Journal of
Risk and Financial Management

MDPI

Article

An Assessment of the Impact of Legal Regulation on Financial Security in OECD Countries

Robertas Vaitkus [1,*] and Asta Vasiliauskaitė [1,2]

[1] Faculty of Public Governance and Business, Mykolas Romeris University, 08303 Vilnius, Lithuania; avasil@mruni.eu
[2] Faculty of Business Management, Vilnius Gediminas Technical University, 10223 Vilnius, Lithuania
* Correspondence: inforobvai@gmail.com

Abstract: The recurrent economic and financial crises expose the state, enterprises, and households to a range of financial risks and negative financial consequences. As a result, governments are seeking the most efficient measures of legal regulation and other measures ensuring financial security in order to address financial insecurity. The financial security can be considered from a variety of perspectives, and this research proposes that microeconomic and macroeconomic indicators be taken into account when assessing the financial security situation. The results of this research confirmed that legal regulation has a significant positive impact on financial security in OECD countries during the analysis period. Based on the results of the study, it can be argued that legal regulation, including anti-corruption measures, must be an essential part of the financial security strategies being developed. The studies carried out provide a platform for further research, which will allow identification of regulatory measures that would most effectively contribute to financial security needs in individual OECD countries.

Keywords: financial security; legal regulation; sustainable economy; economic policy; risk management

JEL Classification: E60; F50; F52

Citation: Vaitkus, Robertas, and Asta Vasiliauskaitė. 2022. An Assessment of the Impact of Legal Regulation on Financial Security in OECD Countries. *Journal of Risk and Financial Management* 15: 86. https://doi.org/10.3390/jrfm15020086

Academic Editor: Andy Naranjo

Received: 27 December 2021
Accepted: 15 February 2022
Published: 18 February 2022

1. Introduction

Globalisation, integration between countries, and other factors activate and improve the movement of people, goods, and services around the world, thus creating the conditions for welfare creation. However, as Apergis (2019) remarked, the emergence of new risk channels and increasing financial vulnerability are undermining financial security. Helm (2015) noted that managing security is becoming increasingly difficult at every level as risks change and our socioeconomic systems become more interconnected and complex. As a result, Ben-David et al. (2012) put forward proposals for options to reduce the negative impact on the economy during the financial crisis. However, there is a debate about whether existing issues of insecurity are effectively addressed when it comes to maintaining economic viability. Therefore, Langevoort (2010) pointed out that international regulation is often limited to the part that includes complex institutional investors.

These and other reasons led some researchers (Maurer et al. 2011; Storelli and Williamson 2015; Lyons et al. 2018; etc.) to discuss legal mechanisms in the field of financial security policy. Brück (2004) noted that one set of security policy instruments includes regulation, supervision, and coordination, while another involves the provision of financial incentives and disincentives. In the opinion of Schultz et al. (2019), regulation is one of government's key instruments to promote economic growth, enhance social welfare, ensure inclusiveness, protect the environment, respond to new technological challenges, and increase overall quality of life. In choosing financial security measures, their possible compatibility or

even contradiction is discussed, which may complicate the search for appropriate measures. Lehmann (2017) expressed the view that a systematic approach should be taken to establishing legal regulation in order to ensure global financial stability.

The implementation of financial security measures is expected to have a positive financial and economic impact. There is no doubt about the benefits of financial security measures in ensuring the stability of economic processes. However, there are not sufficient studies to support this idea. Therefore, in solving these problems, the authors are looking for ways to assess the impact of legal regulation on the economy or on individual areas thereof. Baily et al. (2017) assessed the relationship between the benefits and costs of the Doodd-Frank Federal Law adopted in the US. In their study, De Serres et al. (2006) confirmed that the regulation of the financial system has a significant impact on the growth of production and productivity. Studies aimed at assessing the impact of legal regulation on financial security are also absent.

In order to address the problems of financial insecurity, there is a need to assess the impact of legal regulation on financial security.

The object of this research is the impact of legal regulation on financial security.

The purpose of this research is to assess the impact of legal regulation on financial security after examining the concept of financial security.

In order to achieve this purpose, this article undertakes the following tasks:

(1) To analyse the theoretical aspects of the financial security.
(2) To reveal the specificity of OECD legal regulation in the field of financial security.
(3) To develop a model for the evaluation of financial security and a model for assessing the impact of legal regulation on financial security.
(4) To assess the impact of legal regulation on financial security in OECD countries.

In order to solve these tasks, this article first analyses the concept of financial security. The specificity of the OECD's regulation in the area of financial security is then revealed. Finally, the impact of legal regulation on financial security in OECD countries is assessed.

2. Literature Review

2.1. The Concept of Financial Security

Discussions about the role of the financial system in the process of the creation of modern economies reveal that its impact can be both positive and negative. Therefore, the question of how the financial system must be defined in order to have a positive impact remains unanswered. Likewise, there is no answer as to the nature of the most desirable scenario for the development of the financial system itself to enable the sustainable development of society. The intention of society and politicians to make the financial system reliable, secure, and efficient, thereby supporting the sustainable development of society, is clearly expressed, but it is unclear how the concept of a financial security should be defined.

Many authors analyse various aspects of financial security. Hryhoruk et al. (2019) associated financial security with the protection of financial interests. Franchuk et al. (2020) argued that the main task of a financial security system is not only to maintain financial resources but also to create a secure environment for continuous business development. Munyon et al. (2020) defined financial security as a subjective state that reflects the adequacy and stability of monetary assets relative to liabilities. Therefore, Guryanova et al. (2017) described financial security as a phenomenon of a high degree of complexity and multidimensionality. In support of this view, Vergun and Topenko (2016) argued that the integration of the existing theoretical approaches leads to the conclusion that there is no generally accepted definition of financial security: all of the above formulations reflect only certain aspects of this category and do not represent its unambiguous interpretation. Zwolak (2017) pointed out the difficulties that occur when it comes to determining financial security, as this category proves to be unsettled, dynamic, and difficult to quantify. There are also attempts to define the concept of financial insecurity. According to Osberg (2015), the term financial insecurity (which is potentially very broad) has been commonly

restricted to the context of retirement and/or old age, and this is often done without any accompanying explicit definition. These reasons increase the need to formulate a universal definition of financial security for households, enterprises, and the state.

In 1950, Hertz wrote of security as the absence of fear of being 'attacked, subjected, dominated or annihilated by other groups and individuals' (Retter et al. 2020). Engerer (2009) stated that security is often described as the absence of threats or risks and, in his view, security is often considered to be a public good, meaning a stable society and a strong government. Engerer (2009) pointed out that economists describe security as an economic good. Mura et al. (2017) argued that, historically, security expresses the ability of the state to secure its autonomy and stability and, according to European mercantilists, security is closely connected with the establishment of conditions for economic growth. In the opinion of Brück (2004), insecurity is defined as an aggregate and unquantifiable form of risk.

It is worth noting that the concept of security has changed over time. For example, Retter et al. (2020) expressed the opinion that after the collapse of the Soviet Union, the focus on military security decreased and the need to review the concept of security arose as the priority of military security grew into a broader context, including the dimension of economic security. As the concept of security changes, other elements of security—environmental, social, financial, etc.—become more important. Abu Bakar et al. (2015) supported this idea, and argued that the emergence of welfare is influenced by the satisfaction of basic needs and the provision of certain conditions, which include maintaining interpersonal relationships, community empowerment, financial security, remunerated employment, good health, and an attractive environment. In the context of shaping economic welfare, the need to ensure the financial security of households, enterprises, and the state becomes important. This means that in this multi-dimensional environment the financial security interests of individual entities (households, enterprises, the state) need to be harmonised.

