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CAPITAL MARKETS DEVELOPMENT IN THE EMERGING MARKETS

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Annotazione

Nei paesi in cui si tende a spendere più del reddito c'è un enorme rischio di essere coinvolti in un circolo vizioso di impoverimento. Per creare un Paese è essenziale una politica che stimoli la conservazione delle finanze tra i cittadini. Il sistema, considerato di stimolare tali azioni, è il mercato dei capitali. Il presente documento è dedicato allo sviluppo dei mercati capitali nei paesi con mercati emergenti.

Secondo la stima dei professionisti i mercati emergenti in Europa e in Asia centrale cresceranno nonostante l'impatto negativo dopo la prolungata crisi di Covid 19; pertanto, i mercati emergenti stanno diventando oggetto di maggiore interesse per l'analisi. Altri fattori benefici sono le possibilità moderne, che menzionano il processo di recupero, e modelli di sviluppo del settore finanziario di successo che sono già esistenti e provati da altri paesi più sviluppati, in particolare i modelli sullo sviluppo del mercato dei capitali, e, aggiungendo, i dati diversificati dell'esperienza delle organizzazioni internazionali. I mercati emergenti sono di grande interesse per stimolare lo sviluppo dell'economia attraverso un modello completo di sviluppo del mercato dei capitali. Inoltre, al giorno d'oggi con il rapido sviluppo della fintech, la tendenza di orientamento bancario dei paesi sta cambiando verso i mercati dei capitali.

La ricerca condotta nel presente documento è stata quella di identificare gli aspetti metodologici internazionali riguardanti lo sviluppo del mercato dei capitali; inoltre, uno degli obiettivi era identificare i fattori che hanno un effetto più significativo sullo sviluppo finanziario del paese attraverso l'analisi di regressione, in particolare, identificare il livello di dipendenza tra gli indici internazionali con gli indicatori macroeconomici, istituzionali e finanziari del paese. Allo stesso modo è stata

condotta l'analisi per l'indicazione dei fattori che influenzano lo sviluppo dei mercati dei capitali; quindi è stata condotta un'analisi comparativa di paesi con condizioni economiche iniziali simili e diverse. Per un ulteriore analisi approfondita, la ricerca completa e per l'applicazione del modello è stato scelto un paese peculiare. Alla fine, con l'aiuto della ricerca e delle analisi condotte, è stato creato il modello completo di sviluppo del mercato dei capitali; per chiarire, in questo caso, il paese prescelto con un mercato emergente in analisi è stato l'Uzbekistan.

In conclusione, è stato creato e descritto il modello di sviluppo del mercato dei capitali (modello CMD) con aggiustamenti, suggerimenti, spiegazioni sui risultati attesi. Inoltre, sono stati offerti diversi esempi con l'implementazione dettagliata dei fattori menzionati del modello CMD.

Secondo l'attuale livello del sistema finanziario dell'Uzbekistan, il focus del modello CMD è stato diretto al raggiungimento dei seguenti risultati primari:

1- adeguamento della legislazione,

2- alfabetizzazione finanziaria dell'aumento della popolazione,

3- diversificazione dell'attuale sistema strumenti finanziari con sukuk, e

4- miglioramento dell'infrastruttura con piattaforma di crowdfunding (è stato offerto l'esempio preciso), con diversificazione delle funzionalità del CSD come sulle parti principali dell'infrastruttura di mercato (è stata presentata la spiegazione dettagliata delle possibilità),

5- aumento della trasparenza dei mercati dei capitali,

6- tutela degli investitori di minoranza.

Content

Introduction

In countries were the tendency when expending is higher than the income there is a huge risk to be caught into a vicious cycle of impoverishment. To create a country, a policy that stimulates preservation of finances amongst citizens is essential. The system, considering to stimulate those actions, is capital market. The current paper is dedicated to the development of such markets in the countries with emerging markets.

According to the World Banks's estimations emerging and developing economies in the Europe and Central Asia will grow despite negative impact after protracted crisis of Covid 19 by 3.6 % in 2021. Moreover, several emerging markets were able to overcome crisis with positive financial results even in the end of 2020. A number of few countries the world with an estimated economic growth in 2020 include also Uzbekistan[1]. As for the World Bank, economic growth of Uzbekistan will sustain due to an ambitious reform program that has continued also last year, despite huge hurdles from the pandemic.

Taking into account above mentioned, as well as possibilities and successful financial sector development patterns which are already exist and proved by other more developed countries, in particular patterns on development of capital markets, mentioning the catching up process, the emerging markets are of the great interest to boost the economy development by means of comprehensive capital market development model. Nowadays, with the rapid development of fintech the countries' banking-orientation tendency is changing towards capital markets. Advanced economies historically point the way to development, the capital market in this case not the exception, thus the predominant way of financing in the USA is via capital markets, in particular, corporate bond market. Moreover, the hugest international companies operating towards capital marketed development all over the world located in USA, the greatest capital markets regulator is American, USA has the two largest stock exchanges (NYSE and Nasdaq), etc. Consequently, the experience of America serves as the epitome of capital market development model, the methodologies and guidelines issued and developed by international organizations operating from there are used as the main methodological basis.

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[1] World Bank, Europe and Central Asia Economic Update, Spring 2021, Data, Digitalization, and Governance. Washington, DC, World Bank 2021

Furthermore, there is a diversified and multifarious structure of capital markets of the European Union. There are advanced capital markets on the other hand and emerging, infant once from the other. Moreover, the example of Union can be the subject on similarities identification with the Eurasian union, where Uzbekistan became an observer from the beginning of 2021.

In addition, there are several comprehensive indices which were created for evaluation of an economy in general, financial sector, regulating system, population capability and other characteristics of the countries all over the world. Thus, indices could be used during the pre-implementation step of the model for the current condition analysis, post-implementation step as a tool for monitoring the progress.

In conclusion, the research conducted within the framework of the current paper was to identify the methodological international aspects on capital markets development, identify the aspects which effect more on the financial development of the country via regression analysis, in particular, to identify the level of dependence between Financial development index (one of the most important international indices for each country) and the capital markets development, same for indication of factors effecting capital markets development, to implement a comparison analysis of countries with similar and different initial economic conditions, choose the country for the model application, then conduct a deep, comprehensive research of the chosen country with further creation the comprehensive capital market development model for it. To clarify, the country with an emerging market under analysis was Uzbekistan.

In order to implement abovementioned goals, the working plan for the current paper was divided into 4 parts, where the first part is going to be dedicated to financial systems and financial markets history of creation and comparison analysis between those of several countries. The comparison will be made within countries with advanced economy and advanced capital markets, versus those with developing and emerging ones. The second part will be devoted to methodological explanation, then, in the third part there will be statistical analysis conduct on identification of an effect of several variables on the regression models. That would be an attempt to figure out the influence on financial development. Finally, in the fourth part, summarizing possible interrelations of factors, an attempt on particular comprehensive model of the capital markets development will be fulfilled.

Chapter 1. The financial systems and the financial markets.
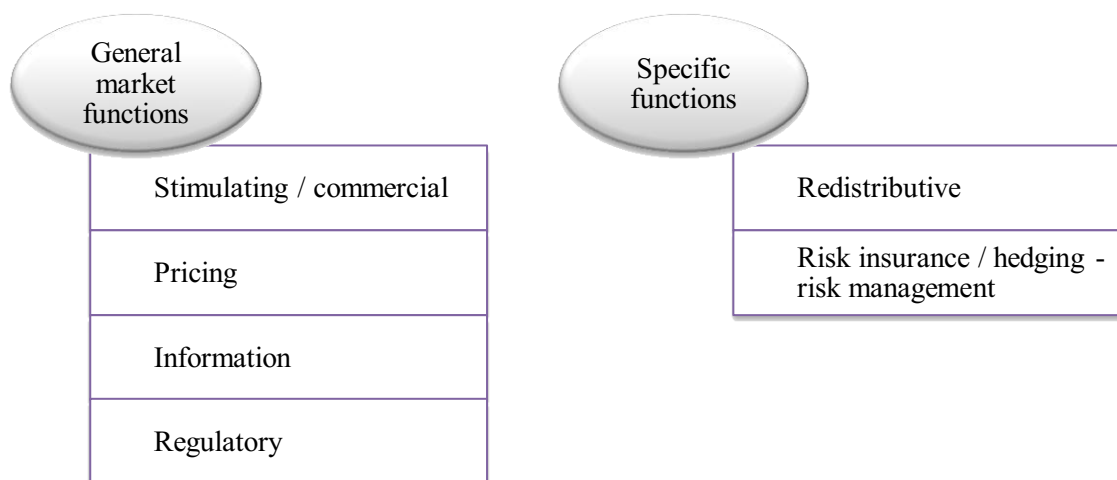
1.1 Capital markets evolution

There are several levels of growth of a country. One such grade is where the expending is higher than the income. On that level the small quantity of money in the economy is saved. Which implies that there exists a vicious cycle of impoverishment. To create a country, a policy that stimulates preservation of finances amongst citizens is essential. To rise savings citizens are encouraged to deposit their surplus monetary resource in financial institutions such as banks, co-operative societies, building societies, mutual funds, stockbrokers and pension funds for a specified maturity of time at fixed rate of interest without any withdrawing. The savings now turn investments. afterwards a period of time, the culture of saving is instilled in the public. The financial institutions stated above will agreeably act an important part in the economic growth of the country. Through diverse incentives they will syndicate together little, idle, surplus savings from individuals, households and groups scattered throughout a broad geographical space. Abreast acquiring way to the surplus unutilized funds, the abovementioned institutions transfer funds into deficit parts which are in the lack of them. Moreover, institutions will be linking joint between those that have unused surplus savings with entrepreneurs who are in search of funds to fund their ideas; the lenders and borrowers. Schumpeter gave an explanation - "without the transfer of purchasing power to him, an entrepreneur cannot become the entrepreneur." What means, the capital market is a place, virtual, physical where investors through financial intermediaries lend funds for a fixed long term to borrowers in exchange for financial assets. The maturity period of the financial assets is above a period of one year in addition to interest accruing thereof. To increase long term funds, the borrowers issue long term bonds, shares, and other securities. According to the economic times: Capital market is a market where sellers and buyers engage in trade of financial securities. The buying/selling is undertaken by participants such as individuals and institutions. Capital markets serve as a linkage tool for surplus funds from individuals, investors, savers to institutions which then invest them into productive use. Generally, this market trades mostly in long-term securities. "A capital market is a financial market in which long-term debt (over a year) or equity-backed securities are bought and sold".

Having a well-operated financial system framework that coordinates reserves to their most profitable use may be a significant prerequisite for economic superiority. The financial system

comprises of all related mediators and financial, budgetary, markets, and their relations with regard to the stream of funds from/to individuals, governments, trade firms, foreigners, also in terms of infrastructure.

The main task of the financial system is to channel funds from sectors that have a surplus to sectors that have a shortage of funds. In doing so, the financial sector performs two main functions: (1) reducing information and transaction costs – general market functions, and (2) facilitating the trading, diversification, and management of risk[2] - specific functions. Figure 1 illustrates detailly.

Figure 1.1. Financial system functions

General market functions		Specific functions
Stimulating / commercial		Redistributive
Pricing		Risk insurance / hedging - risk management
Information		
Regulatory		

Source: Personal elaboration

Well-performing economy has entities that together perform all the above-mentioned capacities. Banks offer payments administrations, also deposit and credit service (capital assignment through obligation or debt). A central bank is responsible for the monitoring of inflation rate, it ensures the availability of the currency in the country. A stock exchange gives an excess to other types of capital allocation by means of such instruments as equities (shares) or debt / obligations (bonds) additionally manages corporate governance by means of the procedure of listing. It also acts as a supervisor of the information, data spreading (financial statements, necessary information disclosure regulation, real prices etc.). Solid media is vital to dissemination, spread of data related to the financial markets or important in terms of investors', customers interests. Hazard assignment is encouraged by insurance agents, companies, moreover is facilitated be the market of derivatives.

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[2] *Jakob de Haan, Rijksuniversiteit Groningen, The Netherlands, Sander Oosterloo, Dirk Schoenmaker, Chapter 1 - Functions of the Financial System from Part I - Setting the Stage, Cambridge University Pres, Chapter 1, pp 3-38*

The main idea of derivatives creation was the provision of possibility of risk management. And in the epitome of protection and regulation power is a regulatory authority (such as the US SEC or the UK FSA, for example), which provides control to banks, exchanges, all market players according to the legal framework. The financial market can be presented in some types of assets as different subdivisions: capital markets, which trade with long-term securities (bonds, shares) maturing more than a year; money market – operates with short-term bonds, foreign exchange - currency market; goods, commodities markets; property debt mortgage markets; market of derivatives (underlying assets of all types of existing assets).

A well- performing capital market boost the allocation of capital to productive use in companies by encouraging the placement of shares and bonds in the primary market. It gives investors an efficient means of buying or selling assets in a liquid secondary market, and it requires companies to provide

In conclusion the capital market lies at the heart of economic development of any country and it is prudent for the government to come up with deliberate policies which ensure the establishment of a stable and functioning capital market.

The beginning of the activities similar to those of a capital market can be traced to various parts of the world. The global capital market can be traced to several centuries ago. Originally, money lenders mainly filled the gap of banks by lending out money to traders. For instance, in Shakespeare's play, Merchant of Venice, a context depicting a historical setting where money lenders lent money to borrowers. First brokers in the world, merchants acted as lenders of money to various businesses. Perhaps it was in the habit of lending that led to a system of trading debts. Hence the first brokers in the history of the capital market were the 'courretiers' from France. The trading in debts perhaps initiated thoughts of coming up with negotiable instruments such as debentures.

Trading government securities. The pioneer of trading government securities were the merchants of Venice whose trading in government securities motivated other players to venture into the government securities market. Banks from nearby cities such as Florence, Genoa, Pisa and Verona followed the footsteps of the lenders and began trading government securities.

The world's first stock market. It is believed that the first stock markets begun in Belgium and in the Dutch cities such as Bruges, Flanders, Ghent and Rotterdam. Van der Beurze was an influential

man in 13th century that his house conducted transactions similar to those of a stock market. Despite the fact that the infrastructure and institutions were similar to the modern stock market, there was the absence of trading in shares of companies nor was there listing of companies to the stock market. The markets were mainly concerned with trading in government securities and individual debts. The Van der Bourse family revolutionized the stock market. They housed the traders and for the first time, trading of debts and other securities came under one roof. The idea quickly spread around Flanders and neighboring counties and "Beurzen" soon opened in Ghent and Amsterdam. Therefore, it is conventionally accepted that in the whole world, it was in the city of Antwerp that the first stock market was formed. The stock market system then gained root and sprouted in the neighboring cities and other countries.

The first Stock exchange. The Bubbles Act prohibited the business of incorporation part of which is the issuance of shares. Therefore, the Bubbles Act banned the very business of issuance of shares. Although the ban limited commerce and trade transactions, the London Stock Exchange came into existence in 1801.

The New York Stock Exchange. The New York Stock Exchange (NYSE) was formed in 1817. Its creation was a watershed moment in history. This is mainly because the New York stock exchange began trading since its very first day of inception. Contrary to claims that the New York stock exchange was the first stock exchange, founded in 1790, the Philadelphia stock exchange was the premier stock exchange in the United States of America. Due to its strategic location at the center of commerce and trade in the United States in New York, the New York stock exchange grew by bounds. The absence of competition within the United States of America gave NYSE a freehand in stock market trade. Soon, NYSE entrenched its place as the best and most powerful stock exchange in the United States of America this further propagated its status internationally. With the London stock exchange shackled, NYSE cemented its place globally as the biggest stock exchange in the world. The London stock exchange remained a power to reckon in Europe.

1.2. Features of the advanced and some emerging Capital Markets in comparison

Current paragraph is devoted to the description of some countries' Capital Market systems, appropriate economies characteristics. The choice was made to present the well-developed or advanced system and economy, then less developed system with advance economy, and finally several developing economies with infant or infant Capital development system. Thus, following

the descriptive overview and comparison of USA, EU (union in general), Italy, Ukraine, Georgia and Uzbekistan, accordingly.

Features of USA's Capital Market

The US has the World's hugest capital markets. USA equity markets represent 41% of the $75 trillion in global equity market cap, it has $30 trillion (Figure 1.2).

it has well-developed long- and short-term capital markets. The long-term loan capital market includes the government bond markets, securities market (as well as stock exchange), industrial and foreign, the mortgage market, and consumer credit. The short-term market includes markets such as currency, money (short-term capital market), forward finance (options market), swaps and futures.

Figure 1.2. Global equity market capitalization
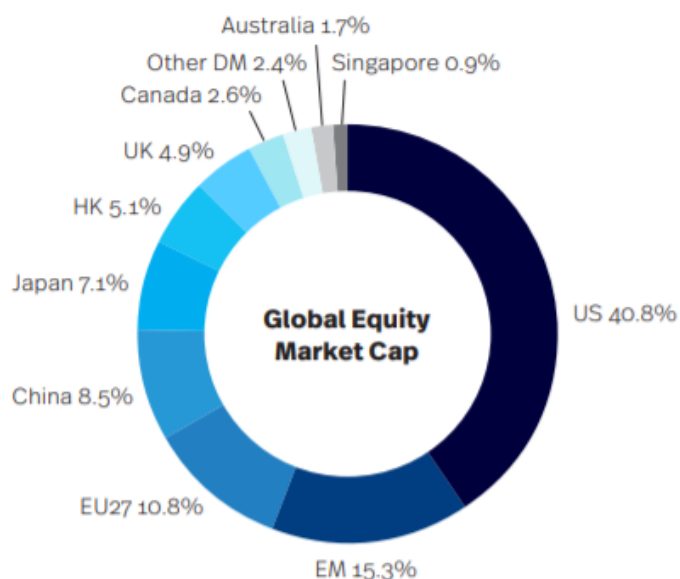
Source: Sifma, 2020 Outlook, Trends in US Capital Markets.

1) Long-term loan market

The United States has the world's largest capital market, with a total of more than $20 trillion in securities debt in a stable economy, including equities and liabilities. The World's greatest market capitalization share belongs to several American companies (Figure 1.3).

