 0.05$. *** $p \leq 0.01$

Discussion

This study aimed to analyse the complex nature of financial risk-taking behaviour, presenting it across the dimensions of gambling and investing. The proposed questions examined whether various individual and socio-economic factors, such as gender, age, employment status, living conditions, and national background, influence financial risk-taking. The study highlights how the national context shapes financial risk-taking behaviour beyond individual factors such as gender. We used the same type of groups, students, in both countries, which decreases the number of potential variables but at the expense of generalization that may exist. Differences between Iceland and Poland suggest that broader socio-economic structures, like welfare systems and investment traditions, influence financial decisions. As we explained, Icelanders have a strong financial safety net but are still stung by the huge stock market losses in 2008.

The study's findings reveal different factors influencing risk-taking behaviour in gambling versus investing. Gender occurred as a significant predictor of risk-taking in both gambling and investing. This difference emphasizes the role of gender dynamics in financial risk preferences, which aligns with other studies such as Barber and Odean (2001) and Czerwonka (2019). Age did not predict risk-taking. These results call for a re-evaluation of age-related assumptions in financial risk-taking, especially considering traditional financial strategies like pension funds that advocate for higher-risk investments at a younger age due to the potential for long-term recovery (Bikker et al., 2012; Jagannathan & Kocherlakota, 1996). However, it is essential to note that our analysis only distinguishes between age groups of 25 years and younger and those older, which may not accurately capture the financial risk-taking propensities of individuals nearing retirement age. The employment status, particularly among Icelandic students, suggests that working students exhibit a higher propensity for risky investments than those who do not work in addition to their studies. This finding indicates that economic conditions and employment impact investment decisions. The finding needs to be taken with a grain of salt, as different psychological traits may correlate with risk-taking. However, students' living situations did not significantly affect financial risk-taking behaviour, suggesting that financial security or independence from living conditions may not directly influence the risk preferences of students.

Generally, gambling decisions are predominantly influenced by individual characteristics such as gender and, in the case of Poland, by living situation and age. In contrast, external factors, such as nationality and economic context, influence investment decisions, and individual factors, including employment status. This finding supports Hypothesis 1, suggesting a nuanced understanding of risk behaviour across different financial activities.

Additionally, Hypothesis 2 is validated, with nationality significantly impacting investment behaviour but not gambling; therefore, Hypothesis 3 is not supported. These results reveal the importance of cultural and national contexts in shaping investment behaviour, yet this influence does not extend to gambling activities. The differences observed between Polish and Icelandic students challenge assumptions based on cultural indices, such as Hofstede's, indicating the complex interaction of factors that influence financial risk-taking behaviour. Therefore, the findings question the prevailing belief that Hofstede's cultural dimensions drive financial risk-taking behaviours. It illustrates that while gambling tendencies tend to lean more towards individual characteristics, the impact of one's country of origin on investment choices is significant but unfolds in ways contrary to Hofstede's predictions. For instance, Iceland, described as individualistic, tends towards risky investment strategies, whereas Poland, seen as collectivist, leans more towards risk aversion. Yet, this narrative is complicated by evidence suggesting that collectivist and economically disadvantaged nations may lean towards risk-taking,

particularly when considering factors such as individualism and uncertainty avoidance (Illiashenko & Laidroo, 2020; Payne et al., 2017). Despite Hofstede's model suggesting slow societal shifts, rapid changes in financial behaviour, especially in contexts like Poland and Iceland, challenge this view. For example, looking at pension fund allocations (OECD, 2023a) could illustrate Poland as more inclined towards risk-taking, indicating a more complex interplay between cultural dimensions and financial risk behaviour than previously thought.

The findings from the study have several implications. The consistent influence of gender on risk-taking behaviour in both gambling and investing suggests that interventions and educational programs targeting risk awareness and decision-making should consider gender-specific approaches. Designing strategies for the different risk attitudes of men and women may increase the success of such interventions. Moreover, the study highlights the importance of cross-national differences in understanding financial risk-taking behaviour. While gender remains a universal factor, the „almost" significant predictors in the Polish subgroup suggest that national nuances, such as living arrangements and age, might play a role in specific contexts.

Limitations and future outlook

The research is based on self-reported risk propensity rather than actual behaviour. Future studies should include questions about respondents' prior experiences with gambling and financial market investments to complement this analysis and allow for a more comprehensive interpretation of the results. Another limitation is that the study's sample comprises undergraduate business students. While this sample was intentionally chosen due to its relevance for studying financial risk-taking, given the likelihood of future involvement in investment and economic decision-making, it does limit the generalizability of the findings. Consequently, the results may not fully represent the financial risk-taking behaviour of individuals from other educational backgrounds or age groups.

What is more the sample gender-imbalanced, with more female than male respondents. However, this reflects the actual gender distribution in the enrolled student population, where female students are in the majority. Nonetheless, future studies should consider drawing from a more diverse or balanced student population to enhance representativeness and generalizability. Another consideration is the absence of real-world financial behaviour data, such as lottery ticket sales, sports betting participation, or household stock market involvement. Despite these constraints, the study provides meaningful insights into how individuals perceive financial risk. Future research could explore ways to integrate self-reported attitudes with behavioural data while controlling for external influences to deepen the understanding of financial risk-taking in real-world contexts.

While this study examines financial risk-taking across two national contexts, it is vital to recognize the limitations of using national boundaries as a proxy for cultural differences. Culture is complex and shaped by multiple factors beyond nationality, including individual experiences, socioeconomic background, and education. Although national comparisons provide a valuable framework for exploring broad patterns in financial behaviour, they do not fully capture the diversity of cultural influences within each country. Additionally, institutional and economic differences – such as financial market structures, regulatory environments, and educational systems – may also contribute to variations in risk-taking behaviour. Future research would benefit from incorporating direct measures of cultural attitudes and values better to isolate the role of culture in financial decision-making. Expanding the analysis to include additional countries, particularly those with a long history of active stock markets, could provide deeper insights into how institutional and economic contexts shape financial risk-taking. Future research should explore whether similar patterns exist in countries with different financial systems, regulatory frameworks, and investment cultures.

As the current study only offers a snapshot of risk-taking behaviour at a specific point in time, longitudinal studies following individuals over a more extended period could provide insights into how risk attitudes evolve over time and whether cultural and gender influences remain consistent or change.

Note 1: Defined by Arthur et al. (2016) as: „…financial market activities that, when compared to investments, tend to be shorter term, higher risk, sometimes with higher potential losses and gains, and with a primary focus on making a monetary profit from price movements without regard for the fundamental value of the asset.“

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The authors have no competing interests to declare.

Author's contributions
VK was the principal investigator of the project and conceptualized this specific study, she was the lead analyst, and responsible for figure and table creation. MWM and AW: Literature review and manuscript revision. All authors approved of the final version.

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