Financial security is analysed at different levels of the economy (micro and macro). Historical events, public needs, and other trends also lead to different interpretations of financial security. Some authors use the term financial security to analyse the financial situation of households or companies. For example, Piotrowska (2017) defined financial security as the ability to achieve the income necessary for covering household needs at a sufficient level and to create financial reserves that are available in case of emergencies (sickness, job loss, family breakdown). Ahmad and Sabri (2014) described financial security as the state of having constant income or other resources to maintain a standard of living now and in the foreseeable future. Such an approach by these authors implies that the state of financial security exists at the time when there is a steady income that allows for the maintenance of a decent standard of living now and in the near future.

Delas et al. (2015) stated that one of the main tasks of a company's system of ensuring financial security is to protect its own financial interests from the influence of internal and external threats in order to ensure the efficiency of the enterprise. Blakyta and Ganushchak (2018) defined the financial security of undertakings as a constituent part of the economic security of an enterprise, which defines the process of development of the enterprise on the basis of: certain financial resources; the sufficient structure of capital which is used by the company; compliance with the targets and missions on the basis of the level of internal and external threats; and the influences of certain factors in unstable periods of development.

Ermakova (2017) defined financial security as the preparation of a country's financial system for timely and reliable financial support, to the extent sufficient to maintain the economy at a level that would ensure the country's economic security. Reznik et al. (2020) understood the financial security of the state as protection of the financial and economic interests against internal and external unlawful threats. Burkaltseva et al. (2017) presented financial security as sustainable, high-quality economic growth in the absence of internal and external threats.

The analysis of the views of a number of authors on financial security allows for the formulation of a universal definition of financial security, which would be appropriate to describe the financial security of entities at different levels (households, enterprises, and

the state). Financial security shall mean a level of financial standing maintained by legal regulatory, managerial, economic, and other means, enabling protection against risks that might have significant negative impacts and ensuring satisfaction of the most important needs while maintaining financial independence.

A variety of instruments can be used to address financial insecurity. Brown et al. (2020) revealed that social security policies have an impact on future financial well-being and financial security. Zimon et al. (2020) revealed that proper management of stocks, receivables, and liabilities is crucial to increase the financial security of renewable energy companies. Poltorak et al. (2019) associated the financial security of the state with favourable financial conditions for the sustainable development of the financial system. Vaitkus and Vasiliauskaitė (2021) proposed a set of tools to address financial insecurity, incorporating instruments and models of financial security assurance. The legal regulation measures contained in this set of financial security tools are designated as an integral part of the process of the creation of sustainable economic development. The importance of legal regulation is confirmed by many authors (De Serres et al. 2006; Lehmann 2017; Schultz et al. 2019). The OECD is considered to be a key player in shaping regulatory policy in the international field (Jakobi 2012). It is therefore appropriate to disclose the specificities of the OECD's legal regulation in the field of financial security.

2.2. OECD Legal Regulation in the Field of Financial Security

The OECD promotes policies aimed at achieving the highest sustainable levels of economic growth and employment and raising living standards in the Member States, while maintaining financial stability and thus contributing to the development of the global economy. Osberg (2015) argued that economic insecurity is an important determinant of individual wellbeing, and that it is now expensive in all OECD countries to mitigate the extent of economic insecurity. These reasons lead to the fact that in OECD countries not only funds but also various recommendations are allocated to reducing economic insecurity, especially in cases of unemployment, sickness, widowhood, and old age. The first of the OECD's international documents on regulatory quality was the 1995 recommendation on improving the quality of government regulation (Bublienė et al. 2017). The OECD's recommendations include the review, maintenance, and implementation of regulatory procedures and targets, regulatory review, and reporting on regulatory policies and the implementation of reforms. Regulatory coherence is also promoted in order to avoid duplication or conflict (OECD 2012). As regards financial security, the OECD recommends ensuring that regulatory decisions are taken objectively, impartially, and consistently, without conflict of interest, bias, or undue influence in the implementation of risk assessment and management.

The documents adopted by the OECD in the field of regulation fall within the group of soft law instruments (Bublienė et al. 2017). Thus, the OECD is constantly making recommendations[1] to improve regulation in order to contribute to financial stability and economic development. However, De Serres et al. (2006) considered that the main regulatory objectives in OECD countries tend to be to narrower, with a focus on market integrity (conduct rules), consumer/investor protection (disclosure rules), and crisis prevention—in particular limiting systemic risks in the event of one or more institutions experiencing unexpected problems (prudential regulation).

The search for appropriate legal regulation raises problems in maintaining a balance between the liberalisation of the financial market and excessive constraints, which may hinder effective economic development. De Serres et al. (2006) indicated that in order to strike the right balance between the protection of the rights of various stakeholders (shareholders, creditors, entrepreneurs/managers, and employees) and allowing firms and markets to function effectively, a complex compromise is needed across different regulatory areas. For these reasons, public policy makers must address the dilemma of maintaining proportionality between increasing the regulation of financial security and its efficiency, and the principles of justice and freedom.

The OECD's recommendations focus on consumer protection through measures for reducing risks and vulnerabilities. De Serres et al. (2006) pointed out that, to a certain extent, rules aimed at consumer protection may contribute to reinforced competition; as an example, helping consumers to make better informed decisions raises their willingness to switch between institutions. However, in many cases, regulation is aimed at stability or consumer protection. Lyons et al. (2018) revealed that households do not have sufficient opportunities to ensure security, primarily due to a lack of financial planning, savings options, and financial knowledge. To address these and other problems, the OECD established the International Network on Financial Education (OECD/INFE) in 2008, which promotes and activates international cooperation between policy makers and other stakeholders in the field of financial literacy. The OECD Core Competences Framework for Financial Literacy highlights the various results of financial literacy, which can be considered important for owners and managers of micro-, small-, and medium-sized enterprises and potential entrepreneurs, as well as for the development of financial literacy systems for young people and adults.[2]

One way to choose effective financial security measures is the monitoring and evaluation of the current state of financial security regulation in individual OECD countries. This is perhaps why Brück (2004) argued that the key policy focus should be the monitoring of security spending, the security situation, the security policy, and its impact on the economy, and that measures should be adjusted over time as appropriate. Monitoring of the current situation makes it possible to understand which regulatory measures best achieve the intended objectives in terms of improving financial position. Thus, various indicators reflecting the state of regulation are being developed. Schultz et al. (2019) noted that the OECD regulatory and governance indicators (iREGs) are among the main indicators for better regulation in the world. These indicators are an integral part of OECD flagship products and reflect the importance of an appropriate regulatory policy for achieving the priority economic and social objectives. The disclosure of the best performing countries is an important incentive to initiate closer cooperation and the sharing of regulatory best practices from the countries that have achieved more in this field to those where it is appropriate to improve the existing regulatory frameworks.

In summary, as regards the legal regulation of the OECD in the field of financial security it can be noted that, despite the fact that economic security or individual financial security measures are given a lot of attention, the issue of financial security is not sufficiently reflected in OECD recommendations and other documents. The conceptual aspects of financial security are not highlighted. Generally, these regulations are limited to general recommendations for the whole economic sector or its individual areas (e.g., banks, risk management, and the improvement of management processes).