Figure 1.3. Market capitalization of the World's hugest companies, $ bln

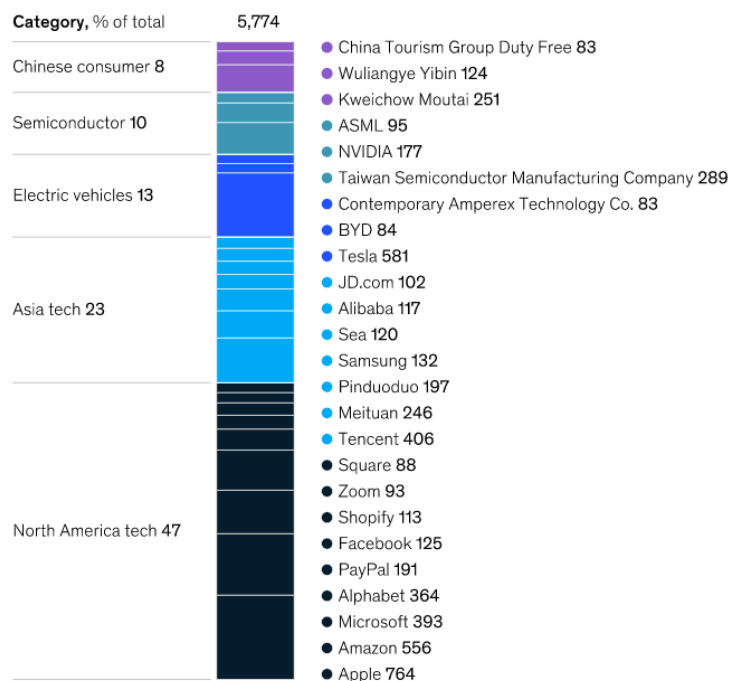Source: Bradley Ch., Stumpner P., McKinsey & Company, The impact of COVID-19 on capital markets, 10.03.2021

2) Mortgage market

The mortgage market is the second largest sector, more than 70% of GDP until the crisis in 2008, of the capital market. Mortgages on housing considers to most of the outstanding debt, though agencies of government (State National Mortgage Association for example) and others issue a great quantity of mortgage-backed securities (proved to be unreliable though).

3) State Treasury

The third largest borrower of the USA capital market is the Treasury, stands to the United States Department of the Treasury. The Treasury has gradually increased borrowings since 1983, what considered as huge concern by lots of economists. The causes of distress are the crowding out of private sector borrowers with public expense and the supposition of inflationary effects. outside holders of treasury (government bonds) securities are second only to US administration agencies. The enormous quantity of internal public debt has an affect the avow of the United States dollar

world-wide, on equity and bond markets especially. Nevertheless, since there is no appropriate substitute to the dollar, it, with all mentioned fluctuations, still is and will be in the nearest future the most reliable, secure currency throughout the World.

4) Money market (short-term capital market)

The money market of USA also considers as the largest one in the World, covering more than 40% of GDP.

Short-term market liquidity (issuing a large number of certificates of deposit to finance loans to productive and other firms) is generally necessary for economic growth, which is contraindicated to the notion of "shortage of funds". The upward trend in the issuance of treasury bills and government securities reflects an increase in government deficits, i.e., government transactions are affected through new government commitments. In this sense, the Federal Reserve market is a unique short-term US money market.

There is the hugest regulation system in the USA, which consists of both government entities (Ministry of Finance, Securities and Exchange commission, etc.) and independent regulators (FINRA).

Features of the Capital markets union (CMU)

The European Economic and Monetary Union (EMU) united the member states of the European Union (EU) into a single economic system. It is the successor to the European Monetary System (EMS). The European Economic and Monetary Union (EMU) is a rather extensive umbrella, within which a group of measures has been adopted aimed at economic convergence and free trade between the member states of the European Union. The succession of the EMU over the EMU took place in a three-stage process, with the third and final stage initiating the adoption of a single currency, the euro, instead of the former national currencies. This was done by all of the original EU members, with the exception of the UK and Denmark, which abandoned the changeover to the euro. Subsequently, the UK withdrew from the EMU in 2020 following a Brexit referendum.

The European Economic and Monetary Union (EMU) involves the coordination of economic and fiscal policy, a single monetary policy and a single currency - the euro for the eurozone countries. The decision to create the EMU was made by the European Council in the Dutch city of Maastricht in December 1991 and later enshrined in the Treaty on the European Union (Maastricht Treaty).

The EMU reached its final phase in 2002 with the introduction of a single currency, the Euro, which finally replaced the national currencies of most EU member states.

The adoption of the euro forbids monetary flexibility, so that no committed country can print its own money to pay off public debt or deficits, or compete with other European currencies. On the other hand, the European Monetary Union is not a financial union, which means that different countries have different tax structures and spending priorities. Consequently, all member states could borrow in euros at low interest rates in the period before the global financial crisis, but bond yields did not reflect the differing creditworthiness of member countries.

The structure of stock market capitalization in % to GDP ranges from 1.1% of GDP in Slovakia to 155.1% of GDP in Sweden (Figure 1.4). In general, EU-27 stock market capitalization has increasing tendency, it represented 68.7% of GDP in 2019, rose by 10 percentage points compared with 2018.

Figure 1.4. European stock market capitalization as % of GDP (end-2019)
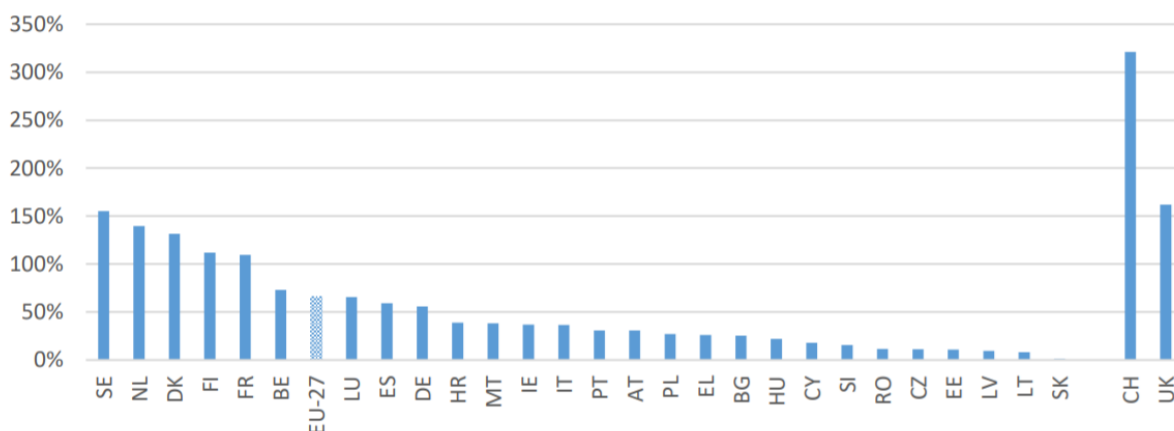
Source: 2020 ECMI Statistical Package

Features of Italia's Capital Market

As for last decade, on average less than 4 firms/year became listed on the Italian stock exchange (or the regulated market) and the Italian market capitalization as per cent of GDP remains well beneath that of the mean in Europe. Also, the total number of corporate bonds issued, in Italy as well as by Italian non-financial companies abroad covered 6% of all European issuances in 2018, it's around half of Italy's share of European GDP. Notably, in comparison to other advanced European economies, the size of the share of bonds listed on international markets is considerably

higher with 90% of all Italian corporate bonds listed abroad. The size of the Italian market is limited, that affects on small quantity of portfolios of institutional investors here in Italy investing in local issued bonds, corporate shares. There was only 7% invested in 2017. Moreover, to the foreign securities investors of Italy have injected around EUR 190 billion. That sum was more then 60% of the general free-float market capitalization of local listed firms. Italian indicator MSCI (Morgan Stanley Capital International) is 3.6 % only (in comparison, France has 18%). In today's globalized capital markets, a low weighting in key indices automatically limits the inflow of capital from the growing pool of indexed institutional funds.[3]

Italy has currently undertaken valuable structural reforms that have contributed to a gradual economic recuperation. Nevertheless, sustained improvements in productiveness, competitivity and progress requires even more investments in the real economy. And investments demand that companies have entrance to long-run capital. Entrance to well-functioning Italian capital markets will also encourage companies to approach a necessary sizing, which is oftentimes vital in order to multiply productiveness and take on outside competition.[4]

Corporate bonds have turn like progressively valuable generator of finance for Italian companies. significantly, littler unlisted non-financial companies have gained entrance to the market by exploitation the mini-bond market model that was created in 2012.

Figure 1.5. Free-float level in selected European markets

Source: OECD calculations based on data from Thomson Reuters Eikon, 2019

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[3] OECD, OECD Capital Market Review of Italy 2020, Creating Growth Opportunities for Italian Companies and Savers, OECD Capital Market Series (2020) http://www.oecd.org/corporate/OECD-Capital-Market-Review-Italy.htm
[4] Ibid

In addition is valuable to add that to the comparatively low quantity of listed companies in the Italian regulated market, the market capitalization is also affected by the low free-float. At 60%, here the stock market has the worst level of the free-float among similar developed European countries, and Italy is quite below the average of all European countries of 75%. Even more, in the Italian regulated market only 29% of the listed companies have more than 50% of their shares are free floating in the market, in comparison to 41% of France and 45% of Germany[5] (Figure 1.5).

Features of Georgia's Capital Market

The domestic government securities market of Georgia is represented by government treasury bonds. The Ministry of Finance of Georgia determines the main directions of the state debt policy of Georgia and every 3 years approves the "Strategy for the reform of public finance management", the goal of which is the rational and efficient management of state finances.

In order to develop and support the Georgian financial market, the Ministry of Finance of Georgia issues treasury bills and bonds. A Treasury bill is a short-term discount government security; Treasury bonds are medium-term coupon securities with a maturity of 1 to 10 years and a coupon payment every six months.

Government securities are issued in national currency (GEL) in uncertificated form. The par value of one security is 1000 GEL. Securities are sold at auctions at a predetermined date. Any individual or legal entity, both residents and non-residents, can buy government securities through commercial banks operating in Georgia.[6]

The regulatory state bodies and the infrastructure creators of the capital market of Georgia are: Ministry of Finance of Georgia, National Bank of Georgia, Georgian Stock Exchange.

The National Bank of Georgia has initiated on the start of the securities market reform. The country's main regulator proclaimed the justification of initiatives of that the expansion of the Treasury bond market and changes in the Tax Code are contributing to the growth of the corporate bond market. This means that the securities market in Georgia needs further reform. Plus, the new reform will have a positive impact on the pension reform, which has become one of the main sources of long-term savings. The National Bank of Georgia became the first associate member of

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[5] OECD Capital Market Review of Italy 2020, Creating Growth Opportunities for Italian Companies and Savers, OECD Capital Market Series, 2020

[6] Cbonds.ru, Грузия: облигации, акции, индексы. (Georgia: bonds, stocks, indices)

IOSCO (International Organization of Securities Commissions) in 2018. But in the near future, they plan to take a permanent place in it, which will be a positive signal for local and international organizations. Since participation in IOSCO guarantees the presence of minimum requirements for transparency and protection of the interests of investors. Plus, membership expands opportunities for the integration of financial markets with different countries. But in order to become a permanent member of an international organization, it is necessary to amend the existing regulations.

The main problem in the development of the country's capital market is the small size of the country's economy. Moreover, long-term savings are not popular in Georgia, and there is no developed market for institutional investors (pension funds, credit unions, insurance organizations, etc.), as well as a relatively small scale of the corporate and industrial sector.

Georgia implemented amendments to the Law of Georgia "On the Securities Market" in 2020 and to the Law of Georgia "On Investment Funds" in 2020 issuance, considering most ambitious market changes since the adoption of the Law "On the Securities Market" in 1999. The amendments to the law significantly improve the transparency of the issuers of government securities. New requirements are established for them, regarding: the filing of periodic financial information, the purchase of a significant share, the publication of information on the acquisition of a significant share and other inside information.

Another goal of the new changes is to ease pressure on enterprises that were privatized in the early 1990s. Most of these companies today do not meet the transparency requirements. And the new amendments will give them the opportunity to relieve themselves of the responsibilities of an accountable enterprise, since the new requirements and restrictions of the Law of Georgia "On Securities" will no longer apply to them.

<center>Uzbekistan's Capital Market</center>

Uzbekistan is and independent country from the moment of Soviet Union collapse in 1991. For a huge period of its existence the country exemplified itself as a country with a "closed economy".

Comparative to other nations that were inside the Soviet Union, Uzbekistan's economy (1990-2000) was generally overwhelmed by the government, despite the fact that the constitution of Uzbekistan has characterized its economy as market-based: The economy of Uzbekistan,

advancing towards market relations, represented in different types of ownership. The state should ensure the opportunity for financial actions, business enterprises and labor with respect for the need of consumers' rights, protection from the side of Law and equality to any type of ownership. Alongside with the other sorts of property, the private property must be inviolable and secured by the government. A proprietor may be denied of his property rights exclusively within the cases and method dictated by the Law. [7]

The new President of the country Shavkat Mirziyoyev stated a new wave of changes, which effected other neighboring countries in the Central Asian region, taking into account the tendency of poor cooperation between them.[8] There were evidences that the government has started crucial changes: 1. taking off a planned economy system and changing the direction to a market-based economy; 2. exchanging to a private sector-driven economy from the last one – government hegemony; 3. Changing to broadly looking, straightforward and quite open from an closed insulated nation.

From 2019 the government of the country has already implemented key reforms approved by the IMF. Those were tax reforms, foreign exchange rate liberalization, reforms developing regional cooperation, forced labor elimination.[9] As the changes was proclaimed, companies as well as households and individuals awarded with the right to fulfil market operations with currencies in banks for all purposes, moreover, adding loans, trade, repatriation of benefits as of the real market rate.

The domination on the local market belongs to state-owned enterprises (SOEs). The spheres of their operation is telecommunication, energy, mining, transport, chemicals, energy and fuel, etc. In general there are more than 80 % of total number of companies which are managed by the government, or by the State Assets Management Agency of the Republic of Uzbekistan. [10] By the overall overview there is lack of medium-sized enterprises in the economy of Uzbekistan. Obviously, the dominance in the banking sector is also by government controlled and owned

[7] "Constitution of the Republic of Uzbekistan," 2015, http://constitution.uz/en.

[8] "The United States and Uzbekistan: Launching a New Era of Strategic Partnership," White House Foreign Policy Briefing, May 16, 2018.

[9] Randa Elnagar, "Uzbekistan: Staff Concluding Statement of the 2019 Article IV Mission," International Monetary Fund News Website, March 5, 2019

[10] "Об утверждении Стратегии инвестиционной политики Республики Узбекистан до 2025 года," UzbekLegislativeDatabase, May 10, 2019

banks, they cover 89% of total quantity of loans, 85% of assets, as well as 69% of all local banking system deposits, they exceptionally offer services to SOEs, they operate as auditors and accountants for them as well, and, on behalf of the state, as tax collecting body.[11] Here banks also operate as government fiscal agent, as the key chain in state sources allocation. Since the role of banks is strengthening and developing rapidly, and the rates of loans are huge for creditors (more than 23%) the stock market has to become the alternative to the current local banking system.

The regulator of the capital market and the authority assumed to corporate governance development is the Capital Markets Development Agency (CMDA). The regulator was created in 2019. The establishment of CMDA was respected as a breakthrough within the handle of expanding the engaging quality of the capital markets of Uzbekistan and guaranteeing the assurance for investors. Being infant the regulator creates a powerful pool of coordinators, Coordination Council. The Council consists of state agencies, ministers, related entities (See Table 1.1).

The government of Uzbekistan has provided the capital gains repatriation on the legal basis, so the first conversion was fulfilled by Hong Kong-based fund after the stock sale on the stock exchange of Uzbekistan.

Table 1.1. Coordination Council on capital markets reforming

Heads of cabinets involved in the Coordination Council
Administration of the President
Senate of Oliy Majlis
Ministry of Finance
Ministry of Economy
Ministry of Investment and Foreign Trade
Central Bank
National Agency for Project Management under the President
UNDP
Agency of State Assets Management
Antimonopoly Committee
State Tax Committee
ADB, EBRD, IFC, WB, ISDB

Source: cmda.gov.uz

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[11] Ibid

Features of Ukraine CM

For Ukraine it has been established that in terms of the quality of regulation of the securities market, the country occupies one of the last places in the world rating of competitiveness. The aim of the proposed study is to substantiate the directions of reforming the capital market regulation system in Ukraine, taking into account global trends. The flaws in the regulation of the capital market and in the regulatory system are revealed, namely: the lack of mechanisms for identifying and neutralizing fictitious issuers, facts of market manipulation and insider trading.

Despite the virtual absence of a capital market, Ukraine is not yet threatened with "reinforced concrete" consequences of its collapse. The operational tasks of the market regulation system is to neutralize the factors that led to the actual failure of the domestic capital market to function and to the catastrophic level of its international competitiveness. In accordance with (The Global Competitiveness Index, GCI) which is determined by the World Economic Forum, according to the level of development of the financial market in general and the capital market in particular, our state ranks one hundred and twenty-first among 140 countries. Moreover, in terms of quality regulation of the stock exchanges of Ukraine with an index of 2.5 was on 135th place, and in terms of funding through the local capital market -118th (index 2.6). The table shows the main indicators of the quality and competitiveness of the domestic capital market during 2010-2016.

As shown by the results of the analysis shown in the table, permanent attempts The Government of Ukraine does not improve the regulation of the local capital market give no positive effect on increasing the investment attractiveness of the domestic market and improving the conditions of its operation. The Ukrainian stock market faces the same problems as are not resolved. In particular, the issues of introducing legal mechanisms aimed at preventing insider trading remain relevant trade and market manipulation; building an effective system of prudential supervision of professional participants in the securities market; creation conditions for securitization of financial assets; wide involvement of small investors; development of financial services market infrastructure; harmonization information with financial reporting forms; improvement of stock market control systems; development of national stock exchange, depository and settlement and clearing systems from securities State regulation of the securities market is carried out by the National Commission on securities and the stock market (NSSMS), which ensures the development of draft regulatory acts, analyzes the regulatory impact on the market and controls

the participants. Other state bodies (first of all the Antimonopoly Committee of Ukraine, tax bodies, the National Commission state regulation in the field of financial services markets, National Bank Ukraine) control the activities of securities market participants within their powers.

The instruments of the system of state regulation of the capital market are classified into direct and indirect. Direct influence on the market is through administrative levers that regulate specific tasks and restrictions (or extensions) of the activities of the regulator and capital market entities. Indirect regulation is implemented through privatization, tax, budget, monetary, currency, investment, insurance, foreign economic policy. Using these tools, the state does not directly change anything in the market mechanism, but only creates the preconditions for such changes.

Due to the functional failure of the regulatory system, the domestic capital market operates according to one of the worst models that are characteristic of developing countries. In this context, T. Beck, H. Kazerer and Rapp emphasizes that the financial system of most countries is low income is bank-centric, and the capital market is underdeveloped and illiquid. Insurance and investment companies are usually weak in such country's funds. The impact of the latter on the capital market is negligible[12]. Unsatisfactory the state of the capital market regulation system in Ukraine is due to its declarative and ambiguous legislative provision, shortcomings in activities of state bodies, its deformed infrastructure.

1.3. Comparison between capital markets

After the crash of the Soviet Union, and the ubiquitous transformations into the market economy within countries of the post-Soviet area, disparate their own way financial markets were created. Mentioned disparity or uniqueness is especially evident in the capital market, taking into account the catching-up processes.