The theoretical assessment of legal regulation does not demonstrate and is not sufficient for the selection and development of the necessary measures for the formulation of financial security policy. An assessment of the financial security situation of individual entities (households, enterprises, the state) is also insufficient to identify the problems of sustainable and high-quality economic growth. The assessment of the financial situation requires a holistic approach and an assessment to be carried out in a broader context. This will help to answer the question of whether the legal regulation has an impact on financial security and whether this impact, if it exists, is positive or negative. To address this problem, an econometric assessment of the impact of legal regulation on financial security in OECD countries was carried out.

3. Research Methodology

The results of the theoretical analysis of the concept of financial security reveal that the measures of legal regulation are broad in scope. As a result, the broad regulation of social relations affects various levels of the economy. This idea is supported by Engerer (2009), who claimed that economic research has highlighted the economic impact of security threats at macroeconomic and microeconomic levels. These reasons determine that a

holistic approach must be taken when assessing financial security. Such an approach to this study would allow the different levels of financial security (households, enterprises, and the state) to be taken into account in an integrated manner, and would provide an integrated approach to determining the level of financial security. Most often, other authors (Table 1) only assess financial security from a certain point of view, e.g., they assess the level of financial security of households, enterprises, and the state by analysing solely microeconomic or macroeconomic data, and their combination is considered only in individual cases.

Table 1. Indicators used in financial security research.

Author/ Indicators *	GDP Growth	Price Changes	Income	Saving, Stocks	Debt	Expenditure	Social Benefits	Liquidity	Sustainability Assessment
Lange et al. (2012)			H						
Semjonova (2016)	S	S	S	S	S	S			
Alifanova and Evlakhova (2017)	S	S		S	S	H			
Piotrowska (2017)				H		H			
Lyons et al. (2018)	H			H			H		H
Khrushch et al. (2019)								B	
Hryhoruk et al. (2019)						B		B	B
Melnychenko (2020)			B	B	B				

* The indicator is used as a component of financial security or applied to calculate the following financial security component: S—financial security of the state; B—financial security of enterprises; and H—financial security of households.

Lyons et al. (2018) focused on five fundamental indicators of personal financial security: (1) account ownership; (2) general saving behaviour; (3) saving related to aging; (4) saving for emergencies; and (5) sources of emergency funds. Poterba et al. (2011) stated that the financial security of many older households depends to a large extent on the value of the housing they own. The importance of saving was also confirmed by Hacker et al. (2010), who defined adequate financial safety as the possession of financial assets sufficient to offset the loss of a person's income until it has returned to its original level. The insights from the abovementioned authors and others confirm that some factors (e.g., savings, expenses) are used to assess financial security at different levels (households, enterprises, the state). This means that the financial security interests of entities at different levels overlap with each other and may determine the overall level of financial security. Therefore, the harmonisation of the financial security interests of households, business entities, and the state, along with the identification of specific features, would allow an integrated assessment of financial security.

The analysis of indicators used in financial security studies showed (Table 1) that specific financial security characteristics may be related to the level of economic development, stability of purchasing power, state and household accumulation of financial reserves, and a stable level of consumption. The following microeconomic and macroeconomic indicators can be used to express these factors: GDP growth, price level changes, accumulation of the state reserves, household saving to income ratio, and household consumption expenditure to GDP ratio. Therefore, the abovementioned indicators will be used as components of the financial security index. When calculating the financial security index in a selected state, all the values of financial security elements will be normalised (by changing the estimates into values from 0 to 1, where the highest estimate is 1 and the lowest 0). It shall be considered that all components have the same comparative weight. Böhringer and Jochem (2007) found that the same weights are used to calculate the following indices: the living planet index, ecological footprint, human development index, environmental vulnerability index,

index of sustainable economic welfare, genuine savings index, and environmental adjusted domestic product. Therefore, the financial security index will be calculated by summing up the normalised values of the components. The index will be calculated using data on percentage changes in gross domestic product, changes in government stocks (includes gold), and percentage changes in inflation obtained from the World Bank database. Changes in household consumption expenditure (as a percentage of GDP) are derived from the publicly available UNCTAD statistical database, and the percentage of household savings from household disposable income from the OECD database.

When carrying out impact assessments of legal regulation, authors use indices reflecting different levels of legal regulation or indicators to calculate the index. For example, Robertson and Watson (2004) and Cuervo-Cazurra (2016) used the corruption perception index to analyse the impact of corruption on economic processes. In another study, Bellak and Leibrecht (2009) assessed the dependence of foreign direct investment on the level of labour market protection using the OECD labour market regulation index. De Serres et al. (2006), while examining the impact of financial system regulation on the growth of output and productivity, selected the following areas: performance of contracts, access to credit, investor protection, and bankruptcy procedures. Different legal regulation indices and indicators used in their research also allowed those authors to disclose their attitude towards the assessment of the level of legal regulation.

Legal regulation includes a broad set of mandatory rights and obligations regarding social relations. Vaišvila (2000) stated that legal regulation is such a type or form of social regulation when the legal effect on people's behaviour is influenced by legal norms. In the opinions of Urmonas and Milčiuvienė (2003), legal regulation plays an exceptional role in the development of society, as it is the main factor in determining the order that exists in society. Some rights and obligations are designed to detail the legal forms and values of economic processes. Therefore, the impact of legal regulation on financial security can be assessed and disclosed in two aspects. The first aspect envisages taking into account the narrower nature of legal regulation, and is focused on the specificity of legal regulation in the field of economics. The other aspect of the impact of legal regulation on financial security is broader, and covers aspects of legal regulation involving not only the regulation of economic relations, but also the enforcement of public order (hereinafter referred to as general legal regulation). Based on the above arguments, a conceptual model for assessing the impact of legal regulation on financial security can be developed (Figure 1).

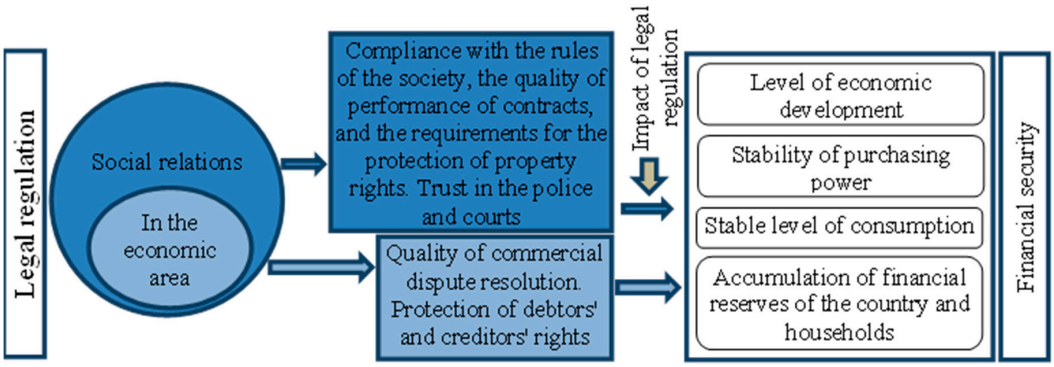

Figure 1. A model for assessing the impact of legislation on financial security. Source: authors' contributions.

The assessment of the level of legal regulation in the economic field needs to take into account the legal regulation of relations between entities involved in economic activities and how commercial disputes between entities are solved in practice. For this reason, the score for enforcing contracts will be considered as the index of legal regulation in the economic field (data from the Doing Business database). The score for enforcing contracts is measured by the time and cost involved in resolving a commercial dispute through a local

first-instance court, and since 2016 this index has included data on the quality of judicial processes that promote quality and efficiency in the court system.

The rule of law, presented by the World Bank, will be used to assess the impact of the general level of regulation on financial security. This index shows the extent to which subjects trust and adhere to the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The study will also assess the impact of the corruption on financial security. Therefore, the corruption perceptions index (CPI) developed by Transparency International will be used for this assessment. The CPI reveals how states manage to control corruption. One aspect of corruption control is the ability of governments to contain corruption and enforce effective integrity mechanisms in the public sector. The effective functionality of the state's legal mechanisms can be considered to a general area of regulation.

OECD countries were selected to assess the impact of regulation on financial security. In total, 35 OECD countries were compared to each other in order to ensure the comparability and objectivity of the study data, taking into account the availability of data. Due to the lack of data, the methodology developed makes it impossible to calculate the financial security index of two specific OECD countries (Israel, and Turkey) and to assess the impact of legal regulation on financial security. The selection of event-reflecting indicators also requires the assessment of their temporal dynamics; therefore, the investigation period of 2005–2018 was chosen for the analysis of change. The corruption perceptions index data are available for the period 2012–2018.

4. Estimation Methods

Financial security is influenced by a number of external factors that may affect it. Therefore, after displaying the calculated level of financial security in a graph, it was possible to observe how it changed over time and in what time periods the level of financial security rose and fell. A regression analysis was used to identify and evaluate the links between legal regulation and financial security. Cogoljević et al. (2018) and Butkus et al. (2019) have used a regression analysis to establish functional relationships of economic phenomena between dependent and independent variables. Regression equations were therefore used to assess the impact of legal regulation on financial security.

When analysing panel data, the following basic regression equations were used to reveal the impact of legal regulation and the content of impact:

$$\ln FS_{i,t} = \alpha + \beta_1 * \ln CPI_{i,t} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (1)$$

$$\ln FS_{i,t} = \alpha + \beta_1 * \ln L_{i,t} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (2)$$

$$\ln FS_{i,t} = \alpha + \beta_1 * \ln GL_{i,t} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (3)$$

where lnFS was the logarithm of the financial security index; lnCPI was the logarithm of the corruption perceptions index; lnL was the logarithm of the legal regulation index (economic area); lnGL was the logarithm of the general legal regulation index; i and t were the country and time indices; α and β were coefficients; θ_t represented the factors that were common to all countries and varied in time; ϕ_i represented the factors that did not change over time but were specific to countries; and ε indicated errors.

The impact of legal regulation on financial security may depend on lags in the phenomena analysed. In order to establish the existence and the direction of causality among analyzed variables, Florea et al. (2021) used the Granger test. The Granger approach aims to see how much the past values of x can explain the current y. Therefore, in the regression equations (No. 1, 2, and 3), lags were inserted into those levels instead of into the level of legal regulation and financial security:

$$\ln FS_{i,t} = \alpha + \omega_1 * \ln FS_{i,t-1} + \ldots + \omega_p * \ln FS_{i,t-p} + \beta_1 * \ln CPI_{i,t-1} + \ldots + \beta_p * \ln CPI_{i,t-p} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (4)$$

$$\ln FS_{i,t} = \alpha + \omega_1 * \ln FS_{i,t-1} + \ldots + \omega_p * \ln FS_{i,t-p} + \beta_1 * \ln L_{i,t-1} + \ldots + \beta_p * \ln L_{i,t-p} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (5)$$

$$\ln FS_{i,t} = \alpha + \omega_1 * \ln FS_{i,t-1} + \ldots + \omega_p * \ln FS_{i,t-p} + \beta_1 * \ln GL_{i,t-1} + \ldots + \beta_p * \ln GL_{i,t-p} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (6)$$

where ω were coefficients; t − 1 were time indices with one-year lags; t − p were time indices with selected lags. The study used an assessment of the impact of the three-year lag.

The impact of legal regulation on financial security may depend on changes in the phenomena analysed, therefore in the regression equations (No. 1, 2, and 3), changes were inserted into those levels instead of into the level of legal regulation and financial security:

$$\Delta \ln FS_{i,t} = \alpha + \beta_1 * \Delta \ln CPI_{i,t} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (7)$$

$$\Delta \ln FS_{i,t} = \alpha + \beta_1 * \Delta \ln L_{i,t} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (8)$$

$$\Delta \ln FS_{i,t} = \alpha + \beta_1 * \Delta \ln GL_{i,t} + \theta_t + \phi_i + \varepsilon_{i,t} \quad (9)$$

where ΔlnFS was the logarithm differences of the financial security index; ΔlnCPI was the logarithm differences of the corruption perceptions index; ΔlnL was the logarithm differences of the legal regulation index (economic area); ΔlnGL was the logarithm differences of general legal regulation.

In order to take into account the effects of country-specific factors that either vary or have little time variation, the suitability of the ordinary least squares (OLS) model, the fixed effects model, and the random effects model was assessed. As such, a fixed effects estimator was performed for the developed OLS model, which included an F test that showed which model—OLS or fixed effects—was more suitable for data analysis. A random effects estimator, which included the Breusch–Pagan test and the Hausman test, was also performed. The Breusch–Pagan test shows which model—random effects or OLS—is more suitable for data analysis, and the Hausman test is used to choose between the fixed effects and random effects models. Grozdić et al. (2020) and Hounmenou and Degbedji (2021) chose the appropriate panel model using the Breusch–Pagan and Hausman test. In order to choose an appropriate data processing method before a fixed effects or random effects model was designed, the Wooldridge test was carried out to assess autocorrelation, and a White test was performed to assess heteroskedasticity. Once autocorrelation and/or heteroscedasticity had been determined using fixed effects or random effects models, a covariate matrix of autocorrelation and heteroskedasticity was used.

5. Results and Discussion

Based on the results of the analysis of financial security level, it can be observed that the overall level of financial security of OECD countries changed over the period of 2005–2018. Decreases and increases in the level of financial security were recorded (Figure 2).

When considering the changes in financial security in 2005–2018, it becomes evident that if problems arise in the economic environment, the instruments of legal regulation and other instruments become less powerful, and this leads to changes in the level of financial security. The financial crisis was found to have contributed to a reduction in the level of financial security in OECD countries. In 2005–2006, the overall financial security level rose from 2.70 to 2.82, while in 2007 the overall level started to decrease, reaching the lowest point during the period analysed in 2009 (2.55). In 2010–2011, the overall level of financial security of OECD countries increased, but in 2012–2015 the level decreased again, and in 2013 it was almost as low as in 2009, i.e., 2.54. These changes are related to the reduced growth rate of the global economy in 2012–2013 and the Eurozone debt crisis. In 2017, the overall level of financial security of OECD countries increased to 2.68, but did not reach the level of 2005, which amounted to 2.70. While analysing changes in the level of financial security, it has been assumed that the financial crisis, Eurozone debt crisis, and the slowdown of economic growth had a negative impact on its level. The study confirmed the results of studies carried out by Maurer et al. (2011) and Sylkin et al. (2019) that the

financial crisis and the slowdown of economic growth affect the level of financial security. However, more detailed research is necessary for the approval of these assumptions.