Taking a look into a historical background of difference between countries the first difference in developing process is that Eurasian capital markets emerged only two decades ago as a result of rapid programs of government property privatization. An obstacle to their intensive development was the lack of Shareholder culture from the one side and market incentives from the other, which ultimately led to the emergence of low-liquid markets with small volumes of exchange trading and

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[12] Стецько М. В., Система регулювання ринку капіталів україни: міжнародний вимір, Фінанси інституційних секторів економіки, УДК 336.76, "Фінанси України", 2'2017

companies with problematic structure of corporate governance, which affect negatively on features of both distributed and concentrated forms of ownership.

Georgia officially left the Commonwealth of Independent States on 18 August 2009. However, its performance is discussed in the context of this group of countries for reasons of geographic proximity and similarities in economic structure.[13] When looking at it in comparison to its previous peers in the Commonwealth by means of Hofstede dimensions, it's easy to recognize that in several sub indicators countries (Georgia, Ukraine and Uzbekistan) look quite similar. Mentioned could be explained by the huge period of co-existence in the one country. For example, uncertainty avoidance, power distance, individualism could be considered as similar, at the same time Georgia differs from others with its higher Masculinity, and Long-term orientation at a score of 38, Georgia culture is more normative than pragmatic. People in such societies have a strong concern with establishing an absolute truth; they are normative in their thinking. They exhibit great respect for traditions, a relatively small propensity to save for the future, and a focus on achieving quick results. Mentioned could dictate Georgia's early separation from the Commonwealth and future own, different way of economy development (Figure 1.6).

Figure 1.6. Hofstede dimensions among countries under analysis
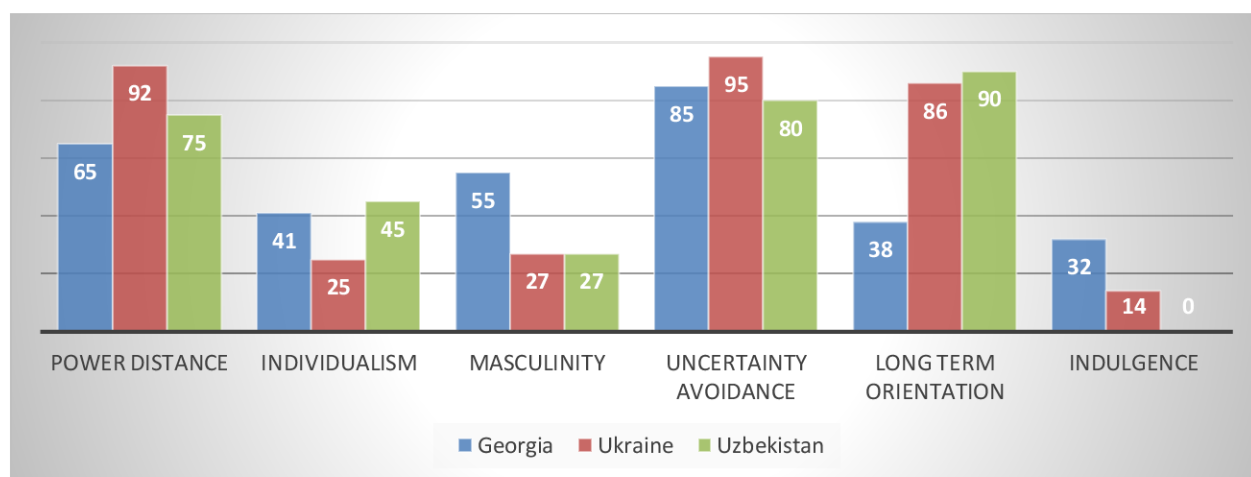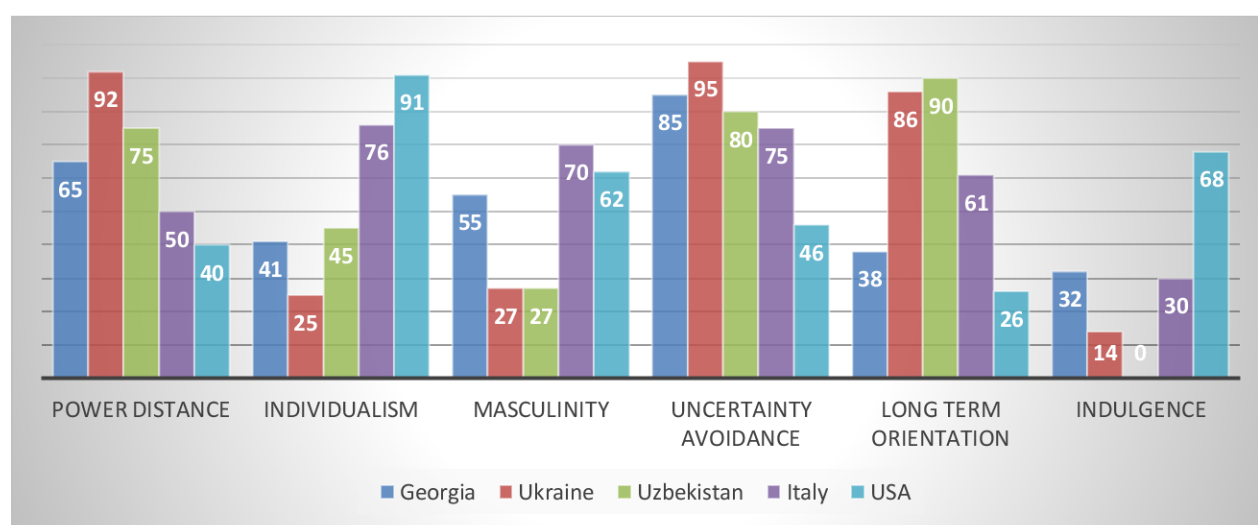

Source: hofstede-insights.com

Looking at all dimensions all the all countries under analysis at the same time the features, which could probably explain benefits of others and backwardness of others, could be recognized. The

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[13] Economic Analysis and Policy Division (EAPD) of UN DESA, "World Economic Situation and Prospects (WESP)", United Nations New York 2020

power distance is higher in Post-soviet countries with emerging markets, what means that those are hierarchical society, in contrast to developed and advanced Italy and USA, what means that they have less inequalities amongst their population. Then, the significant difference demonstrates Individualism dimension, emerging markets under consideration have more collectivists cultures, and the developed once differs by higher degree of independence among members of their cultures. The same tendency with Masculinity, the dimension standing for preferences of the society for achievement, assertiveness, material, tangible rewards for achievements, competitive (in comparison, according to the Hofstede dimensions, the societies with the current dimension as Femininity differs with modesty, preferences for cooperation, consensus orientation). The outstanding dimensions shows USA with Uncertainty avoidance and Long-term orientation, which differs it a lot from others at the same time, these two dimensions that of Italy are quite similar with emerging markets (Figure 1.7).

Figure 1.7. Hofstede dimensions among countries under analysis

Source: hofstede-insights.com

In the current paragraph the investigations of the main features of above-mentioned capital markets systems: Italy, Georgia, Ukraine and Uzbekistan are presented.

With the intend to compare capital markets, to analyze the relationship between capital market development and economic growth, the indicator Market Capitalization to GDP was used:

Market Capitalization to GDP = (SMC/GDP) * 100

Table 1.2. Table of comparison

#	Country	Population	Economic development status	Ease of doing business	GDP rank (IMF)	Nominal GDP(USD mln)	GDP growth	Regulator
1	Italy	60,244,639	third-largest national economy in the European Union, the eighth-largest by nominal GDP in the world, and the 12th-largest by GDP (PPP).	58	8-th	506,144.4 Dec 2020	+0.8% (2018) +0.3% (2019) −10.6% (2020e) +5.2% (2021e)	Italian Securities Regulator CONSOB
2	Ukraine	41,732,779	Emerging free market economy	64	57	46,042.4 Dec 2020	3.3% (2018) 3.2% (2019e) −7.2% (2020f) 3.0% (2021f)	National Securities and Stock Market Commission (NSSMC)
3	Georgia	3,716,858	emerging free market economy	7	129	4,252.3 Dec 2020	4.8% (2018) 5.1% (2019e) 4−4.8% (2020f) 4.0% (2021f)	National Bank of Georgia (NBG)
4	Uzbe-kistan	32,955,400	economy with slow transformation to market economy	69	79	16,119.3 Dec 2020	5.4% (2018) 5.6% (2019e) 1.5% (2020f) 6.6% (2021f)	Capital markets development agency

Source: Personal elaboration from iosco.org, CEIC

Table 1.3. Table of comparison (additional)

#	Country	Protecting minority investment (DB WB index)		Size of the Capital market Market Capitalization: % of GDP (%)
		DB rank	DB Score	
1	Georgia	7	84.0	0.1 (2016)
2	Uzbekistan	37	70.0	9.4 (2020)Equity Market Index (29Aug2016=1000) 793.3 (2021)
3	Ukraine	45	68	3.4 (2018)
4	Italy	51	66	36.7 % (2020)
5	EU27			54.6 % (2018)

Source: Personal elaboration from WB group, CEIC Data, an ISI Emerging Markets Group

Where: SMC – Stock market capitalization, GDP – Gross domestic product

Looking at the table of dimensions the following can be added: it's obvious that there are attepts towards capital market development in the emerging markets, but still there is a huge difference even with Italy, which has not the greatest developed capital market in comparison to its peers in European Union. Nevertheless, analytics of OECD group conclude that the stock markets of the Eurasian region, in particular mentioned countries with emerging markets, remain underdeveloped, with low level of liquidity and infant capitalization rate, and are not yet have achieved that which would allow them to perform the main functions of the market in terms of: 1) creating an attractive alternative to the bank financing system; or 2) creation of a secondary market for owners.

1.4. Capital markets integration and economic growth in the European Union

Creation of a single financial market in the UES, and then in the EU has always been considered as the most important component of the Single Internal Market (Single Market), designed to ensure the smooth and most efficient movement of financial resources between member countries for sustainable economic growth, and financial stability.

The EU's response to the global financial and economic crisis of 2008-2009. was the decision in 2012 to create a Banking Union (Banking Union). The introduction of the Single Rulebook, the Single Supervisory Mechanism represented by the European Central Bank (ECB), the Single Resolution and the European Deposit Insurance Scheme (EDIS). As for the pan-European deposit insurance system, it has many opponents. First of all, these are Germany and other donor countries, which are afraid of an increase in their expenses if they have to make payments to bank depositors from financially disadvantaged countries of southern Europe.

The incompleteness of the creation of the Banking Union is complemented by the emergence of new risks associated primarily with collateral cybersecurity. Still European banks in the event of cyberattacks consult with national governments and financial regulators. However, for the eurozone it is necessary a pan-European competent regulatory body in this area. Existing Agency on Cybersecurity in Europe (ENISA) is just a coordinating institution and does not have the necessary enforcement powers.

The post-crisis reform of the EU banking sector played a certain role in increasing its stability, building up the capital base, reducing leverage, but this is not enough to effectively finance sustainable economic growth in the EU and increase the Union's competitiveness in world markets. This is why the Capital Market Union (CMU) Action Plan was adopted in 2015.

The goal is to form a single pan-European securities market, balance financial risks, diversify and expand investment opportunities. Banks, acting as organizers of IPOs, market makers in the secondary market, are called upon to play an important role in the implementation of the CMU. As part of the Juncker Plan1, CMU should strengthen its financial component (third pillar), especially in the field of long-term investment, contribute to the growth of EU GDP by 0.5% by 2030 and the creation of 350 thousand new jobs.

If the CMU is fully implemented, it is estimated that the EU would benefit about 137 billion euros per year. The starting conditions for the implementation of the Plan were quite specific in comparison with other developed countries. European capital markets are characterized by the fact that they have a relatively small capacity, which leads to a strong dependence on the banking sector (imbalance in the shares of market and bank financing), and differ significantly from country to country.

About 40% of household savings in the EU are bank deposits (for comparison: in the US - 10%); only 30% of liabilities of non-financial companies are securities; more than half of long-term assets of investors are placed on their national markets.

European companies, especially small and medium-sized enterprises (SMEs), predominantly rely on bank loans (in the eurozone, before the 2008-2009 crisis, their share was 70% of all financing, and in the USA - 40%). The IMF experts state that "the EU has a large banking system and small capital markets." Banking assets in the eurozone accumulate about 300% of GDP (in Japan - 500%, in the USA - about 85%). In the first half of 2018, the share of NPLs accumulated in the largest EU banks amounted to 3.4% of their portfolio. This indicator, although it tends to decrease (from a peak of 8% in 2013, it dropped to 5.4% by 2017), remains significantly higher than in the USA (1.7%) and Japan (1.6%). The largest share in the European capital market belongs to investment funds (110% of GDP, or 13 trillion euros). But at the same time 70% of assets under their management go to the domestic markets of the countries in which they are based. The second largest share belongs to insurance companies and private pension funds (about 50% of GDP, 6

trillion euros). The main goals of the 2015 CMU were: maintaining the convergence of the economies of the EU countries, reducing economic "shocks" in the eurozone. As stated in the Five Presidents' Report, the Capital Markets Union is a clear priority for the European Commission (EC). Integrated capital markets in the EU should provide a barrier to systemic shocks in the European financial sector, provide diversified sources of finance for companies, especially SMEs, and ensure risk-sharing across the Union[14].

The main tasks of the CMU include:

- stimulating investment activity in the EU and outside it with an emphasis on SMEs, infrastructure investment and long-term projects to create new jobs;

- stimulating cooperation within the EU: countries with low market capacity and high growth potential will gain access to capital and investment markets for their projects, while countries with developed capital markets will benefit from increased cross-border investment flows;

- maintaining the stability of the financial system; integrated financial markets will allow the financial systems of the EU countries to redistribute economic shocks, weakening their impact on individual countries; - deepening financial integration and increased competition should lead to diversification of funding sources, reduce costs and increase European competitiveness.

In other words, the Capital Markets Union is a long-term structural reform program designed to strengthen the nexus between savings and economic growth. In addition, the 2015 Plan noted that its effectiveness will be achieved only as a result of the implementation of a whole set of 33 measures ("bricks", building blocks), which were to be implemented by 2019. Their wide coverage is noteworthy: from supporting infrastructure investments before pan-European taxation and the promotion of innovative corporate finance schemes.

1.5. Fintech

When dealing with the literal interpretation of the term "Fintech", which indicates the use of technologies (Tech) for financial activities (Fin) the main purpose of Fintech is obvious. In modern realities no financial service firm can afford operational hiccups. Throughout the industry for

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[14] Худякова Л., Сидорова Е., Единый финансовый рынок ЕС: иллюзия или реальность, Мировая экономика и международные отношения, 2020, том 64, № 9, с. 63-72

capital markets participants the difficulty of integrating old and new technology is a major obstacle to digital transformation.

Fintech by its nature is a constantly evolving phenomenon that does not fit into the ideal template and resists any stereotyped definitions. It reflects the evolution and progress of methodologies, with the help of which financial services are created and offered to the population.

Already in 1967, with the introduction of "automatic sellers" the possible integrational options between automation and finance became obvious. Human mediation in cash withdrawals processes raise questions within experts like those that arise today in relation to such topic's phenomena such as cryptocurrency or robot-adviser[15].

Robotic Consulting is a fintech sector where scientists and regulators pay the most attention.

There are three different types of consultation under the Markets in Financial Instruments Directive (MiFID II), each of which can be provided in robotic form:

- recommendations that are specific, personalized, relate to a specific financial instrument and the context of the transaction;

- general recommendations regarding the category of financial instruments, and not a specific financial instrument;

- general recommendations that may relate to an individual financial instrument and a separate transaction, but which are intended for a wide audience.

Big data. The fundamental element of the digital revolution is undoubtedly collection, processing and use of data. No wonder the data today viewed as a new factor of production added to the traditional factors of capital and labor, or perhaps as a fundamental unit a new data-driven economy in which it is necessary to balance different interests of innovative and technological development with financial stability and consumer protection.

Blockchain and Distributed Ledger Technologies (DLT) Blockchain technology is currently considered by many to be the heart of the fintech phenomenon. Initially connected exclusively to the Bitcoin protocol, the blockchain can be described as a public and persistent digital ledger or as

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[15] Ленер Раффаэль (R. Lener), Развитие финансовых технологий в италии и европе (The development of fintech in italy and in europe), Вектор юридической науки Вестник университета имени О.Е. Кутафина (МГЮА) 1/2021

a database distributed to users who install the open source software necessary to implement and continuously record all transactions between network participants (known as nodes).[16]

This technology makes it possible to establish whether a particular transaction took place between its users and when it was completed, which eliminates the need to use traditional certification mechanisms used in payment systems that require a third party - a guarantor (usually a central authority authorized check the conclusion of transactions). Thus, this mechanism guarantees decentralized management of the common database, which is entrusted not to the central authority, but to the participants (nodes) themselves and which can be structured in different ways. In the case of unsolicited system permissions, which are typical of cryptocurrencies, anyone can participate in the network by running specialized software. In permitted networks, which are more suitable for trading in financial markets, participation in the network depends on the fulfillment of a certain set of requirements established by the rules of the financial market.[17]

Capital markets firms, keenly focused on their future competitiveness, are already investing heavily in AI and in foundational technologies like cloud computing and data analytics, and over the next three years their investments in blockchain and agile development look set to soar. They're attuned to which tools their rivals are using and realistic about the competitive tussle ahead.

The following actions can help strengthen competitive position of modern market players:

• Adopting agile delivery processes across the business, including the technology function;

• Investing in DevOps-driven automation tools to support these processes;

• Investing in behavioral change across the business and within the technology function, to facilitate the success of agile programs;

• Applying innovative processes and tools to existing, legacy technology to free up time and resources and to improve focus;

• Establishing an ecosystem of partnerships and strategic alliances to amplify digitally driven innovation at scale.

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[16] Ibid

[17] Ibid

1.6. Problem background, substantiation and purposes

Developing countries, or emerging markets are the most significant quantitatively and heterogeneous in terms of various characteristics of economic development, including the level of economic development of financial development, a group of states. Therefore, it is no coincidence that among these countries there is a significant scatter in the values of indicators of financial depth, depending on the level of well-being of the population. Usually, as was mentioned before, indicators of financial market development in developing countries with relatively high per capita incomes are 3-7 times higher than in the poorest countries.

It is believed that U. Bajgot was the first to draw attention to the relationship between economic growth and the quality of the financial system; expanded reproduction in profitable industries. Later J. Schumpeter developed the theme of the positive role of banking institutions in ensuring the transition of resources from old producers to new ones, contributing to "creative destruction" and economic growth. The historian-economist R. Cameron deeply studied the influence of the financial system on economic growth. Such studies acquired a lot of specificity after the inclusion of indicators of the financial system (financial depth - Financial Depth) either in production models of endogenous economic growth, or in econometric growth models (direction of Finance-Growth Nexus).

It is supposed that the greatest impact of the financial system on economic growth was manifested in China, which has been the subject of dozens of studies. Based on them and data for 1978–2015[18].

Research shows that a modern financial system to stimulate growth must: - effectively and cheaply transform savings into investments; - weed out unpromising business projects and participate in corporate governance (in many countries, the lending bank sends a representative to the Board of Directors); - diversify risks and reduce the overall risk in the economy; - to ensure the exchange of economic information, solving the problem of information asymmetry according to Stiglitz. [19]

The main indicator of the quality of the financial system is its total financial depth, which is taken as the amount of capitalization of the stock market (or its turnover), loans to the real sector, other

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[18] Чжан, М. Генезис развития финансовой системы Китая, Новая экономика, 2018, № 2., 123–131.
[19] Demirgüç-Kunt, A. Finance and economic development: policy choices for developing countries, Policy, Research working paper, № WPS 3955, Washington D.C., World Bank Group.

financial assets (bond, insurance, pension) to GDP. In developed countries, the aggregate financial depth in 2010 exceeded 500%: Great Britain - 700%, USA - 500%, Germany and Japan - 600%, China - 300%, Brazil - 200%[20]. At the same time, there are studies showing that not only the total volume of financial services is important, but also its distribution among different segments of the financial system. The financial system structure ratio FSR (Financial Structure Ratio) was introduced as the ratio of the capitalization of the stock market to loans to the real sector - it indicates the type of financial structure of the country: if this indicator is more than 0.7 (the average for 50 leading countries for 2001–2010), then the stock market dominates in the country (Hong Kong - 3.8, Singapore - 2.3, Chile - 1.3), if less, then we are talking about a bank-oriented type of financial system[21]. Stock market capitalization to GDP in developed countries ranges from 137% in the UK to 46% in Germany. Credit to the real sector in most developed countries ranges from 188% in the Netherlands to 90% in the United States. It has been established that a bank-oriented financial system is optimal for traditional industries, and a fund-oriented financial system is optimal for innovative industries. Thus, a convergence of indicators of financial depth occurs. It is clear that financial depth does not always guarantee financial inclusion, but it effects positively on economy.

Taking into account all abovementioned, it appears more complicated nowadays to build a financial system development plan to the country, so to increase a prosperity, but the facilitating converging component- capital markets, which is comprehensive itself, could be analyzed detailly and could be modified itself to boost the further effect on financial system. Moreover, it's more interesting to take into consideration, with the reasons mentioned, and also with such a model to be more actual for the capital markets on the stage of creation or development.

[20] Господарик Е. Ковалев М., Анализ финансовых систем стран ЕАЭС и их влияния на экономический рост, Научные публикации, Банкаўскі веснік, ЖНІВЕНЬ 2020
[21] Ibid

Chapter 2. Literature review. Methodology

2.1 Financial development and economic growth

Obviously, solid financial markets for the economy of each country are vital to development since they suppose efficient resource allocation, they create jobs, and spur economic growth.

As was mentioned before, when considering the financial market, the comprise of both capital and money markets is taking place. Referring to Capital markets, trading with financial instruments with maturities longer than a year, opposite with money market, which refers to debt securities trading, trading with instruments with maturities of one year and less.

Financial system has a role of intermediation between market players. Primarily it's represented by commercial banks and primary capital markets. Where banks are able to provide indirect funding as go-between connector the saver and user, and capital markets –direct funding in form of securities.

Practically, in case the government has an intend to fasten the finance development, to manage foreign exchange risk and inflation, to finance fiscal deficits, it goes by borrowing from local markets to avoid exchange rate risks. All well-developed markets (like USA) are using those beneficial features of the local capital markets. Moreover, it's favorable for savers and investors, since there are more attractive investment opportunities, more profitable returns; as well as better for institutional investors, including pension funds and insurance companies. The last is the example of importance of the local capital markets not only for the financial stability of the country, but also for future prosperity of the society.

Consequently, stock market capitalization of advanced economies is huge, while those of emerging market countries, including countries of Eurasia, Asia remains relatively significantly smaller. Consequently, in the Figure 2.1 below there is a visual representation of countries, which have sizes according to their free-float stock-market capitalization dimensions.

There are possibilities also to attract international investors, though, in this case, adequate macro stability is of the first importance. Furthermore, to create an attractive atmosphere the level of investor protections as well as transparency has to be appropriate, in that case instruments of capital market could be attractive.

Figure 2.1 Global free-float stock-market capitalization by country, in $ Bln.

Source: Bank of America Merrill Lynch, Transforming World Atlas, August 2015

Solid financial system, including well-functioning capital markets and banks, supposed to have sound policy, macroeconomic, institutional frameworks. In case government institutions works well it provides strong confidence from the side of investors, since with that government guaranties investors and creditors protection, thus make itself more attractive.

Summing up, in order to enable creation and using all profitable features of proper functioning markets, to spur financial system, sound regulation framework for market players (investors, intermediaries, issuers) has to be created, as well as propriate level of transparency has to be provided. Moreover, abovementioned should be complemented with solid supervisory arrangements for investors protection, liquid and deep markets promotion, systematic risks management.

A growing economy in need of new forms of financial intermediation to finance investments that are either too long-term or too risky for commercial banks is one of the most important drivers of capital markets growth. It is also now well understood that fostering the development of capital markets can itself be a strong spur to innovation and economic growth[22].

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[22] Meera Narayanaswamy, Senior Investment Officer – Financial Institutions Group, IFC, Charles Blitzer, Senior Advisor – Financial Institutions Group, IFC, Ana Carvajal, Lead Financial Sector Specialist, Finance & Markets, World Bank, THE IMPORTANCE OF LOCAL CAPITAL MARKETS FOR FINANCING DEVELOPMENT, EMCompas IFC WB Group, NOTE 28, 2017

One of the key issues in the capital market development, which is also the point of the current investigation is raising financial resources in the capital market corporate sector. At the present stage, improving the forms and methods of attracting financial corporate resource sector in the capital market is topical issue of economic development. This fact due to the process of globalization of economies, integration into the world economic space of national securities markets and credit markets, the creation of new financial instruments that determines the presence and understanding and trends, characterizing the formation, development and transformation of the capital market and its institutions.

2.2 Conceptual foundations.

Current paragraphs mostly rely on the regulations created by international institutions, organizations like IFC, World Bank Group, OECD, etc., which operates with goals of supporting developing countries in terms of mobilization of financial sources (also for enhancement of private sector of economies), acceleration of competitive and open markets, provision of professional advisory services (both for government and for private sector), creation of productive jobs, delivery of essential services, etc.

Mentioned international organizations several times addressed to the essential fundamentals of the reliable financial system operation, in particular:

- macroeconomic stability;

- sound banking systems;

- high institutional quality;

- and an adequate regulatory and supervisory framework.

As was already mentioned before there are several expectable positive effects which has to be kept in mind when considering the capital markets development strategy or model: strong financial markets are crucially important to ensure effective, efficient resource allocation, creation of working places, and spur economic growth; in particular, debt markets are important sources of capital funds, serving to cover gaps in infrastructure and housing industries; domestic savings channels creation (managed by institutional investors) to further efficient usage in the local economy.

The main aims used by the IFC methodology to justification the support related to capital markets development, in particular local currency bond issuance, of the countries all over the world, is acceleration the corporate bond development to facilitate financing; encourage local investors by demonstration of issuance a high-quality asset class into the domestic market; reduction of risks related to foreign currency borrowing; diversification of the source of funding; strengthen the financial sector.

As an example, a part of capital markets system - the corporate bond market plays a critical role in the economy of the USA. Businesses tap the bond market to raise more than $1 trillion in financing each year, and the more than $8 trillion of corporate bonds outstanding represent an important asset class for a variety of investors.[23]

Furthermore, the current analytical research is also partly referred to principles and methodology of European Securities and Markets Authority (ESMA), being an epitome of the capital market regulator, which development is supposed to entrust an institution, to put an effective check on the potential financial stability and business conduct challenges that might arise from cross-border capital markets integration withing the members of EU[24]. Thus, it can be comparable to the development of the capital markets in the emerging markets as well as within, and on their way to internationalization.

The conceptual foundation which is used in the current thesis is based on theoretical and practical sources, methodic, database and analytical research conducted be abovementioned international organizations, as well as interpretation of books, relative scientific journals and articles were used when relevant research on financial development, capital markets creation and development were assessed and represented along the way of research implementation. Thus, that was the foundation of the first, theoretical and analytical part of the thesis. In the next chapters the capital markets development model was developed and presented based on reliable schemes of authoritative international organizations, based on methods fulfilled by several governments of developing economies, as well as those successfully approved by advanced economies. In addition, the professional advises and inputs of several experts from relevant fields of work, responses and investigations of different actual actors of Uzbekistan capital markets was used. Moreover,

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[23] "Bond Market Liquidity", CFA institute (https://www.cfainstitute.org/en/advocacy/issues/bond-market-liquidity)
[24] André Sapir, Nicolas Véron and Guntram B. Wolf, Making a reality of Europe's Capital Markets Union, Policy Contribution Bruegel, issue n˚07, April 2018

different international indicators were used as a support for the arguments provided. The model was adjusted to the realities of one of the countries with emerging markets, taking into account features, historical background and future development expectations, consequently, was theoretically applied to the chosen country. Factors in the models, those of the interest for the general purpose of the model, are agued within the text of the thesis. The aim of the thesis is to create a clear and relative model (without pretending that it's an only and the rightest one) to create, develop and evaluate capital markets in developing markets with distinction of the parts which are the same for each economy's realities, and which are subjects of adjustments.

In addition, there are more consideration were taken into account for the concept of this thesis. Like interpretation and understanding of international indices could be to some extend considered to be subjective, taking into account different sides like that of creator and that of interpreter. Insignificant level of influence by cultural, own experience prism is acceptable to be recognized in several parts of the thesis.

The conceptual foundations of the financial development are detailly analyzed on the World Bank group open knowledge depository, in particular, "EMCompass Nopes" possess information on financial sectors development, relation between capital markets and financing development, relying on examples of different countries. Furthermore, the Reports of Emerging Markets Committee of the International Organization of Securities Commissions IOSCO are on the basis of the model creation and decision making in the part of suggestions offering. In addition, the guidelines of OECD, as well as in its research reports were the once to rely upon when additional solutions and advises suggesting.

2.3 Methodological procedure

Basic theoretical and methodological problems in capital markets development, attraction of financial resources is usually concentrated around the following topics with the explained fields of investigation:

- Corporate finance – Here in the focus is influence of the process of attracting financial resources on the value of the company and its efficiency. Methods of attracting financial resources in the capital market. Conflict of interests of managers, owners, stakeholders when making decisions on financial resources attracting. Analysis of the effectiveness of financial resources attraction into the capital market;

- Financial markets, in particular, capital markets, securities market, credit market - Features of foreign capital markets, different models of development. Structural and institutional organization of financial markets. The role and features of the capital market infrastructure development. Complex derivatives and hybrid financial instruments;
- State regulation of the financial market – Laws, regulation of development of a market economy. The concept and functions of state regulation. Mechanisms of state financing. Regulatory support for the activities of financial markets;
- Risk management.

At the frameworks of the current paper the investigation topis of two mention fields are taking place: financial markets, and the state regulation of the financial market. In particular, the capital markets analysis, development and regulation are the main topic of research.

The current paragraph is devoted to provide the reader with an understanding of how the research was conducted and to make the logic of creation of the capital markets development model transparent.

The thesis consists of several parts where a set of different types of analysis and approaches have been used. The first part in more introductory, informational, with some piece of historical background of the capital markets formation with distinguishing by countries. Following the part which is dedicated to explain all existing indices methodic, practices which were used to support and approve the current research and took part in formation of the model. Then the theoretical possibilities of practical usage of that model was presented, projected beneficial results estimated and submitted.

The part of analysis of the current paper is dedicated to prove that direct copying of theoretical and methodological developments by foreign models is not productive for most emerging markets, especially in terms of assessing financial decisions related to borrowing into the capital market, which is associated with significant differences in the peculiarities of regulatory legal regulation and state regulation of the capital market in the interests of corporate business, the parameters of attracting financial resources into the capital market, the role of financial infrastructure, in ensuring interaction between the corporate sector and the capital market, assessing the impact of environmental factors such as the state of the economy, the global financial crisis and its consequences for the economy as a whole and individual industries as well as internal factors

associated with financial management culture. Moreover, practically the research in the current paper provides evidences and solutions on the several, but not the all mentioned aspects and issues.

Following some methodological aspects generally accepted in the world and approved by international organizations specializing on financial markets:

1) The one of IFC (as was mentioned earlier). IFC bolsters local capital markets development by the means of:

   - Local currency bonds issuance (moreover to make a catalytic effect for future issuances, also to facilitate financing by constantly signaling and demonstrating the impact);

   - Counseling regulators, controllers, authorities, as well as market players (to estimate and develop local system of processes, to encourage and stimulate rapid improvements in regulations);

   - Support issuers in getting to capital markets (as well as stimulate an access to new wave of investors, in particular to international investors);

   - To assist local markets, decouple from more unstable finances.

   IFC advanced getting to the local capital markets by means of swaps, loans and structured instruments adjusted to the needs of appropriate economy.

2) WB Group. Doing Business was the first global indicator created to measure aspects of regulation that enable or hinder the owners of small and medium-size businesses in starting, operating or expanding their companies. In its annual publication, each economy is represented by its largest business city and compared globally with another one hundred and eighty-seven economies.

   The methodology of the first global key indicator "Doing business development index", which was the created with the proposes of regulation aspects evaluation, in particular, ability to support owners of small and medium-size businesses in initiating, operating, as well as expanding, consists of scoring the indicators: Starting a Business, Dealing with Construction Permits, Getting Electricity, Registering Property, Getting Credit, Protecting Minority Investors, Paying Taxes, Trading across Borders, Enforcing Contracts,

Resolving Insolvency.[25] Relying on the methodology the essential sub-indicator evaluation the significant changes and regulation decisions could be implemented. As well as according to appropriated sub-indicators the adjustments to the model could be done.

Moreover, World Bank researching reports remind regarding the risk existing of capital markets: In the context of financial markets' need of addressing the syndrome of asymmetric information, understanding the financial contracts written between companies in need of resources and lenders/investors in the form of debt (loans and bonds) and equity is a first step into the role, benefits, and obstacles that face capital markets in contrast to the banking industry. First, debt contracts have a predetermined maturity and interest rate, whereas in an equity arrangement the contract maturity is not predetermined, the risk is shared, and there is no fixed obligation to remunerate the investor. Those conditions mean that, relative to debt, equity contracts are riskier and longer term. They are riskier because, for a given profit share, the payoff might be very high or very low depending on the company's actual cash flows, with no legal recourse for the financier to be repaid in a bad scenario. In contrast, debt risk is bounded because the fixed interest rate imposes an upper limit while the ability to claim ownership of the firm in case of bankruptcy mitigates the loss. This risk is further contained when the debt is secured by collateral. Equity contracts are also longer term because the parties do not set a maturity date on which repayment, or rollover, must occur[26].

3) SEC (U.S. Securities and Exchange Commission). The SEC is the main government regulator, rule and policy maker in capital markets of the USA, protecting fair, investors against fraudulent. It operates since 1934. The Regulations' methodology is based on the following principles, such as that developed securities markets contribute to economic growth by: lowering cost of capital; more efficient allocation of capital; reducing systemic risk. By facilitating more efficient means of raising capital (from a wider audience) for certain types of projects (especially large aggregations of capital and risky endeavors). Real investments occur that would otherwise not take place. By generating higher returns for

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[25] The World Bank IBRD IDA, Doing Business Measuring business regulation, Methodology, https://www.doingbusiness.org/en/methodology

[26] International Bank for Reconstruction and Development / The World Bank, Capital markets development causes, effects, and sequencing, 12/2019

investors, through projects that would not have been financed by banks but where return justifies risk. By creating equity "buffers" (as opposed to debt) that reduce systemic risk. By de-regionalizing flow of capital to business enterprises.

One of the main indicators in the way of operation is concept of marginal efficiency of investments. Prerequisite to developing successful securities markets which serves as main guiding line is a presence of well-founded trust from the side of investors. Moreover, the regulating authority is aimed to facilitate this by addressing: the major fears of investor: customers' abusing, lack or absence of market information awareness, market abuses 4. Discontinuities of the market or institutional one, excessively costly markets.

4) OECD. As was mentioned before, OECD guidelines, principles are recommendations addressed to counties tending to changes. In particular, the methodology of Principles of Corporate Governance is aimed to support creation of the policy, improve and evaluate the institutional, legal and regulatory framework of corporate governance.

5) Several international indices used as methodological grounds, such as:

1) World competitiveness index;

2) Ease Doing Business WB;

3) Financial development index.

Answering the question why emerging markets were considered as the object of research: it's interesting to make researches in emerging markets, since they are able to show the usage of different interesting combinations of methods used earlier via their catch-up periods. Moreover, some of them demonstrated significant results outstripping some advanced economies.

For example, the emerging market, successfully developed its capital markets, and which model of development now be considered as great pattern is Chile. Chile was the first country in the world which introduced a private pension fund system in 1981. That supported and strengthen the Chilean financial system over next 20 years. [27] Chile builds it system of regulations on the based on those of USA, for advanced private equity and VC funds to operate in the country. Gradually, and consequently it was awarded with 15-th place for the Index of Economic Freedom in 1995,

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[27] Carla Bustamante, Santiago Mingo, Sharon F. Matusik, Institutions and venture capital market creation: The case of an emerging market, Journal of Business Research April 2021

then in the next year it became 6-th with the quality of its regulatory system, as for Worldwide Governance indicators conducted by the WB Group.[28]

The next significant government activity was concentrated on VC markets, since it was recognized to be weak. In 2001 the government initiated to subsidize the operation of business incubators inside colleges and universities, anticipating that vicinity to science and innovation would offer assistance deliver high-growth tech-based start-ups. This program was in fact defended by its potential to form positive development externalities. Government financed 6 such programs. Government also provided programs with a seed capital instrument with an inventive products or innovation technologies coming from these incubators. Activity generated $US 60,000 to around 30 projects each year[29]. Mentioned practice is becoming popular in Italy. Despite it's quite new in comparison to the USA and several European countries, the legal framework allowing commercial exploitation of universities' researches was initiated in 1999. The biggest number of new spin-offs was reached in 2007 there were about 100 start-ups, subsequent tendency is around 60 spin-offs per year. Totally during the period 2000-2012 there were 747 spin-offs initiated. Within the tree year incubation period, about 40 % of that spin-off achieved more than €50,000 of sales and average sales in 2011 reached €200,000[30].