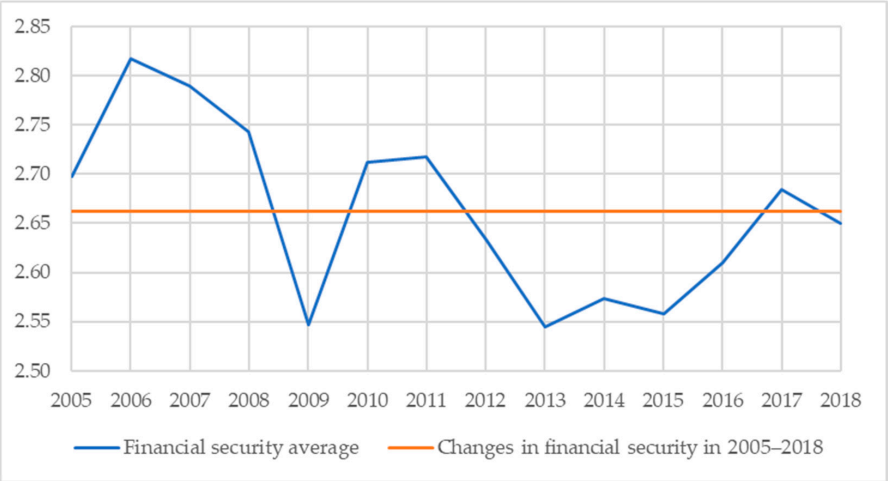

Figure 2. Changes in the level of financial security of OECD countries during the period of 2005–2018. Source: authors' contributions.

The estimated descriptive statistics (averages, standard errors, minimum and maximum values, etc.) of OECD countries on financial security and legal regulation are provided in Table 2.

Table 2. The results of the assessment of the impact of legal regulation on financial security.

Full Name of the Variable and the Measurement Unit	Short Name of the Variable	Min	Max	Mean	Median	C.V.	S.D.
Financial security (index) [1]	FS	1.9118	3.9242	2.6626	2.6407	0.11219	0.29870
Corruption perceptions index [2]	CPI	28.000	92.000	68.253	72.000	0.23224	15.851
Legal regulation (Enforcing Contracts) (index) [3]	L	32.400	86.000	67.880	68.800	0.16453	11.168
Legal regulation (rule of law index) [4]	GL	28.846	100.00	84.513	89.312	0.18220	15.398
Financial security (ln_FS)	ln_FS	0.64805	1.3672	0.97309	0.97105	0.11460	0.11152
Corruption perceptions index (ln_CPI)	ln_CPI	3.3322	4.5218	4.1916	4.2767	0.062928	0.26377
Legal regulation (Enforcing Contracts) (ln_L)	ln_L	3.4782	4.4543	4.2017	4.2312	0.044864	0.18850
Legal regulation (rule of law index) (ln_GL)	ln_GL	3.3620	4.6052	4.4146	4.4921	0.052075	0.22989
Financial security (Δln_FS)	Δln_FS	−0.36558	0.38680	−0.00124	−0.00224	63.911	0.079369
Corruption perceptions index (Δln_CPI)	Δln_CPI	−0.12136	0.10536	0.0019434	0.00000	15.844	0.030792
Legal regulation (Enforcing Contracts) (Δln_L)	Δln_L	−0.28108	0.18452	−0.001541	0.00000	22.977	0.035396
Legal regulation (rule of law index) (Δln_GL)	Δln_GL	−0.23752	0.18976	−0.000563	0.00000	56.434	0.031774

Source: [1] The World Bank's World Development Indicator's database, United Nations UNCTADSTAT database, OECD database; [2] Transparency International data; [3] Doing Business database; [4] The World Bank's World Development Indicator's database. Source: authors' contributions.

The results of the assessment of the impact of legal regulation on financial security (Table 3) confirm a positive and negative impact. However, only legal regulation of economic activities and changes in the level of corruption are statistically significant. This is explained by the fact that legal regulation of economic activities has a greater impact on financial security and is statistically more significant than the general level of legal regulation of economic activities. However, the impact of legal regulation in the economic field does not occur immediately, but with a delay of one-year lags. The findings reported are broadly in line with the few empirical papers looking at the regulation impact for economic growth. For instance, De Serres et al. (2006) also confirmed that policies improving contract enforcement, access to credit, and the efficiency of bankruptcy procedures will foster labour productivity and value-added growth, in sectors most dependent on external finance.

The results of the study also confirmed the importance of state corruption control for financial security. Reznik et al. (2020) also found that corruption is a threat to the financial security of the states in the present conditions. This is due to the specificity of the legal regulation of economic activities and effective measures to prevent corruption, which is more oriented towards economic and financial aspects. Proper and effective regulation of economic relations has a positive effect on the financial situation of all entities, thereby increasing their financial security.

Although changes in the legal regulation are not statistically significant, the results show that changes in legal regulation have a negative and positive effect. This is explained by the fact that changes in the legal regulation may have not only a positive but also a negative impact on individual economic areas. Without an assessment of the potential impact of legal decisions on economic processes, there is a risk of a possible increase in the financial insecurity of individual entities. Therefore, evaluations on how regulatory changes may affect the economy and its sustainability are needed in order to achieve optimal legal solutions. This is supported by Brück (2004), who revealed the importance of monitoring the current situation. The research model proposed in this article could be further developed and used for testing of the envisaged legal regulatory response to the need for positive economic changes. The methodology used for studying the impact of legal regulation on financial security is universal. Therefore, the inclusion of additional inputs and/or indicators would make it possible to assess the impact of regulation on the economic performance of entities at different levels.

Table 3. Indicators used in financial security research.

Variable	ln_FS	ln_FS	ln_FS	ln_FS	ln_FS	ln_FS	ΔIn_FS	ΔIn_FS	ΔIn_FS
Corruption Perceptions Index, ln_CPI	0.1715 **								
	(0.08123)								
Enforcing Contracts, ln_L		0.1243							
		(0.09138)							
Rule of Law Index, Ln_GL			0.1312						
			(0.1364)						
Corruption Perceptions Index, ln_CPI_1				0.1560					
				(0.1208)					
Corruption Perceptions Index, ln_CPI_2				0.1194					
				(0.1194)					
Corruption Perceptions Index, ln_CPI_3				0.2050					
				(0.1873)					
Enforcing Contracts, ln_L_1					0.1715 **				
					(0.07370)				
Enforcing Contracts, ln_L_2					−0.04193				
					(0.07186)				
Enforcing Contracts, ln_L_3					−0.2130				
					(0.1307)				
Rule of Law Index, ln_GL_1						0.1335			
						(0.08673)			
Rule of Law Index, ln_GL_2						0.1161			
						(0.1542)			
Rule of Law Index, ln_GL_3						−0.1053			
						(0.08669)			

Table 3. *Cont.*

Variable	ln_FS	ln_FS	ln_FS	ln_FS	ln_FS	ln_FS	Δln_FS	Δln_FS	Δln_FS
Corruption Perceptions Index, Δln_CPI							−0.1739		
							(0.1455)		
Enforcing Contracts, Δln_L								0.1480	
								(0.09888)	
Rule of Law Index, Δln_GL									0.1748 *
									(0.08885)
Constant	0.2464	0.4639	0.4076	0.06714	1.198 **	0.2233	−0.03390 ***	0.04173 ***	0.04129 ***
	(0.3390)	(0.3827)	(0.6023)	(0.6264)	(0.4957)	(0.5602)	(0.008869)	(0.01224)	(0.0004026)
Number of Observations	245	490	490	140	385	385	210	455	455
LSDV Adj. R^2	0.810604	0.704461	0.702812	0.827115	0.739397	0.737491	0.129106	0.167860	0.168500
F-values	3.60148	7.20663	6.81574	6.4306	14.6392	9.13277	3.89667	8.044709	1.40×10^{17}
p-value [(1)] (F)	0.00524351	<0.0001	<0.0001	<0.0001	0.000422455	<0.0001	0.00456059	<0.0001	<0.0001

Notes: [(1)] A low *p*-value counts against the null hypothesis: all regressors are jointly insignificant. All estimations include time-dummies and. *, **, *** indicate significance at the 10, 5, and 1 percent level, respectively. Furthermore, _1, _2, _3 indicate the number of lags. Source: authors' contributions. Table 3 is compiled regarding the Wooldridge, White, Breusch–Pagan, Hausman, and F test results provided in Tables A1–A9 in Appendix A.