2.4 Research overview

The main propose to enhance knowledge and clarify the extend of the relationship between capital markets and exp monetary advancement, financial development, as well as evaluation to attract and generate financial sources, and economic growth - important studies are displayed in a clear way. Within the investigation segment the attempt of assessment of the material was made and was interpreted and summarized with own understanding of the subject.

1) Understanding of the current position of the country by analyzing of the historical background, current economic situation, recent tendencies of market development as well as recent legal system. As was mentioned earlier the capital development model can't be copied and applied the way it was successful in other economies, but it has to be adjusted

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[28] Ibid

[29] Ibid

[30] Donato Iacobucci, Alessandra Micozzi, How to evaluate the impact of academic spin-offs on local development: an empirical analysis of the Italian case, Springer Science Business Media, New York 2014

according to features of the country, taking into account it's background, strength and opportunities.

This part is comparative analysis of several indices and parameters related to financial market, economy development, also those which suppose be related and considered. In particular, mentioned is related to statistical analysis by means of Rstutio (Rstat) program and Excel add-up Data analysis;

2) Review of drawbacks and detriments for the further development of the financial system. The chosen country is analyzed according to data officially published by the government and appropriate international organizations, as well as small survey was conduct within the market participants, professional advisors and brokers of the chosen emerging market.

3) Analysis of the Capital markets development. The current conditions and recent decisions were taking into account and evaluated.

4) Analysis of the current market players. The pool of existing market participants was analyzed;

5) Comparison analysis between several capital markets. To ensure the benefits of supposed capital markets model the main features and characteristics of successful and developing models were presented;

6) Analysis using strategic planning method SWOT (the current CM and the particular strategic decision). Since the decision making is not limited by tools to be used, the well-know and quite flexible in terms of sphere or usage instrument was applied.

7) The Model – development and implementation. On the basis of theoretical material mentioned earlier, conducted analysis, comparison and with the results of the research within market players the model was created, and in the framework of the current research, several parts of the model were detailly explained.

8) Summary and Projecting results. Consequently, there was an appempt to project the implementation results.

2.5 Model development and implementation

2.5.1 Development

After preliminarily analysis have done and the whole detailed information on the object of study has compiled the next step can be implemented. The next step stands for the development, creation of the appropriate, suitable Capital markets development model (CMD model).

One of the key tools that presupposes consulting, advising and without what would be impossible to make the model practical is access to inputs from practitioners. This particular sort of knowledge is usually not documented or even are not explicit. Scientifically, this part of the model derived from a type of personal theoretical approach or framework. This approach is practically used by international organizations to conduct study "in the field", when the focus group is intruding into the object of study surrounding to get the appropriate information, piece of insides for further infiltration.

The major focus in particular case, analyzing capital markets development of the country, is on all the participants of the current capital market.

STEP 1. To analyze the efficiency and perspicuity of the current legal framework, apart from the standardized analysis including the type of the Legal system (Common, Civil Law etc), main features and characteristics of the particular framework, official entities, regulators terms of reference, competence and status, but also to spur the overview with the World bank group as Doing business index, as well as global competitiveness index, or others reliable.

STEP 2. To compare the existing one with the ideal version, in order to identify strength and weaknesses

STEP 3. To adjust the model in accordance to the country's specification.

STEP 4. To define the appropriate spheres of development. To zoom the focus.

STEP 5. To prioritize the development plan with the creation of step-by-step plan of achieves.

STEP 6. To monitor the progress, meaning also the collaboration with international scores and indices rating organizations to identify the level of the progress on the worldwide basis. As was mentioned before, such organizations have a clear methodology of appropriate investigations, what helps to identify the appropriate way to develop, to gain the international recognition as well, to

gain the ability of intercultural exchange of experience, and, moreover, the access to international professional advising sources. All mentioned could be crucially important when having the outside view of ubiquitous lack of changes, of reforms.

2.5.2 Implementation

Obviously, once the model was developed it needed to be approbated in the real-world setting. Uzbekistan's capital markets development level of development, as well as its environment make it quite suitable for implementing the CMD model, moreover, taking into account a particular background of this country gives even more filed, space for adding several adjustments, diversifications, and making it more comprehensive.

Here are some additional facts on the Uzbekistan, justifying the choice of the country with emerging market, its capital markets, to propose the model of further capital markets development.

Being right in the bottom of freest economies of the world, Uzbekistan has economic freedom ranked by the Heritage Foundation as "mostly unfree" with 108 out of 178 countries, or 58.3 by score. As for Rule of Law Index it's 92 out of 128 according to the World Justice Report 2020. It was one of the three countries with the lowest scores in the region together with the Russian Federation, and Turkey (107th out of 128 countries globally). The Index is based on eight primary factors: Constraints on Government Powers, Absence of Corruption, Open Government, Fundamental Rights, Order and Security, Regulatory Enforcement, Civil Justice, and Criminal Justice. The Index is the world's leading source for original, independent data on the rule of law.[31]

The last means that the level of corruption is quite on the high level. In general, the countries with high level of government's hegemony in all spheres of economy is usual practice. Nevertheless, what gives a great hope that there is a potential to great development of capital markets here it's, first of all, a new governance of the country, new President, who is going straight towards wide spread changes, reforms in all spheres of economy. Moreover, from the beginning of the presidency lots of initiated reforms were related to corruption mitigation. The figure, explaining and proving the importance of such changes to the economy of the country, and in particular, to the capital market development is "Informal Relationship-Based Personalized Exchange", what means, when not the rules and regulation prevail in the business relationships. Reading the

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[31] The World Justice Project (WJP), World Justice Project Rule of Law Index 2020 Report, WASHINGTON, DC 2020

information represented by the curves the effect of corruption existence can be explained. Interestingly, there is no evidence that the economy can't operate satisfactorily with the evidence of the corruption, but in the short term only. The benefits of such relationships are not long-playing. The last statement opposes the principles, or factors of attractive and well-functioning capital markets, here the trustful and long-term basis of relationship between market payers is vital. The Figure 2.3. gives a graphical representation of the effects achieved by means of Formal, Rule-Based, Impersonal Exchange revealing in the economy. Consequently, building the capital development market model in the country reforming its economy on the way to corruption elimination is more likely to be successful.

By 2019, in Uzbekistan's market were108 public companies (132 in 2017), listed on the stock exchange (TSE- Tashkent stock exchange). Market capitalization achieved 9.4% to GDP in comparison to its 2018 level of 5.9%, but still relatively infant level comparing with neighboring countries, Kazakhstan with (20.6% in 2018 and 22.4 % in 2019) or Russia (38% in 2019 to its 34.5% in 2018). Moreover, transactions in the stock market are less than 3% of total equity turnover in the economy, what is signaling the miserable role capital market nowadays.

Furthermore, the securities of the main part of public companies are not in an active trade. By the data of stock exchange, there are only 23 firms which equities are regularly in trade, there are bank shares prevail. Still market offer some attractive for investor equities, trading at around 3 to 5 times price-to-earnings, complementing with high dividend yields. Average daily turnover (excluding banks) was less than $100,000. Shares with the total amount of $300 million (what is less than 10%), were in free float, with $3 billion of the total market capitalization.

The right to issue bonds have only "joint-stock companies", in 2019 they are 604 in total. Moreover, 90% of them are state-owned or with the government as a shareholder. These companies historically raised capital by going public reluctantly, they possessed access to public funds on preferential terms by the protection of the Central Bank, or the Ministry of Finance.

In the current situation, the capital market development looks even more attractive. Thus, since there is almost absence of the non-state-owned enterprises on the stock market, and, as was explained earlier, the role of banks is strengthening and developing rapidly, and the rates of loans are huge for creditors (more than 23%) the stock market has to become the alternative to the current local banking system as well.

There are some positive moments to complement the model creation like the existence of the Portal of Corporate Information (www.openinfo.uz), which supposed to obligate all companies in Uzbekistan's stock market submit their financial statements quarterly and reports on the annual basis online.

Figure 2.2. Informal Relationship-Based Personalized Exchange
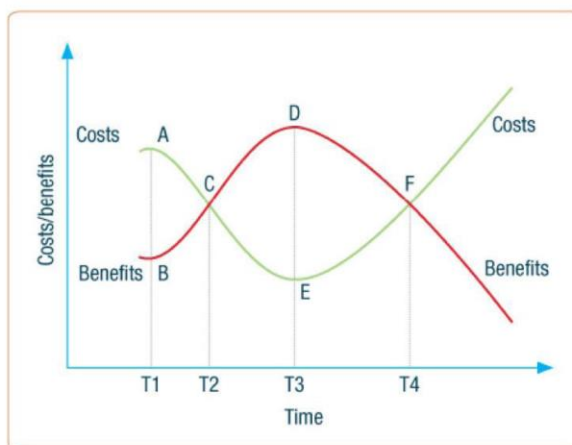
Source: Marcelo Cano Kollmann, Ph.D., Country analysis, UNIVPM 2021

Figure2.3. Formal, Rule-Based, Impersonal Exchange
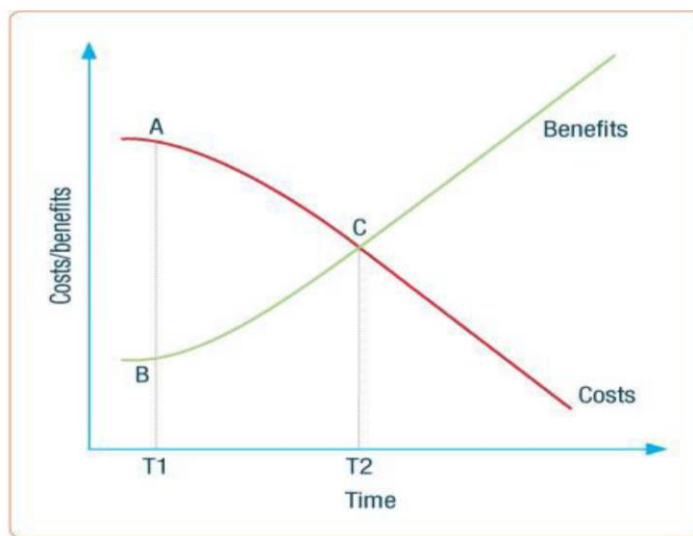
Source: Marcelo Cano Kollmann, Ph.D., Country analysis, UNIVPM 2021

2.6 Critical discussion

The suggestions in the current work tend to cower almost all aspects, considering relevant by the author, but there is no evidence that they are the only and they are enough, the development of several aspects is detailly presented in the frameworks of the current work. Moreover, since we give the probability of the model implementation only, the theoretical part is prevailing and there is lack of evidences of particular practical application. The only sound justification of all suggestions is the authoritative international institutions' practical applications in the other countries of the world, as well as open information on the personal reforms and results of the reforms of the countries.

The suggestion of the institutions' activation on the stock market is also the issue of the not total confidence of success, since the is an information when the realization of similar activities didn't give the result. There was evidence that pension fund and CIS reforms in certain jurisdictions have not led to the desired results. The Lithuanian Securities Commission said that the reforms of Lithuanian pension funds and collective investment undertakings (CIU) have not released a large pool of liquidity into the domestic market. One of the reasons cited for this was that a significant majority (i.e. 75%) of funds were invested abroad instead[32]. In general, institutional investors tend to be long term strategic investors and do not trade as frequently as retail investors. While institutional investors do carry out large trades, they are often not frequent enough to improve overall market liquidity. In some cases, such trades may even mop up liquidity. In such instances, reforms should instead focus on channels that promote trading e.g. via distributing funds to licensed fund management companies.

The model is a long-lasting implementable, as well as the supposed period of the beneficial results achievement is unpredictable, and still long-term. It mostly explained by the absence of the patterns of development worldwide, since every case is unique and the catching-up periods in different spheres of economy are not the same, taking into account increasing level of economic indicators convergence. Nevertheless, since there are statistical interdependence shown, to some extend the positive effect could be predicted.

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[32]IOSCO, Factors Influencing Liquidity in Emerging Markets, Report of the IOSCO, Emerging Markets Committee, December 2009

Chapter 3. Presentation and analysis

3.1 The role of capital markets

The experiences of nations all over the world prove that capital markets improvement ought to be a slow process requiring solid authority from the state authorities at the same time requiring a huge commitment of time and assets. In case done accurately, the payoffs can be considerable and long-term. The key basic, in any case, is to create methodologies, strategies, model that fit the specific country's ecosystem. The additional point of focus, which wasn't mentioned, is that much could be done to foster liquidity on national exchanges, including by embracing the inevitable further consolidation of exchanges and other infrastructure.

To implement the comprehensive analysis, we are going to use several statistic tools. First, cluster analysis, first coined by Tryon, 1939, actually encompasses a set of different classification algorithms. A common question asked by researchers in many fields is how to organize observable data into visual structures, i.e., expand taxonomies. In fact, cluster analysis is not so much a conventional statistical method as a "set" of different algorithms for "distributing objects into clusters". There is a point of view that, unlike many other statistical procedures, cluster analysis methods are used in most cases when you do not have any a priori hypotheses regarding classes, but are still in the descriptive stage of research. It should be understood that cluster analysis identifies the "most significant decision possible". Therefore, the statistical significance test is not really applicable here. That is the reason why to apply further the "regression analysis" which could help us to figure out the statistical significance between analyzed data during further deep research.

The list of analyzed countries was chosen by the random sampling. Further, few countries for which the information on estimated variables was unable to be found were excluded. Consequently, current research is based on several indexes and reporting data to estimate situation in the analyzed countries. The analyzed list of indicators includes the Ease of doing business score, Score-protecting minority investors, Score-paying taxes, Freedom of economy index, Nominal GDP (US $, mln), Financial development index, Government debt % to GDP, Adults who are financially literate (% to the population), Population, Regulatory framework, Market capitalization share to GDP, Competitive index. The observed period contains data on the latest period available mostly 2020 (see Appendix 1).

The analysis is going to be implemented by means of RStudio application or sofrware and the additional software add-on in Excel "Data analysis". Thus, RStudio free open-source software development environment for the R programming language, which is designed for statistical data processing and graphics.

The ease of doing business score is the simple average of the scores for each of the Doing Business topics: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. The score is computed based on the methodology in the DB17-20 studies for topics that underwent methodology updates[33].

The score for paying taxes is the simple average of the scores for each of the component indicators, the payments, time and total tax and contribution rate for a company to comply with tax laws in an economy, as well as the post filing procedures to request and process a VAT refund claim and to comply with and complete a corporate income tax correction. The score is computed based on the methodology in the DB17-20 studies[34].

At first, we will check the data for homogeneity. With reference to our chosen model with all the variables, in total we have: 12 variables or indicators (on the current step of analysis), with the help of R-Studio application, the dendrograms relative to different hierarchical methods of cluster analysis can be computed. All the distances are computed with the Euclidean metrics.

From the beginning, it's logical to get the overall idea of the best number of clusters which we are able to notice using the R-studio as the on the Figure 3.1

And as we can see, the best number of clusters is around 8 to 10, quite a lot to proclaim homogeneity. Variability expressed on the vertical axis, on the beginning when we increase a number of variabilities, we can see a big drop of variability, but around of number 8-10 of the number of clusters the variability becomes more stable.

As Rstudio give a possibility to use several analytical tools the following methods are used: complete method, single method, average and centroid.

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[33] The World Bank IBRD IDA, Doing Business Measuring business regulation, Methodology, https://www.doingbusiness.org/en/methodology
[34] Ibid

Complete method. In this method clustering is based on maximum distance. All cases are completely linked within a circle of maximum diameter. Works much better by looking at the most dissimilar pairs and avoids the problem of chaining. This method is represented on the dendrogram #1 and not the appropriate and visual one according to the current experiment.

Figure 3.1. Number of clusters
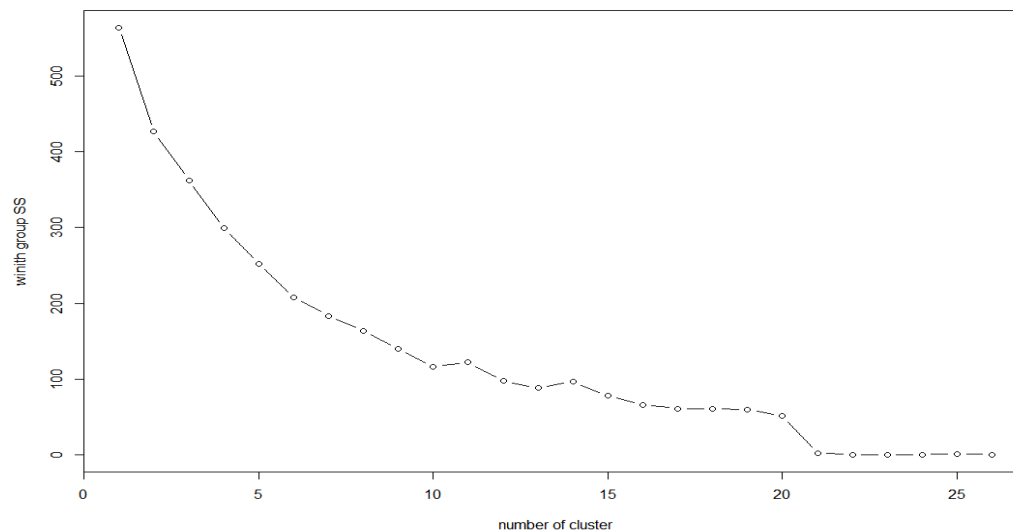
Source: Personal elaboration by means of RStudio

Single. Finds the shortest distance between 2 cases and joins those 2 cases into the 1st cluster. Here all cases are singly linked which makes this not a particularly good choice for clustering as long snakelike chains can form. This method is represented on the dendrogram #2, also not the appropriate and visual one according to the current experiment.

Average. Works similar to single or complete linkage, however once clusters with 2 or more cases have been formed the distance between clusters is based off of the average distance between all cases in cluster to all cases in another (as opposed to the single closest or furthest pair). This method is represented on the dendrogram #3, also not the appropriate and visual one according to the current experiment.

Centroid. The centroid method uses the centroid (centre of the group of cases) to determine the average distance between clusters of cases. This method is represented on the dendrogram #4, also not the appropriate and visual one according to the current experiment.

We can also see from the dendrograms, representing all 4 abovementioned methods, that some countries # 47, 2, 22, 1, 15, 16 can be considered as outliners, behaving in a totally different manner compared to the other countries. And in case of having an intention to present more accurate clustering of those 4 methods, we should have excluded mentioned counties from the observation.

And finally, Ward. The distance here is the error sum of squares (SSE) between the 2 clusters over all of the variables. At each stage in the clustering procedure, the within cluster SSE is minimized over all partitions obtainable by combining 2 clusters from the previous stage. This method is represented on the dendrogram #5, and we can define in as the appropriate and visual one according to the current experiment, where we can obviously recognize the mentioned vivid combination of other clusters.