6. Conclusions

The theoretical analysis of financial security revealed the diversity of the phenomenon and the wide range of socio-economic issues addressed by this phenomenon. The results of this study suggest that there are common features for the financial security of households, enterprises, and the state. Financial security is a financial state which: (1) is supported by active measures; (2) is affected by various links and the external environment; (3) allows for the most important needs to be met; and (4) enables financial autonomy to be maintained.

The analysis of indicators used in financial security studies showed that specific financial security characteristics may be related to the level of economic development, stability of purchasing power, state and household accumulation of financial reserves, and a stable level of consumption. Therefore, these specific financial security characteristics need to be taken into account when designing the financial security index calculation model.

Using panel regression techniques, the results indicate that legal regulation in the economic field and state capacity in the field of corruption prevention have a statistically significant impact on financial security. This confirms the importance of legal regulation in the economic field and corruption prevention for financial security and, at the same time, for the development of a sustainable economy. However, it is important to strike the right balance in the process of setting up and implementing regulatory measures, not only between the various stakeholders (shareholders, creditors, entrepreneurs/managers, and employees), but also in assessing the potential economic impact of regulatory measures.

The results, which have shown the impact of legal regulation on financial security, allow for predicting changes in financial security, depending on changes in the level of legal regulation. This is why OECD governments must take into account the current specificity of legal regulation and the level of financial security in their country when designing financial security assurance strategies. In order to improve the financial security situation, it is important to improve corruption prevention programmes and improve legal regulation in the economic field.

The same weights that apply to the financial security index are considered as a limitation of the study. In addition, only a part of the possible indicators was selected for the calculation of the financial security index. Additional data or indicators can be introduced in the study, as well as different methods of calculating the indicators. In addition, the study could be repeated by extending the base of the study with indicators reflecting the qualitative component of financial security. As financial security is a dynamic and continuous process, the inclusion phases of such additional components would allow for the adaptation of the indices. The introduction of such changes may reflect different perspectives on financial security. The investigation also did not take into account possible similarities between individual countries. It is therefore appropriate to renew the study using the methodology described in the study after the additional investigation methods have been chosen and after the OECD countries have been selected according to similarity.

Author Contributions: Conceptualisation, R.V. and A.V.; methodology, R.V. and A.V.; validation, A.V.; formal analysis, R.V.; data curation, R.V.; writing—original draft preparation, R.V. and A.V.; writing—review and editing, R.V. and A.V.; visualisation, R.V.; supervision, A.V. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: Publicly available datasets were analysed in this study. This data can be found here: The World Bank's World Development Indicator's database [worldbank.org/source/world-development-indicators] (accessed on 17 December 2021), United Nations UNCTADSTAT database (https://unctadstat.unctad.org/) (accessed on 17 December 2021), Transparency International data (https://www.transparency.org) (accessed on 18 December 2021), Doing Business database (https://databank.worldbank.org/source/doing-business) (accessed on 17 December 2021).

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. The results of the intermediate calculations of Table 3 according to equation No. 1.

Type of Test	Statistics	*p*-Value
White test [1]	27.4521	0.0168
Wooldridge test [2]	13.0955	0.0000
F test	21.6263	0.0000 *
Breusch–Pagan test	394.283	0.0000 **
Hausman test	9.05263	0.0026 ***

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the random effects alternative. *** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Table A2. The results of the intermediate calculations of Table 3 according to equation No. 2.

Type of Test	Statistics	*p*-Value
White test [1]	38.8532	0.0833
Wooldridge test [2]	14.6787	0.0000
F test	25.0551	0.0000 *
Breusch–Pagan test	1189.75	0.0000 **
Hausman test	9.27304	0.0023 ***

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the random effects alternative. *** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Table A3. The results of the intermediate calculations of Table 3 according to equation No. 3.

Type of Test	Statistics	*p*-Value
White test [1]	20.4833	0.8462
Wooldridge test [2]	13.3131	0.0000
F test	19.627	0.0000 *
Breusch–Pagan test	963.992	0.0000 **
Hausman test	14.79	0.0001 ***

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the random effects alternative. *** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Table A4. The results of the intermediate calculations of Table 3 according to equation No. 4.

Type of Test	Statistics	*p*-Value
White test [1]	71.4001	0.0158
Wooldridge test [2]	−1.80564	0.0798
F test	2.59706	0.0001 *
Hausman test	103.968	0.0000 **

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Table A5. The results of the intermediate calculations of Table 3 according to equation No. 5.

Type of Test	Statistics	*p*-Value
White test [1]	137.453	0.0044
Wooldridge test [2]	−2.09649	0.0436
F test	3.68432	0.0000 *
Hausman test	139.594	0.0000 **

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Table A6. The results of the intermediate calculations of Table 3 according to equation No. 6.

Type of Test	Statistics	*p*-Value
White test [1]	166.924	0.0000
Wooldridge test [2]	−1.98386	0.0554
F test	3.6767	0.0000 *
Hausman test	138.86	0.0000 **

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Table A7. The results of the intermediate calculations of Table 3 according to equation No. 7.

Type of Test	Statistics	*p*-Value
White test [1]	6.40103	0.8945
Wooldridge test [2]	−5.44177	0.0000
F test	0.12229	1 *
Hausman test	0.90591	0.3412 *

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative.

Table A8. The results of the intermediate calculations of Table 3 according to equation No. 8.

Type of Test	Statistics	*p*-Value
White test [1]	59.475	0.0002
Wooldridge test [2]	−11.5296	0.0000
F test	0.09006	1 *
Hausman test	0.38873	0.5330 **

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Table A9. The results of the intermediate calculations of Table 3 according to equation No. 9.

Type of Test	Statistics	*p*-Value
White test [1]	45.6575	0.0100
Wooldridge test [2]	−11.7247	0.0000
F test	0.08352	1 *
Hausman test	0.12964	0.7188 **

Notes: [1] H0: heteroskedasticity not present. [2] H0: no first-order autocorrelation. * A low *p*-value counts against the null hypothesis that the pooled OLS model is adequate, in favour of the fixed effects alternative. ** A low *p*-value counts against the null hypothesis that the random effects model is consistent, in favour of the fixed effects model. Source: authors' contributions.

Notes

[1] OECD (2015); OECD (2018); OECD (2019); etc.

[2] https://www.oecd.org/finance/core-competencies-frameworks-for-financial-literacy.htm (accessed on 20 December 2021).

References

Abu Bakar, Aisyah, Mohamed Osman Mariana, Bachok Syahriah, Ibrahim Masor, and Zin Mohamed Mohd. 2015. Modelling economic well-being and social well-being for sustainability: A theoretical concept. *Procedia Environmental Science* 28: 286–96. [CrossRef]

Ahmad, Siti Yuliandi, and Mohamad Fazli Sabri. 2014. Understanding financial security from consumer's perspective: A review of literature. *International Journal of Humanities and Social Science* 4: 110–17. Available online: http://www.ijhssnet.com/journals/Vol_4_No_12_October_2014/13.pdf (accessed on 20 December 2021).