Figure 3.2. Cluster Dendrograms of 5 methods
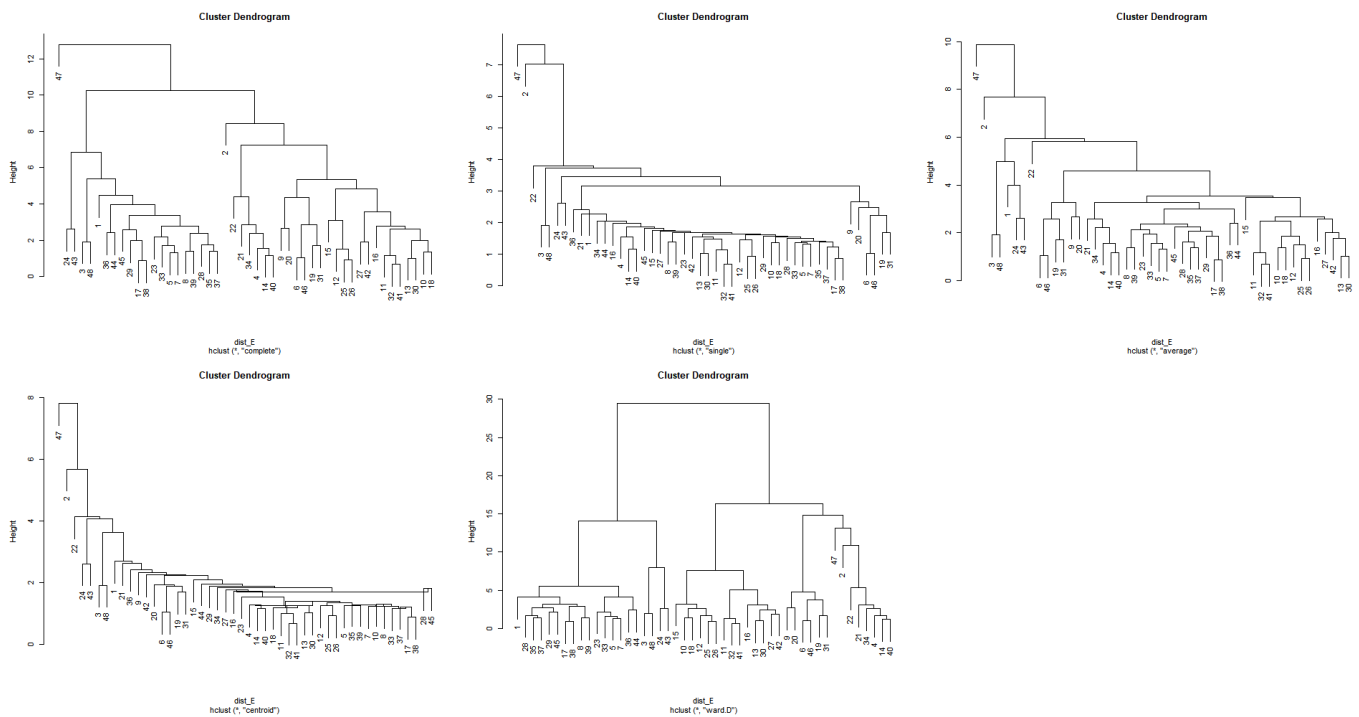
Source: Personal elaboration by means of RStudio

Moreover, to be sure in making decision, R-studio allows to check different possibilities and to find out the best option. Below there are options in comparison (3,4,5,6 clusters), by means of SSW (Figure 3.3), and the compare shows us obvious advantages of the number of clusters 6 concerning our example (12 variables) under estimation. In general: we pay attention to the

graphical overview of each case and the first one with the number of clusters 6 has more stable levels, and more integral shape in comparison to others' plots. Nevertheless, what is also important, to choose the graphical overview with the smaller number of negative indicators, which represent number of outstanding from the whole tendency examinations (or accidental ones), in the current case there are no such. The last means that the variables, chosen for the analysis are difficult to be clustered smoothly, they are different and most probably not all of them are statistically dependent. But on the current step it was clear that the separation of the data into 4 clusters will give more accurate divisions and more statistically related variables.

Figure 3.3. Graphical overview of the comparison with 3,4,5 and 6 clusters
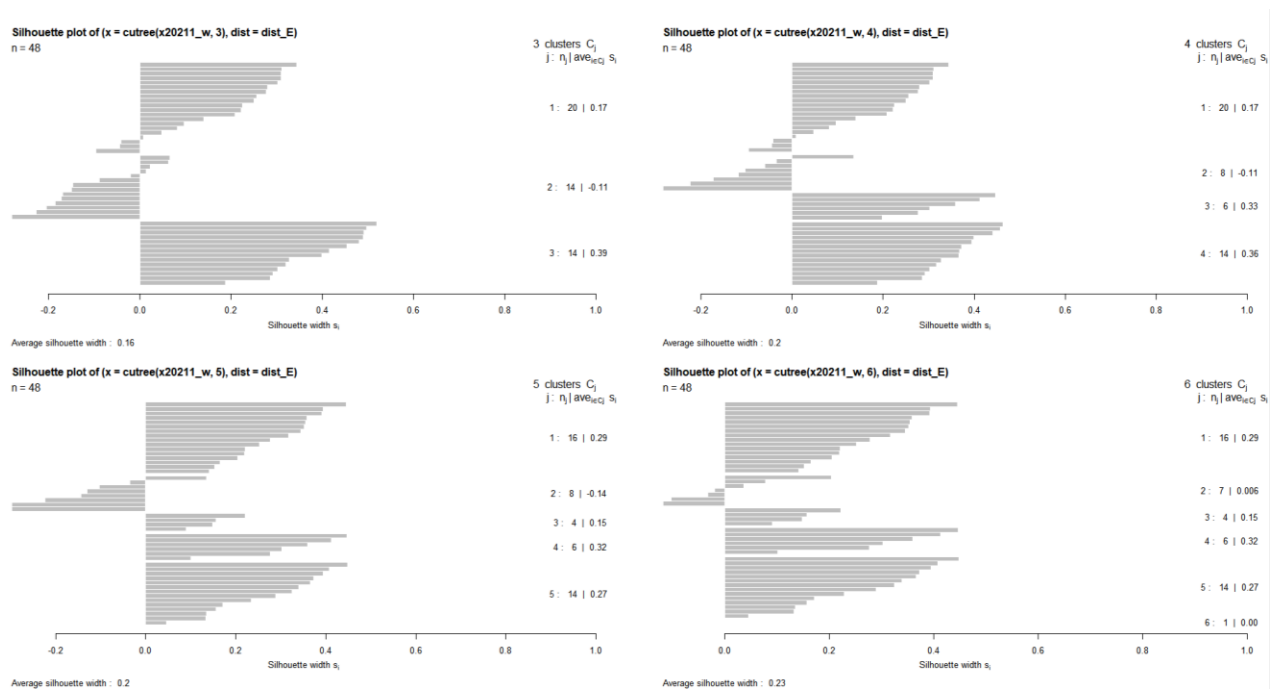
Source: Personal elaboration by means of RStudio

Since the homogenized silhouette was not achieved the further increase of number of clusters can be applied. Thus, following the options in comparison of 7 and 8 clusters (Figure 3.4).

Latest chosen numbers of clusters give fewer negative indicators, which represent number of outstanding from the whole tendency examinations (or accidental ones). Finally, the best appropriate number of clusters for the current research is 7.

Figure 3.4. Graphical overview of the comparison with 7 and 8 clusters
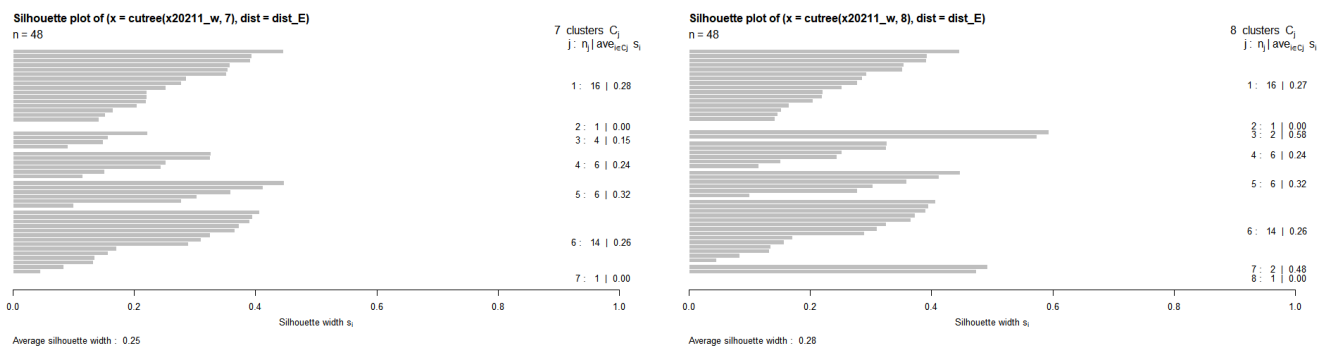
Source: Personal elaboration by means of RStudio

The cluster analysis conduct could signalize that the isn't unified model of development variables of financial system, in particular capital markets, development. The cases of each country are unique and the model chosen should be adjusted to each particular case, to each particular country.

Nevertheless, the first step of analysis conduct gave the spur to estimate further possible dependencies between indicators under investigation. Moreover, there are several countries were indicated to be excluded from analytical list since the character of relationships between their indicators is significantly differ from others. Thus, # 47, 2, 22, 1, 15, 16 or United States, Armenia, Austria, Japan, Georgia and Germany can be excluded from the further investigation list of countries (see Appendix 2).

3.2 The evolution of stock market development

The scientific and technological revolution, the expansion of the joint-stock form of ownership, the industrial upsurge and the strengthening of the role of the state in the management of the market have caused the emergence and development of the securities market throughout the world.

The financial market is a complex system where all financial assets of companies and other participants circulate independently. This market operates with a variety of financial instruments, is served by its own financial institutions, and has an extensive and diverse financial infrastructure at its disposal.

The starting of the operation comparative to those of a capital market can be observed in different parts of the world. The worldwide capital marker can be traced to a few centuries ago. Initially, moneylenders primarily lending out financial resources to traders to filled the gap of banks. Worlds

first brokers operated as moneylenders of cash to different businesses. Probably it was within the propensity of loaning, lending which drove to a framework of trading, exchanging debts. Other parts of Europe as well had a propriate surrounding where obligations were trade. The trading in debts probably started the tendency to creation of negotiable instruments such as debentures.

Trading government securities

Since banks didn't have the clear grounds when lending, as the proper mechanisms for obtaining debts was not exist (especially relating to high-risk debts, the demand to obtain the capital trough loans was getting higher and higher. Thus, the lenders appeared to fill the demand gap. By lending money to high-risk debtors, they traded with them. It started from Venice, where the trading with government securities was initiated, the banks of Genoa, Florence, Pisa and Verona followed the tendency of trading government securities.

The world's first stock market

The history of stock markets started from Belgium and from the Dutch cities such as Ghent, Flanders, Bruges and Rotterdam. In 13th Van der Beurze's house conducted transactions like in the stock market, personally he was an influential man. Even though the institutions and infrastructure existed similar to the modern ones, there were not listing procedures as well as trading in shares for companies. At the first-time trading of debts and other types of securities occurred under the common roof. There was no need to seek for clients located in different parts of the country to implement the exchange, trading. So, the cost of doing business and the time were saved. Being all together they build trustworthy society of traders. Other neighboring cities figured out quickly and also began trading in securities because it was a trade worth venturing into. That tendency has led to the point when trading in securities became prevalent in Europe. The stock market was a game changer as it encouraged trade under one roof and capital was readily availed through exchange of securities.

The rapid development of securities markets was noted in the period after the end of the Great Depression, the global economic crisis, since 1933. This time was also characterized by active government regulation of the market in order to eliminate abuses and fraud in this area, and thereby increase the transparency and attractiveness of the markets. for investors. New segments of the securities market began to form, in particular the over-the-counter market.

The evolution of the securities markets in the countries affected by the Second World War took place in different ways. The European countries most affected by the hostilities were gradually rebuilding their production potential and their securities market. The leading positions in the world securities market were taken by the United States, they still retain them.

The two largest trading floors here are the New York Stock Exchange (NYSE) and NASDAQ, together they form almost a third of the global stock market. NYSE was founded 228 years ago - on May 17, 1792, when 24 New York brokers who worked with financial instruments and concluded deals signed the "Sycamore Agreement" (the so-called Buttonwood Agreement) to create the New York Stock Exchange. The Bank of New York shares were listed first on it. Since 2013, the exchange owns the Intercontinental Exchange network of exchanges and clearing houses for the financial and commodity markets in the USA, Canada and Europe.

The second largest exchange in the United States and the world is the NASDAQ exchange, founded in February 1971. The main feature of this site is that it was originally founded as a completely electronic exchange, unlike most others who introduced digital technologies gradually, step by step moving away from traditional trading in the exchange halls.

One of the largest stock exchanges in Europe is the pan-European exchange Euronext, which unites the stock markets of Belgium, France, Ireland, the Netherlands, Norway and Portugal. This group of companies emerged in 2000 as a result of the President of the Paris Stock Exchange Jean-François Theodore, who initiated the merger of the sites in Amsterdam, Brussels and Paris to give the united exchange an advantage in the European financial market.

Against the background of Britain's exit from the "united Europe" (Brexit), this market should be singled out separately. The most famous platform in this country is the London Stock Exchange, or London Stock Exchange, founded in 1801. Although, in fact, its history began back in 1571, when the Englishman Thomas Gresham built the Royal Exchange with his own money. The LSE is a joint stock company, and its shares are traded on it.

3.3 New financial instruments

The fintech intensive development tendencies are strongly correlated to the new financial instruments' creation and popularization. Consider, for example, the emergence of the first robot consultants, or all broader development of platforms that, thanks to the Internet, bring businesses and lenders together, giving rise to various types of crowdfunding.

Essentially, the crowdfunding sector is symbolic. A little more in less than five years, thanks to the advent of blockchain technology, it managed to develop so much that it seemed that it would be impossible to quickly understand the various phenomena in order to resolve them before they will become obsolete. It is already clear that at that moment when, for example, we thought that stock crowdfunding was definitely regulated, it turned out that it was already exceeded all expectations.

In general, crowdfunding can be defined as the collective contribution of people who use their resources to support projects initiated by other people and organizations. In the modern world, this process takes place using the Internet. Individual projects and businesses are financed in small portions from a large number of participants, thereby allowing for innovation, business development. This business model was initially only used as an alternative way of collecting money funds online for recording albums and organizing concerts of music performers through Internet sites. By now she has many modifications, and the volume of funds raised with its use is increasing annually. No wonder starting since 2010 crowdfunding becomes subject of detailed study with parties not only economists, but also regulatory entities.

The idea of financing any projects by collecting small amounts of money funds through attracting a large number of people is not new. However, the invention of the internet and its availability for large the number of users allowed us to optimize the costs of search and financing projects through the emergence intermediary sites that post information about the fundraising and attracting stakeholders.

The world's first crowdfunding platform ASSOB (The Australian Small Scale Offerings Boards) is a capital crowdfunding. ASSOB, Australia's capital crowdfunding platform, which is the world's oldest and most successful fundraising platform, was launched in 2007. After it, several more platforms appeared, such as Crowdcube, Funding Cicle, Rocket Hub and Indiego, the latter's peculiarity is the ability to use money even if the set amount has not been accumulated. The world's most famous crowdfunding platform is owned by the United States. Kickstarter is the most popular crowdfunding site originally created exclusively for US residents and residents.

The basic approach to identifying the main business models of crowdfunding, which is also guided by the specialists of the English research center, is to group the business models of crowdfunding according to the principle of obtaining additional income from an investment of funds: 1) a group

of non-financial (or non-investment) business models (eng. options: donation crowdfunding, non-investmentbased model of crowdfunding, nonfinancial return model), which does not imply receipt of financial income by the sponsor, i.e., the cash flow is carried out only in one direction - from the funding entity to the project initiator; 2) a group of financial (or investment) business models (English options: crowdfund investing, investment-based model of crowdfunding, financial return model) involves the receipt of additional income by investors and lenders by purchasing debt or equity financial instruments or financing part of a loan, provided through the platform. Within these two groups of crowdfunding, four main business models are distinguished (a detailed classification of crowdfunding is shown in Figure 3.5) In particular, a non-financial crowdfunding group includes the following business models: a) uncompensated, or charitable (English options: donation-based, patronage model) - a crowdfunding model, the purpose of which is to financially support charitable, research, creative, social and private projects in the absence of receiving any financial or non-financial benefits from sponsors; b) reward-based crowdfunding is a crowdfunding model in which the goal of the funding party is not to generate cash income[35].

As part of the financial crowdfunding group, the following business models have become widespread: a) crowdinvesting (equity-based crowdfunding, investment-based crowdfunding) - attracting funds from investors using traditional financial instruments on crowd sites. In the current group most popular: royalties (royalty-based crowdfunding; profit sharing crowdfunding, revenue sharing crowdfunding); debt securities; convertible securities; b) lending-based crowdfunding (credit-based crowdfunding, loan-based crowdfunding, crowdlending) - providing individuals and legal entities with borrowed resources through Internet platforms[36].

In the UK, one of the forms of crowdinvesting is the acquisition of community shares - equity securities that are not subject to resale on the financial market. This type of shares can be issued only by social enterprises and distributed among a community of people (for example, residents of a small town), having primarily a non-financial interest in the functioning of this business[37].

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[35] Crowdfunding's Potential for the Developing World, Finance and Private Sector Development Department, Washington, DC, World Bank, 2013.

[36] T. Ziegler, R. Shneor, K. Wenzlaff, A. Odorović, D. Johanson, R. Hao, L. Ryll, Shifting Paradigms, the 4th European Alternative Finance Benchmarking Report, Cambridge Centre for Alternative Finance,Cambridge Judge Business School, 2019

[37] Голикова А., Ключевые аспекты функционирования краудфандинга, Научные публикации, Банкаўскі веснік, Верасень 2019

Figure 3.5. Classification of crowdfunding business models
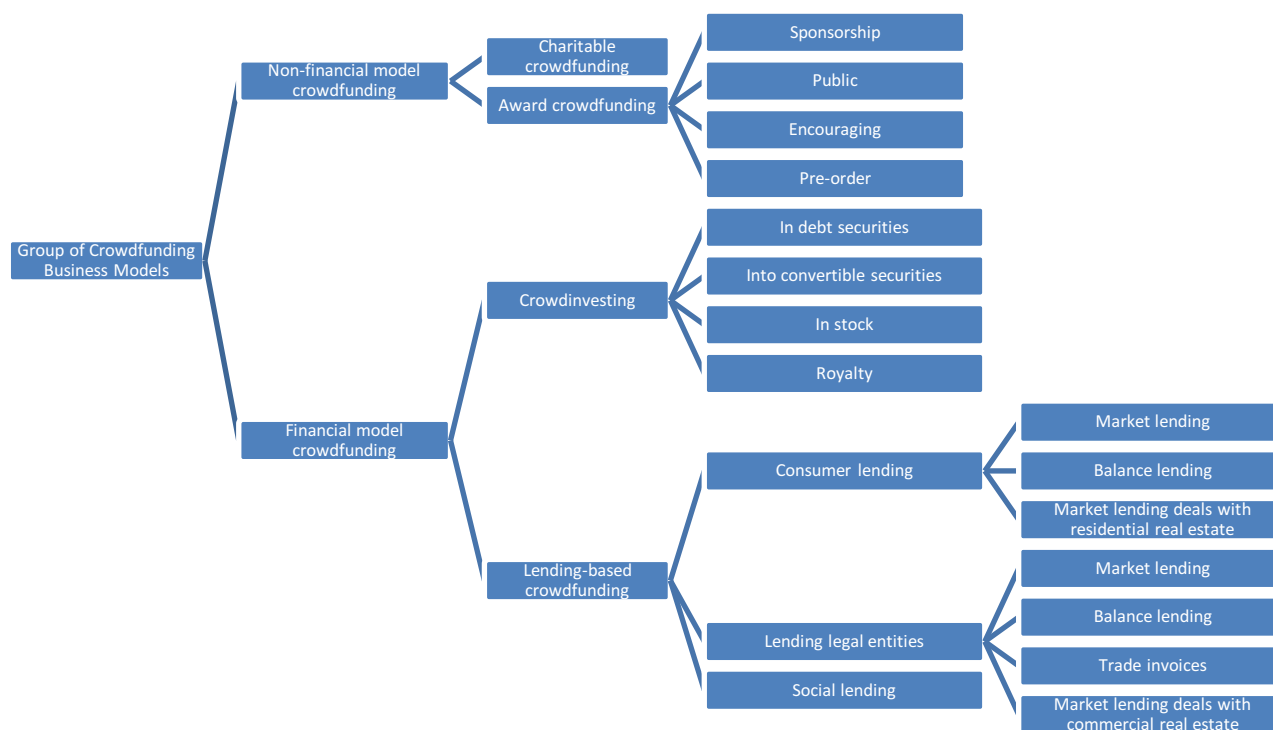
Source: Голикова А., Ключевые аспекты функционирования краудфандинга, Научные публикации, Банкаўскі веснік, Верасень 2019

As for advantages and disadvantages, crowdfunding has the same benefits as other platform economy business models. First of all, this is "reducing the role of the institution of traditional mediation and, accordingly, transactional, operational, time and other costs" for the interacting parties. Greater coverage of the target audience is also important, including the ability to access the platform at any geographic point where there is an Internet connection. In addition to this, the financial crowdfunding group allows you to get a higher return on investment (adjusted for risk), attract borrowers with limited access to traditional sources of financing, and also reduce the investment threshold[38]. Disadvantages: First of all, the result of successful fundraising depends on significant efforts (money, time) of the initiators of the crowdfunding campaign and skills in promoting the product on social networks, since there is a high level of competition between projects on well-known crowdfunding platforms. One of the most mentioned risks in scientific papers is the failure to fulfill obligations by project initiators. This may be due to obvious fraud.

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[38] Ibid

Along with outright deception, this risk can be realized due to the insufficient competence of the initiators of the projects, their excessive optimism about the possibility of implementing the idea or other factors that they did not take into account earlier; disclosure of information on the volume of production and sales, the technical component, which was used by unscrupulous competitors; mistakes in business planning[39]. An insufficiently developed business model for the commercialization of developments by the project initiators can lead to the realization of the risk of bankruptcy or default of the company. Stricter requirements for platforms and projects by regulatory authorities, mandatory identification of the identity of project initiators and their verification in the debtor database, a more thorough procedure for selecting projects by the platform, as well as due diligence by third-party organizations in case of raising funds can reduce the likelihood of these events. using crowdinvesting. The World Bank report finds that it is difficult for sponsors to distinguish between the "intent to produce" a product or service that qualifies for crowdfunding from the "ability to produce". Disclosure of insufficient information to evaluate a company or a project and make the right decision about the possibility of financing them leads to information asymmetry, which also affects the quality of projects posted on platform sites[40].

Another interesting and quite new financial instrument to be considered is Sukuk. Sukuk is one of the recently and very popular financial instruments. At the present stage, in world practice, sukuk (from Arabic - "legal document, act, receipt") provides an opportunity to attract debt financing, occupying an intermediate position between the company's own and borrowed resources. As defined by the AAOIFI (Accounting and Auditing Organization of Islamic Financial Institutions), sukuk are certificates of equal value, certifying the indivisible share of ownership in tangible assets, the right to use them and receive income, services provided, assets of a specific project or special investment project[41]. Thus, the sukuk, or property certificate, unlike bonds, is not a debt obligation of the issuer to the investor, but represents a share in an asset (project) with ownership (applicable as a tool for securitizing assets). At the same time, sukuk, unlike stocks and bonds, is

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[39] Ibid
[40] Crowdfunding's Potential for the Developing World, Finance and Private Sector Development Department, Washington, DC, World Bank, 2013.
[41] Mokina L.S, Islamic securities as a source of investment projects financing and the prospect of their placement on Russian financial market, The Ural State University of Economics (USUE), Russia, Креативная экономика 18-22, 2017

targeted, providing an unsecured income from the profit that can be obtained from the use of assets (services) or a funded project.

Table 3.1. Differences between the issuance of sukuk and equity financing when financing investment projects

Feature	Issue of sukuk	Equity financing
Economical and Legal essence of the financing instrument	Sukuk is a financial instrument that provides the holder with a certain share of ownership in a tangible asset or in an investment project.	A security is a document certifying property rights in compliance with the established form and mandatory requisites.
Funding principle	Issue of sukuk within the framework of a lease, leasing, partnership, purchase and sale agreement.	Issue of securities.
Investment object	The assets underlying the sukuk must not be in conflict with Sharia law.	The ability to finance any assets, projects, enterprises that comply with the legislation of a given country.
Sources of income	Income from lease and rental payments. Income from the profit of the investment project. Sales contract margin.	Share dividends. Coupon yield on bonds.
Investor, lender	Special legal entity.	Shareholders. Holders of bonds.
Backing with real assets	Required	Not required
Price of the financial instrument	The par value of the sukuk is determined by the market price of the underlying asset.	Depends on the solvency and credit rating of the issuer.
The nature of the risk	Mostly sovereign, quasi-sovereign.	Corporate.
Profit	Not guaranteed, but can be determined by a fixed percentage and a floating determinant.	Not guaranteed for stocks. Coupon yield is fixed on bonds.

Source: Mokina L.S, Islamic securities as a source of investment projects financing and the prospect of their placement on Russian financial market, The Ural State University of Economics (USUE), Russia, Креативная экономика 18-22, 2017

In the structure of Islamic securities, Sukuk al-Murabaha are more popular, some of which accounted for almost 50% of absolutely all sukuk agreements in 2015–2016. Agreements of this type have also gained extensive promotion in Islamic banking. Sukuk al-Murabaha is a Debt Financing Contract whereby SPV buys assets and sells them to a borrower on a deferred payment basis. The borrower uses the received asset to generate profit and gradually pays the cost of the assets sold to him[42].

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[42] Ibid

In continuation of the development of the Islamic securities market, the process of issuing sukuk by issuers from Europe, namely from Germany, gradually began. In particular, Luxembourg was the first European country to list a sukuk. In 2004, in Luxembourg, in order to develop the sukuk market, amendments were made to the securitization law, which created a more flexible regime for the securitization of Islamic instruments. Luxembourg became the first country in the eurozone to legislate the right to issue sovereign sukuk.

Figure 3.6 Sukuk market
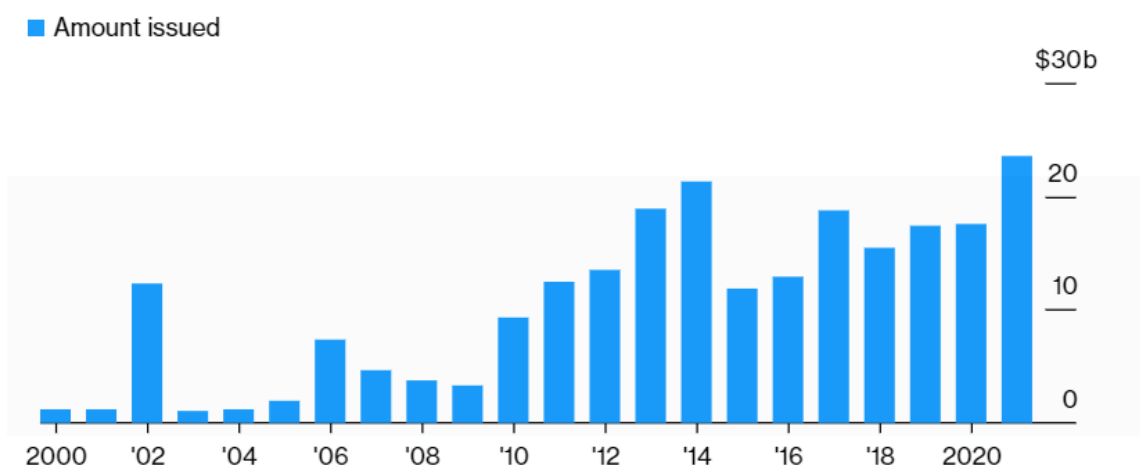
Source: Bloomberg (note: the data represents amount of Sukuk issued during the period 01.01-15.04 of all years).

At the same time, the sukuk market reached its highest level in 2012 - about $ 229 billion. In 2013, the volume of placed sukuk dropped to $ 111.3 billion. In 2014, the issue of sukuk reached $ 116.4 billion. in the market (Maldives, South Africa, Japan, etc.)[43]. Furthermore, according to data compiled by Bloomberg on 15.04.2021 global borrowers have issued more than $ 23 bln of Sharia-compliant debt, the fastest start for a year (Figure 3.6). Professionals predict, that sukuk is going to be more attractive on emerging markets portfolios since consistent lower sensitivity to USA rates[44].

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[43] Ibid
[44] Elbahrawy F, Suhartono H, Investors shun volatility, Bloomberg, 15.04.2021

3.4 Critical discussions and analysis

Continuing the analysis initiated at the beginning of the current Chapter, using the result obtained, the regression analysis could be applied.

Regression analysis is a method of modeling measured data and studying their properties. The regression model is a function of the independent variable. The parameters of the model are adjusted so that the model best fits the data. Assumptions are made about the nature of the distribution of this quantity, called the data generation hypothesis. To confirm or disprove this hypothesis, statistical tests called residual analysis are performed. This assumes that the independent variable is error free. Regression analysis is used for forecasting, time series analysis, hypothesis testing, and uncovering hidden relationships in data. The literature also contains the designation ANOVA (from the ANalysis Of VAriance). Designed by Ronald Fisher for analysis of results experimental research.

For enabling to build up the regression formula the mentioned statistical software add-up in Excel "Data analysis", which serves to enable regression function conduct. Thus, lots of possibilities could be used, taking into account that the database is sightly homogenous, we have to rearrange for more clusters or eliminate some variables. Moreover, mentioned outstanding countries were already eliminated from the list of countries under the current analysis.

First, meaning that all previously used variables unable to construct a regression model together, so it's needed to find some dependencies with the variables to create models by finding combinations of indicators. Thus, the combination of the following dependent and independent variables was analyzed. In the current experiment, the suggestion that there is a dependency between Financial development index and Ease of doing business score, Score-protecting minority investors, Score-paying taxes, Freedom of economy index, Nominal GDP (US $, mln), Government debt % to GDP, Adults who are financially literate (% to the population), Population, Regulatory framework, Market capitalization share to GDP, Competitive index. Compilation the regression function assuming Financial development index as Y – depending or target variable, and others as explanatory 11 variables.

Y (*Financial development index*) = β0 + β1 (*Freedom of economy*) + β2 (*GDP (US $, mln)*) + β3 (*Debt % to GDP*) + β4 (*Adults who are financially literate (% to the population)*) + β5 (*Score-Protecting minority investors*) + β6 (*Score-Paying taxes*) + β7 (*Competitive index*) + β8 (*Ease of doing business score*) + β9 (*Population*)+ β10 (*Regulatory framework*) + β11 (*Market capitalization share*) + ξ

Table 3.2. Summary output

Regression Statistics	
Multiple R	0.908372
R Square	0.825139
Adjusted R Square	0.758813
Standard Error	0.119807
Observations	41

ANOVA

	df	SS	MS	F	Significance F
Regression	11	1.964246	0.178568	12.440577	3.25E-08
Residual	29	0.416256	0.014354		
Total	40	2.380502			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 99.0%	Upper 99.0%
Intercept	-0.79662	0.364396	-2.18614	0.0370244	-1.54189	-0.05135	-1.80103	0.207796
X 1	0.022526	0.007172	3.140759	0.0038587	0.007857	0.037195	0.002757	0.042296
X 2	2.89E-08	5.94E-08	0.487213	0.62977	-9.3E-08	1.5E-07	-1.3E-07	1.93E-07
X 3	0.002587	0.000848	3.048941	0.0048652	0.000852	0.004322	0.000248	0.004925
X 4	0.001526	0.002643	0.57739	0.5681323	-0.00388	0.006933	-0.00576	0.008813
X 5	0.004307	0.002873	1.498893	0.1447094	-0.00157	0.010183	-0.00361	0.012227
X 6	0.00781	0.003803	2.053478	0.049142	3.14E-05	0.015588	-0.00267	0.018293
X 7	0.001896	0.002342	0.809482	0.4248304	-0.00289	0.006685	-0.00456	0.00835
X 8	-0.02261	0.008398	-2.6917	0.0116793	-0.03978	-0.00543	-0.04575	0.000543
X 9	3.42E-09	1.53E-09	2.238175	0.0330536	2.95E-10	6.54E-09	-7.9E-10	7.63E-09
X 10	-0.1132	0.085153	-1.3294	0.19408	-0.28736	0.060955	-0.34792	0.121512
X 11	0.001069	0.000484	2.211209	0.0350607	8.03E-05	0.002058	-0.00026	0.002402

Source: Personal elaboration by means of Excel Data Analysis

When to analyzing the value of the R2 (in the Regression statistics Table above) which is almost 0,85 we can state that the almost 85% of changes in the number of Financial development index caused mostly by real Freedom of economy index, Debt % to GDP, Score-Paying taxes, Ease of doing business score, Population as well as by an important for the current research indicator -

Market capitalization share. According to this, the model is to be considered enough accurate. Same unpresentable is the value of the Standard error (which is unacceptably huge).

The coefficient -0.79662 shows that what value of Y we have if all the variables in the model under consideration are equal to 0. It means that there is less influence on the value of described parameter from other factors not described in the current model.

From the other coefficients most significant for the current model show the weight of the variables X_1, X_8 and X_{11} by Y. For example, the X_8 one has a negative "-" sign, what means negative influence: the higher the score of "Ease of doing business" (what means when it's easier to implement business in the current country) the smaller number of Financial development index. In contrary, the highest percentage points of Freedom of economy and Market capitalization share the higher Financial development index.

Taking into account the value of P-value we can assume that X_1, X_3, X_6, X_8, X_9 and X_{11} are significant regressors in the model. The same is proven by the Confidence interval values (in the current analysis both 95% and 99% confidence interval dimensions were used).

Furthermore, since the cluster analysis confirmed that data likely have satisfied level of significant interdependences the selection should be further improved. Thus, countries were divided according to the size of their GDP, then the regression formula were changed with purpose of understanding the level of statistical significance of variables dependance on the Market capitalization share to GDP indicator.

In addition, the correlation analysis was conducted the Pearson's correlation test, the statistical analysis that measures the statistical association or relationship, between two continuous variables. In the current model, to observe the intercorrelation mentioned earlier, the analysis was applied to check the level of statistical significance between all the variables, the correlation matrix was built (See Appendix 4. Table 4)

3.5 Capital markets in the light of COVID-19 crisis and climate change

The key event of the current year was the spread of the 2019-CoV coronavirus pandemic. As of December 21, 2020, 77.2 million cases of the disease and 1.7 million deaths were registered in the world. In order to limit the pressure on the health sector, countries have taken restrictive measures, which have led to serious socio-economic consequences.

The current global economic crisis has become the strongest in the entire post-war period. The depth and originality of the current crisis have caused constant changes in forecasts throughout the year. Uncertainty about the further development of the epidemiological situation and economic recovery remains in the spotlight. In this issue, we have covered the key economic events of 2020, as well as some forecasts for the medium term.

The coronavirus pandemic has powerfully brought home the all-too-quickly-forgotten reality that nature can strike back. What epidemiologists had long feared, and what Bill Gates had forewarned in 2017.

The recovery in equity markets was uneven and was accompanied by episodes of increased volatility. The MSCI indices (developed countries and emerging markets) by the end of December are 11-12% higher than at the beginning of 2020. However, the recovery in the stock markets of developed and emerging economies is largely due to the markets of the US and China, without which the recovery is much more "modest". The recovery in the inflow of portfolio capital in USD bonds of developing countries (excluding China) began in May and continued until the end of 2020. The accumulated volume of portfolio capital in these securities reached $ 10.4 billion by December. The yield spread on USD-debt of developing countries (except China) at the end of 2020 decreased to 197 bp against 423 bp at the end of March. At the same time, the recovery of the inflow of portfolio capital into emerging markets' debt instruments (except for China), denominated in national currencies, practically did not begin in 2020. The accumulated volume of portfolio capital in these securities went into negative territory at the end of March (- $ 6.9 billion) and by December amounted to - $ 26.8 billion. The yield of the corresponding securities fell to 4.7% against 6.3%.

The general the scratchy pandemic impact on the euro area can be observe on the Figure below. The financial market developments have been extremely scratchy, that is the reflection be the high dispersion of value-added growth across the countries of euro area and sectors of economic activity. The dispersion of growth across countries is measured as the weighted standard deviation of year-on-year growth in value added in the euro area. The dispersion of growth across sectors is measured as the weighted standard deviation of year-on-year growth in euro area value added in the main NACE economic activities.