Alifanova, Elena Nikolaevna, and Yulia Sergeevna Evlakhova. 2017. Developing a system of indicators of national financial security. *Finance and Credit* 23: 1723–36. [CrossRef]

Apergis, Nicholas. 2019. Financial vulnerability and income inequality: New evidence from OECD countries. *Buletin Ekonomi Moneter dan Perbankan* 21: 395–408. [CrossRef]

Baily, Martin Neil, Aaron Klein, and Justin Schardin. 2017. The impact of the Dodd-Frank Act on financial stability and economic growth. *Journal of the Social Sciences* 3: 20–47. [CrossRef]

Bellak, Christian, and Markus Leibrecht. 2009. *Does the Impact of Employment Protection Legislation on FDI Differ by Skill-Intensity of Sectors? An Empirical Investigation*. GEP Research Paper 2009/21. Nottingham: University of Nottingham. [CrossRef]

Ben-David, Itzhak, Francesco Franzoni, and Rabih Moussawi. 2012. Hedge fund stock trading in the financial crisis of 2007–2009. *The Review of Financial Studies* 25: 1–54. Available online: http://www.jstor.org/stable/41302012 (accessed on 20 December 2021). [CrossRef]

Blakyta, Ganna, and Tetiana Ganushchak. 2018. Enterprise financial security as a component of the economic security of the state. *Investment Management and Financial Innovations* 15: 248–56. [CrossRef]

Böhringer, Christoph, and Patrick E. P. Jochem. 2007. Measuring the immeasurable: A survey of sustainability indices. *Published in: Ecological Economics* 63: 1–8. [CrossRef]

Brown, R. Jeffrey, Choi J. James, Courtney Coile, and Richard Woodbury. 2020. Social security and financial security at older ages. *Social Security Bulletin* 80: 31–40. Available online: https://ssrn.com/abstract=3537057 (accessed on 20 December 2021).

Brück, Tilman. 2004. *An Economic Analysis of Security Policies*. DIW Discussion Papers, No. 456. Berlin: Deutsches Institut für Wirtschaftsforschung (DIW). Available online: http://hdl.handle.net/10419/18308 (accessed on 20 December 2021).

Bublienė, Danguolė, Agnė Limantė, Petras Ragauskas, and Evelina Agota Vitkutė. 2017. *Teisinio Reguliavimo ex Post Vertinimo Perspektyvos Lietuvoje*. Vilnius: Lietuvos Teisės Institutas. Available online: http://teise.org/wp-content/uploads/2018/01/Ex-post3.pdf (accessed on 20 December 2021).

Burkaltseva, Diana Dmitrievna, Borsch Lyudmila Mikhaylovna, Blazhevich Oleg Georgiyevich, Frolova Evgenia Evgenyevna, and Labonin Ilya Valentinovich. 2017. Financial and economic security of business as a primary element in the economic system. *Espacios* 38: 3–20. Available online: www.revistaespacios.com/a17v38n33/a17v38n33p03.pdf (accessed on 20 December 2021).

Butkus, Mindaugas, Kristina Matuzevičiūtė, and Alma Mačiulytė-Šniukienė. 2019. Do economic conditions still cause Crime? Some comforting empirical evidences from EU panel. *Zbornik Radova Ekonomskog Fakulteta u Rijeci—Proceedings of Rijeka Faculty of Economics* 37: 603–28. [CrossRef]

Cogoljević, Dušan, Milan Gavrilović, Miloš Roganović, Ivana Matić, and Ivan Piljan. 2018. Analyzing of consumer price index influence on inflation by multiple linear regression. *Physica A* 505: 941–44. [CrossRef]

Cuervo-Cazurra, Alvaro. 2016. Corruption in international business. *Journal of World Business* 51: 35–49. [CrossRef]

De Serres, Alain, Shuji Kobayakawa, Torsten Sløk, and Laura Vartia. 2006. Regulation of financial systems and economic growth in OECD countries: An empirical analysis. *OECD Journal: Economic Studies* 43: 77–113. Available online: https://www.oecd-ilibrary.org/economics/oecd-economic-studies_16097491 (accessed on 20 December 2021). [CrossRef]

Delas, Vitalina, Euvgenia Nosova, and Olena Yafinovych. 2015. Financial security of enterprises. *Procedia Economics and Finance* 27: 248–66. [CrossRef]

Engerer, Hella. 2009. *Security Economics: Definition and Capacity*; Economics of Security Working Paper, 5. Berlin: German Institute for Economic Research. Available online: https://www.diw.de/documents/publikationen/73/diw_01.c.94891.de/diw_econsec0005.pdf (accessed on 20 December 2021).

Ermakova, Eka Pevazievna. 2017. Scientific approaches to defining the concept of financial security. *National Interests Priorities & Security* 13: 1712–30. [CrossRef]

Florea, Nicoleta M., Roxana M. Bădîrcea, Georgeta-Madalina Meghisan-Toma, Silvia Puiu, Alina G. Manta, and Dorel Berceanu. 2021. Linking Public Finances' Performance to Renewable-Energy Consumption in Emerging Economies of the European Union. *Sustainability* 13: 6344. [CrossRef]

Franchuk, Vasil, Oleg Omelchuk, Stepan Melnyk, Mykhailo Kelman, and Oksana Mykytyuk. 2020. Identification the ways of counteraction of the threats to the financial security of high-tech enterprises. *Business: Theory and Practice* 21: 1–9. [CrossRef]

Grozdić, Vanja, Marić Branislav, Radišić Mladen, Šebestová Jarmila, and Lis Marcin. 2020. Capital Investments and Manufacturing Firms' Performance: Panel-Data Analysis. *Sustainability* 12: 1689. [CrossRef]

Guryanova, Lidiya Semenovna, Tamara Semenovna Klebanova, Stanislav Valerievich Milevskiy, Viacheslav Volodimipovich Nepomnyaschiy, and Olga Aleksandrovna Rudachenko. 2017. Models for the analysis of the state's financial security indicators dynamics. *Financial and Credit Activity: Problems of Theory and Practice* 1: 254–64. [CrossRef]

Hacker, Jacob S., Gregory A. Huber, Rehm Huber Philipp, Schlesinger Mark, and Valletta Rob. 2010. *Economic Security at Risk: Findings from the Economic Security Index*. New York: Rockefeller Foundation. Available online: https://community-wealth.org/sites/clone.community-wealth.org/files/downloads/paper-hacker-et-al.pdf (accessed on 20 December 2021).

Helm, Patrick. 2015. Risk and resilience: Strategies for security. *Civil Engineering and Environmental Systems* 32: 100–18. [CrossRef]

Hounmenou, Bernard G., and Fabrice D. Degbedji. 2021. Impact of own resources on municipalities' investments expenditures in Benin. *International Journal of Development Issues* 20: 393–416. [CrossRef]

Hryhoruk, Pavlo, Nila Khrushch, and Svitlana Grygoruk. 2019. Model for assessment of the financial security level of the enterprise based of the desirability scale. *International Conference on Monitoring, Modelling & Management of Emergent Economy (M3E2 2019)* 65: 03005. [CrossRef]

Jakobi, Tobias. 2012. Regulating Regulation? The Regulatory Policy of the OECD. Paper presented at the ECPR Standing Group on Regulation and Governance Conference, Exeter, UK, June 4–7. Available online: http://regulation.upf.edu/exeter-12-papers/Paper%20263%20-%20Jakobi%202012%20-%20Regulating%20Regulation.pdf (accessed on 20 December 2021).

Khrushch, Nila, Pavlo Hryhoruk, Liudmyla Prystupa, and Liudmyla Vahanova. 2019. Assessing bank financial security level using the comprehensive index technology. In *Advances in Economics, Business and Management Research: Volume 95, Proceedings of the 6th International Conference on Strategies, Models and Technologies of Economic Systems Management (SMTESM 2019), Khmelnytskyi, Ukraine, October 4–6*. Amsterdam and Paris: Atlantis Press, pp. 414–19. [CrossRef]

Lange, Ansgar, Anne Prenzler, and Andy Zuchandke. 2012. How do insured perceive their financial security in the event of illness? A panel data analysis for Germany. *Value in Health* 15: 743–49. [CrossRef] [PubMed]

Langevoort, Donald C. 2010. Global securities regulation after the financial crisis. *Journal of International Economic Law* 13: 799–815. [CrossRef]

Lehmann, Matthias. 2017. Legal fragmentation, extraterritoriality and uncertainty in global financial regulation. *Oxford Journal of Legal Studies* 37: 406–34. [CrossRef]

Lyons, Angela C., John E. Grable, and So-Hyun Joo. 2018. A cross-country analysis of population aging and financial security. *Journal of the Economics of Ageing* 12: 96–117. [CrossRef]

Maurer, Raimond, Olivia S. Mitchell, and Mark Warshawsky. 2011. *Retirement Security and the Financial and Economic Crisis: An Overview*. Wharton Pension Research Council Working Papers, 170. Available online: https://repository.upenn.edu/prc_papers/170/ (accessed on 20 December 2021).

Melnychenko, Oleksandr. 2020. Is Artificial Intelligence Ready to Assess an Enterprise's Financial Security? *Journal of Risk and Financial Management* 13: 191. [CrossRef]

Munyon, Timothy P., Andrew M. Carnes, Laci M. Lyons, and Ingo Zettler. 2020. All about the money? Exploring antecedents and consequences for a brief measure of perceived financial security. *Journal of Occupational Health Psychology* 25: 159–75. [CrossRef]

Mura, Ladislav, Monika Daňová, Roman Vavrek, and Mariana Dúbravská. 2017. Economic freedom—Classification of its level and impact on the economic security. *AD ALTA-Journal of Interdisciplinary Research* 7: 154–57. Available online: http://www.magnanimitas.cz/ADALTA/0702/papers/A_mura.pdf (accessed on 20 December 2021).

OECD. 2012. *Recommendation of the Council on Regulatory Policy and Governance*. Paris: Organisation for Economic Co-operation and Development. Available online: https://www.oecd.org/governance/regulatory-policy/49990817.pdf (accessed on 20 December 2021).

OECD. 2015. *Regulatory Policy Outlook*. Paris: OECD Publishing. [CrossRef]

OECD. 2018. *Regulatory Policy in Outlook*. Paris: OECD Publishing. [CrossRef]

OECD. 2019. *Better Regulation Practices across the European Union*. Paris: OECD Publishing.

Osberg, Lars. 2015. *How Should One Measure Economic Insecurity?* OECD Statistics Working Papers, No. 2015/01. Paris: OECD Publishing. [CrossRef]

Piotrowska, Maria. 2017. The impact of consumer behaviour on financial security of households in Poland. *Contaduria y Administracion* 62: 461–504. [CrossRef]

Poltorak, Anastasiia, Natalia Sirenko, Nataliia Prokopenko, Olha Melnik, and Irina Trusevich. 2019. Behavioral approach to monitoring the state of national financial security. *Management Theory and Studies for Rural Business and Infrastructure Development* 41: 102–13. [CrossRef]

Poterba, James M., Steven F. Venti, and David A. Wise. 2011. Demographic trends, housing equity, and the financial security of future retirees. In *Demography and the Economy*. Edited by John B. Shoven. Chicago: University of Chicago Press, The National Bureau of Economic Research, pp. 227–87. Available online: http://www.nber.org/chapters/c8416 (accessed on 20 December 2021).

Retter, Lucia, Erik J. Frinking, Stijn Hoorens, Alice Lynch, Fook Nederveen, and William D. Phillips. 2020. *Relationships between the Economy and National Security: Analysis and Considerations for Economic Security Policy in the Netherlands*. Santa Monica: Wetenschappelijk Onderzoek-en Documentatiecentrum. Available online: https://www.rand.org/pubs/research_reports/RR4287.html (accessed on 20 December 2021).

Reznik, Oleg, Getmanets Olga, Kovalchuk Andrii, Nastyuk Vasyl, and Andriichenko Nadiia. 2020. Financial security of the state. *Journal of Security and Sustainability Issues* 9: 843–52. [CrossRef]

Robertson, Christopher J., and Andrew Watson. 2004. Corruption and change: The impact of foreign direct investment. *Strategic Management Journal* 25: 385–96. Available online: www.jstor.org/stable/20142128 (accessed on 20 December 2021). [CrossRef]

Schultz, Rebecca, Arndt-Bascle Christiane, Davidson Paul, and Gerloff Benjamin. 2019. Better indicators for better regulation: The OECD iREG experience. *Revista de Economica ICE* 907: 51–68. Available online: http://www.oecd.org/gov/regulatory-policy/Better-indicators-for-better-regulation.pdf (accessed on 20 December 2021). [CrossRef]

Semjonova, Nadežda. 2016. Financial security in the Baltic States: Comparison with selected EU countries. *Economics and Business* 29: 90–95. [CrossRef]

Storelli, Elizangela, and John B. Williamson. 2015. Class, pensions, and old-age security. In *Social Class in Later Life. Power, Identity and Lifestyle*. Edited by Marvin Formosa and Paul Higgs. Bristol: Policy Press, pp. 95–112.

Sylkin, Oleksandr, Kryshtanovych Myroslav, Zachepa Andrui, Bilous Sofiia, and Krasko Anna. 2019. Modeling the process of applying anti-crisis management in the system of ensuring financial security of the enterprise. *Business: Theory and Practice* 20: 446–55. [CrossRef]

Urmonas, Algimantas, and Saulė Milčiuvienė. 2003. Elektros rinkos teisinis reguliavimas. *Jurisprudencija* 42: 90–100. Available online: https://ojs.mruni.eu/ojs/jurisprudence/article/view/3413 (accessed on 20 December 2021).

Vaišvila, Alfonsas. 2000. *Teisės Teorija*. Vilnius: Justitia. Available online: https://scholar.google.com/scholar_lookup?title=Teis%C4%97s%20teorija&publication_year=2000&author=Vai%C5%A1vila%2CA (accessed on 20 December 2021).

Vaitkus, Robertas, and Asta Vasiliauskaitė. 2021. Financial security in the context of economics welfare. *International Scientific Conference Contemporary Issues in Business, Management and Economics Engineering* 2021: 37–49. [CrossRef]

Vergun, Antonina M., and Yulia A. Topenko. 2016. Evolution of views on financial security as a management unit. *Економіка: Реалії часу* 4: 122–34. Available online: https://economics.opu.ua/files/archive/2016/No4/122.pdf (accessed on 20 December 2021).

Zimon, Grzegorz, Marek Sobolewski, and Grzegorz Lew. 2020. An Influence of Group Purchasing Organizations on Financial Security of SMEs Operating in the Renewable Energy Sector—Case for Poland. *Energies* 13: 2926. [CrossRef]

Zwolak, Jan. 2017. The financial security of small and medium-sized enterprises in Poland. *Ekonomski Pregled* 68: 399–412. Available online: https://hrcak.srce.hr/187556 (accessed on 20 December 2021).