Figure 3.6. Dispersion across countries and sectors of economic activity

(Q1 2000-Q2 2020, percentage points)
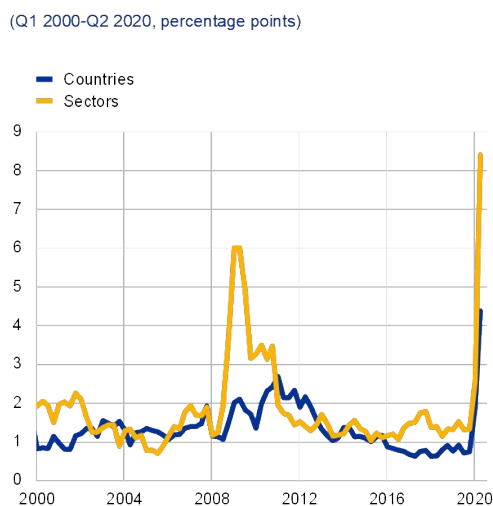
Source: European Central Bank, Financial Stability Review, Germany, November 2020

Related on the results of the research, after identification that there are different ways of recovering within different sectors, moreover, the same relates to different countries in the euro zone. The last explained by the European experts as countries which experienced hardest impact of the pandemic would have less (fiscal) policy tools to recover their economies, so they would recover relatively slowly. That said, alongside the asset purchases carried out by the Eurosystem under the pandemic emergency purchase program (PEPP is a temporary asset purchase program of private and public sector securities), the recently launched European initiatives, such as the SURE and the Next Generation EU (NGEU) instruments, should help ensure a more balanced economic recovery across EU countries and avoid the economic and financial fragmentation risks observed during the euro area sovereign debt crisis[45].

Nowadays it's obvious that alongside to the healthcare sector the pandemic shows the resilience of the financial systems all over the world to the natural disasters. The issues risen towards financial sector regulators push them to actions in terms of sustainability. Since the coronavirus pandemic, climate change exposes world community to tail climate catastrophes and systemic risks. It is also associated with global externalities that call for regulation, supportive public

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[45] European Central Bank, Financial Stability Review, Germany, November 2020

intervention and international coordination.[46] That means the financial systems nowadays are have to be the part of the solution to the systematic risks caused by natural disasters.

Talking about financial intermediaries, as an example, asset managers can complement political action against climate change through corporate activism. One specific instance where activism proved particularly helpful is in pushing for disclosure of climate-related information. Environmental shareholder activism increases the voluntary disclosure of climate change risks, especially if initiated by institutional investors, and even more so if initiated by long-term investors[47].

Moreover, central banks have priceless powerful tools relating to climate change risks elimination. On the Figure 3.7 below there is a graphical representation of such activities handled by the Bank of England, named stress test. The regulating initiatives are related to the probable results in three scenarios over a 30-year time horizon: an early policy action scenario, a late policy action scenario and a no additional policy action scenario, to estimate the size of climate risk and carbon exposures of the major UK banks and insurers (so they could survey their major corporate clients to quantify their risks and by aggregating this information into a carbon footprint of their balance sheets and other risk exposures).

Figure 3.7. Bank of England scenario pathways
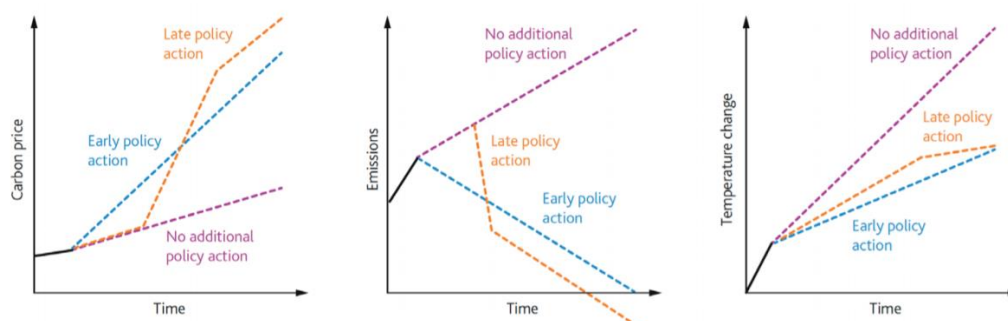
Source: Bank of England

According to the information, the bank can predict and build scenarios of its policy and sources allocation activity, of climate change risks mitigation on the financial institution level. It is

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[46] Patrick Bolton, Harrison Hong, Marcin Kacperczyk, Xavier Vives, Resilience of the financial system to natural disasters, Center for economic policy research, 25 May 2021
[47] Ibid

encouraging in this respect to see that other major central banks are following in the footsteps of the Bank of England, among which are the Banque de France, the Australian Prudential Regulation Authority, De Nederlandsche Bank, the Bundesbank and the European Central Bank[48].

Finalizing all above mentioned, the capital market development model nowadays, has to be created with the reference to the current global issues and crises. The mentioned examples successfully implemented by the European governments confirm the necessity of such factors, at the same time give some ideas of the way of the realization.

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[48] Ibid

Chapter 4. Capital markets development model (CMD model)

4.1 Model overview

If to stress on the main proposes/ for building the Capital Markets Development Model (CMDModel), especially in fast growing, perspective emerging markets the obvious goal is to ensure that the proper protection for investors is provided, to keep and support fair surrounding, spur liquidation of shadow economy (common to emerging markets), facilitate the capital formation, to create a clear and proper order of market operations, to support creation of efficient markets. The main idea is to arrange capital markets system that would inspire and support public confidence, that would provide a diversified variety of financial opportunities for market players, starting from investors (retail and institutional), entrepreneurs, finishing with public companies.

At the same time, the realization of capital market development should first start with the strategy overview. Thus, the main engine for capital markets creation is for sure the government. From the point of view of the Regulator of the capital markets of the country (which can be different entity as was mentioned before), according to the methods used by SEC the base of the strategic plan for formation and sustainable development of capital markets should be:

Figure 4.1 Capital market Regulator's Strategic plan
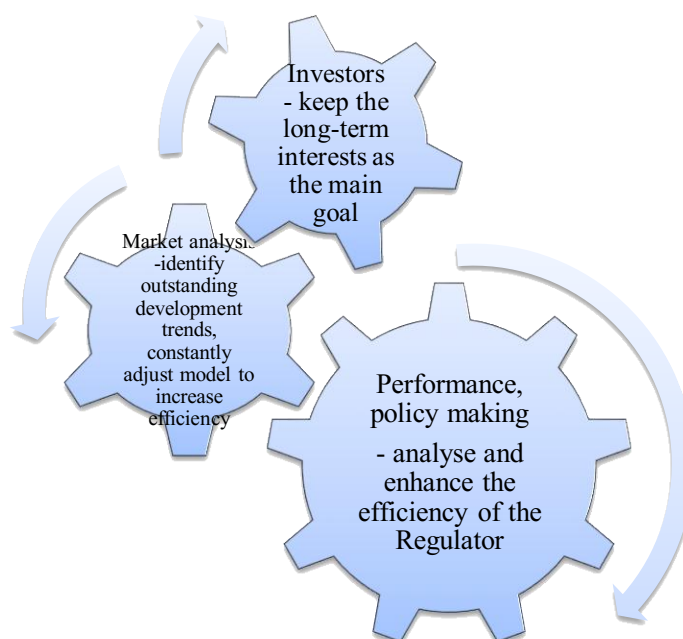
Source: Personal elaboration from SEC.gov

As mentioned in the Figure 4.1 the mechanism of Strategic plan creation should start from analysis of investors and from the level of environment attractiveness, as well as for institutional investors to create the sustainable, financially efficient and well-educated pool of domestic investors. As was mentioned, not only the actual presence of domestic investors is crucial, but the pool of those ones who are financially literate or sophisticated, those understanding risks, able to fend for themselves or even sustain probable financial loss. In general, the market doesn't exist if there are no investors.

The second important factor of the capital markets strategic plan is constant analysis. Here is mentioned the chosen Capital development model's implementation and progress checking. Important to identify outstanding modern development trends (as domestic as international), to make attempts to amplify possibilities to copy adjusted success decisions (catching up effect).

And the last, but not the least is realization of performance control and fulfilment of policy making features as regulator. Here mentioned that the constant analysis of internal processes efficiency, ability to pursue responsibilities, to react in a timely manner by implying policy making, when necessary, is must. However, quality of performance and the depth of analysis are always depending on the quality of human resources. That means, the enhancement of the own human resources financial, managerial, legal literacy at the same time is one of the key elements of Regulator's well-functioning.

After the deep research and analysis of proven sustainable models of capital markets operation the unified model for the capital market development representing capital markets infrastructure can be created. From the general overview of the model, it's easy to see that there are 3 principle, conceptual sectors, from the left to the right: 1-investing sector, which consists of "institutional investors", (taking into account pension funds, insurance companies, mutual funds), "foreign investors" (all certified market players outside the country), "Sovereign funds" (foreign as well as domestic), "private investors", "retail investors". This sector of the CMDModel is dedicated to invest into the market and thus to create the investment flow.

The unified model for the capital market development is presented in the Figure 4.2 below.

Figure 4.2. Unified model for the capital market development

Domestic institutional investors

Foreign investors

Sovereign funds

Private investors

Retail investors

Government Bond Market

Munis

Public sector companies

Private sector companies

Start-ups, R&D

Stock exchange and OTC

Banks

CD

Pool of brokers

Pool of auditors and lawyers

Pool of investment consultuncies

Trustees

Investment flows

Securities flows

Security flow

Investment flow

Source: Personal elaboration from SEC.gov, CMDA.gov.uz

In the center of the model there are main service providers, without which the operation of the capital market would be impossible. Those are the following: "Stock exchange and OTC", "CD", "Pool of auditors and lawyers", "Trustees", "Pool of investment consultancies", "Pool of brokers". In general, we call mentioned organizations as Financial intermediaries, and their main role is in channeling or transferring flows of sources from those who has a surplus to those who needs them in the market, intermediaries simply connect those two mutually benefit, opposite parties. Capital market intermediaries are the experts in different aspects of the capital market, they contribute towards transactions implementation between investors and corporates in the Capital markets charging professional fees for their activity.[49] Since all mentioned intermediaries play an important role in capital market's well operation it's vital to control and establish licensing system for them

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[49] Mayank Manish, Mrs. Archana Goel, Capital market intermediaries, IJESMR ISSN 2349-6193, April, 2017

in the appropriate level to eliminate malpractices and frauds and to ensure the market transparency and reliability. That is one of the reasons why the presence of proper Regulator of the capital market is crucially important.

And the last part consists of government, public and private corporations, in general, all potential seekers of investment for different aims and because of different reasons. In particular here are: "Government Bond Market" (usually bonds issued to cover general federal debt), "Munis" (to fund state public projects, like roads, schools and other types of infrastructure), "Public sector companies", "Private sector companies", "Start-ups, R&D".

The scheme "Infrastructure of Capital markets" shows the idealistic version of capital markets structure, or set of elements and instruments. For sure each model of each country is unique and it's difficult to rely on one particular prototype. The same can be mentioned regarding the level to what extend each element is involved and developed. In the current scheme the number of each element of each side of the scheme is given in random mode just to insert a sense of visual separation of elements related to part of investing institutions, participants and instruments of implementation of capital markets operation, and finally institutions and entities which are potential security issuers.

International organizations as IFC, WB Group, SEC have lots of tools in their methodologies aiming create the base to proper CMD model development, they submit initiatives to fulfil the strategic plan of the Regulator, to be able to respond and to mitigate unpredictable changes in the current accent are the following. In general, mentioned considered as a constant work of each type of Capital Market regulator:

- Awareness of infrastructure used to reach the capital markets by retail investors and institutional ones. That is helping to fulfil adequate or adjust policy initiatives;

- Educational, consulting initiatives development. Those have to be reflective for all types of market players;

Administrative programs ought to reflect the real market situation that not all financial specialists, businesses, and securities markets are the same. Through this activity to grow outreach to market players to superior empower the organization to listen their different points of view, and to guarantee provision of convenient and pertinent direction.

- Seek after examination, enforcement activities aiming at recognizing of wrongdoing that impacts retail investors; Provide investors with the ability to get timely, accurate, structured information, so that to provide a relevant level of transparency;

- Constantly create ways provoking growth of the range and number of cost-effective and long-term options, supporting increase of the number of listed companies;

The last initiative aims to draw attention on encouraging vibrant, dynamic public security market, which would offer growing range of investment opportunities and choices, providing investors with an options fitting to their individual budgetary objectives.

- Attract additional financial resources to the development of the capital market system;

- Increase the sector's contribution to the GDP (the level of market capitalization);

- Searching for perspective, fulfil the possible and deepen the existing economic integration into foreign markets.

After the presentation of the model, overview if strategic initiatives and activities to implement the appropriate capital markets system operation, it's the time to make a comparing parallel with one of emerging market examples. That example, as was mentioned, is Uzbekistan.

The analysis of the Capital Market of Uzbekistan

When analyzing the current situation of the Capital Markets of the Republic of Uzbekistan we can detect the following:

From the side of Investors: Foreign investors, in particular foreign portfolio investors, Sovereign funds (domestic and foreign) as well as Retail investors don't exist at all, when other 2 are required to be improved. In the center complex of elements, apart from auditors, lawyers and investment consultants, agents, which assumed as enough developed, all parts are in conditions to be developed. In the right-hand set of elements there are 2 still not existing types of issuers as Start-ups or R&D and Munis or municipal bond issuers; when other 3, again, are required to be improved.

Entry guarantees high liquidity of traded shares, which will significantly broaden the base of international institutional investors

Further focusing on the development of the Capital market of the Republic of Uzbekistan we have to pay attention to the development of the public securities secondary market without any limitations what can further serve as the ground for establishment of a firm market base as well as corporate bond market development; to find ways of free float increase.

4.2. A model for capital market diagnostic

Step 1. Starting from the overview of the scheme used for the diagnostic of the Capital market of the Republic of Uzbekistan where both inductive and deductive methods or approaches to analysis were used. As for the deduction approach, the probability of pattern occurring is under the focus, since there are plenty of success models, hundreds of cases of successfully implemented activities, so the identification of patterns could be the way of logically predictable way of development. So, the secondary sources information is analyzed by the deductive approach. At the same time, the induction approach, applying to the information given by expert estimation, give as opportunity to try to adjust new tools, justify the introduction of new financial instruments or conduct the analysis.

Figure 4.3. Methodological overview of the model development and refinement
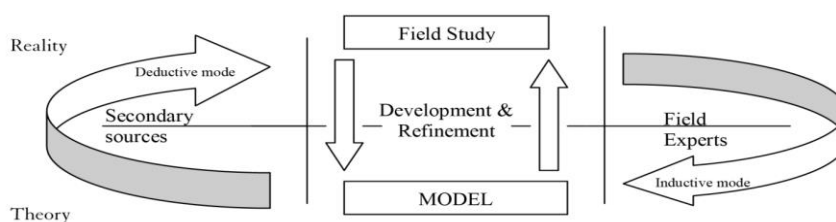
Source: Babbie, The practice of social research, 9th ed., Wadsworth Thomson Learning, Belmont, 2001

Implementation

To build and diagnose the model which are the fundamental activities the theoretical pattern of all processes has to be clarified. First of all, the sources should be identified: the proved and authoritative secondary sources, and that of the field of experts (internal, external).

The analysis will always start form data collection, so the main trustable sources (both from the Field of Experts and Secondary sources): informational sources, researching reports, instructions and guidelines provided by the authoritative international organizations (detailly explained in the Chapters 2.2 and 2.3) for the current research are the WB group, IFC, OECD, SEC, FINRA, stock

exchanges of countries under analysis, their financial institutions, central depositories etc; information from the appropriate, authoritative source of the country under investigation (information on capital markets regulators is given in the Chapter 1.1), in case of Uzbekistan is CMDA- Capital market development agency of the Republic of Uzbekistan, actual, registered and operating market players of the capital market of the country, licensed experts.

Step 2: Supporting factor. The second step leads us to the analysis of the external environment that are – investment opportunities, capital availability, and macro environment.

Investment opportunities consider financial products and underlying assets in the capital market – that stands for listed companies and their shares, bonds and other securities (corporate and state). This indicator describes availability, volume of the listed companies' securities, liquidity of the country, diversity of government bonds.

The next supporting factor is capital availability. That indicator describes the level of investment opportunities requirements within the capital market both from domestic and foreign sources. Moreover, the willingness of investors to invest capital in the local capital market.

The next factor is macroenvironment and it shows the possible circumstance which indirectly impact the capital market development or financial development of the country in general. Worth mentioning in this context, there is a difference between a capital market, that per definition involves long-term liabilities and therefore is dependent on a level of stability, and for example a currency or money market with shorter-term assets.

Suggested range of evaluation is: Very low, Low, Average, High and Very high.

Implementation

If applying step 2 to the current example, the following data and conclusions could be presented: by 2019, in Uzbekistan's market were108 public companies (132 in 2017), listed on the stock exchange (TSE- Tashkent stock exchange). Market capitalization achieved 9.4% to GDP in comparison to its 2018 level of 5.9%, transactions in the stock market are less than 3% of total equity turnover in the economy, there are only 23 firms which equities are regularly in trade, there are bank shares prevail. Still market offer some attractive for investor equities, trading at around 3 to 5 times price-to-earnings, complementing with high dividend yields. Average daily turnover (excluding banks) was less than $100,000. Shares with the total amount of $300 million (what is

less than 10%), were in free float, with $3 billion of the total market capitalization. In 2019 there are 604 joint-stock companies in total. To the end of 2019 there were only nine investment funds, 45 investment consultants, the same number of brokers, and asset managers only 34. Investment opportunities of the country can be estimated as Low.

The level of capital availability in the market can be estimated according to the information provided by the stock exchange, having 604 listed companies the securities of the main part of public companies are not in an active trade, there are only 23 firms which equities are regularly in trade, there are bank shares prevail. Moreover, let's mention the fact that the banking sector is developing rapidly (Figure 4.4) $29.6 bn to capital market's $4.8 bn and free-float-$ 0.2bn, despite the rates of loans which are huge for creditors more than 23%, and free-float with its less than 1 % in comparison to the banking sector's size can be considered as likely existing. Taking into account the huge difference between 2 alternatives to some extend and aspects sectors, the factor of capital availability could be estimated as High.

And the last factor can be estimated by the mentioned government reforms and changes:

1) Foundation of the Capital markets supervisor and regulator the CMDA by Presidential Order #5630 dated 14 January 2019[50];

2) Established an Intragovernmental Coordination Council for capital markets reforms[51];

3) Established a Capital Markets Development Fund, 4.6bn UZS donated from the government of Uzbekistan, in order to support financially the reforms [52];

4) Established cooperation with IFIs, there are several agreements with international regulators on technical and financial support[53];

5) Regulatory framework improvement what can be proved by the Rule of Law Index improvement, it achieved the greatest improvement among the (CIS) countries (Table 4.5). The country has improved its "Absence of corruption" component by 6 points changing the score from 95 in 2019 to 89 in 2020. Several necessary fundamentals have to be properly developed for the relevant capital market operation as security and rule of law. If these basic conditions do not exist, it is hard to persuade investors to (voluntarily) supply

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[50] CMDA.gov.uz
[51] Ibid
[52] Ibid
[53] Ibid

funds when a promise of future returns cannot be backed up by a reliable legal system, or when the investors do not trust that they will be allowed to keep or benefit from such returns.

Figure 4.4. Financial architecture of Uzbekistan
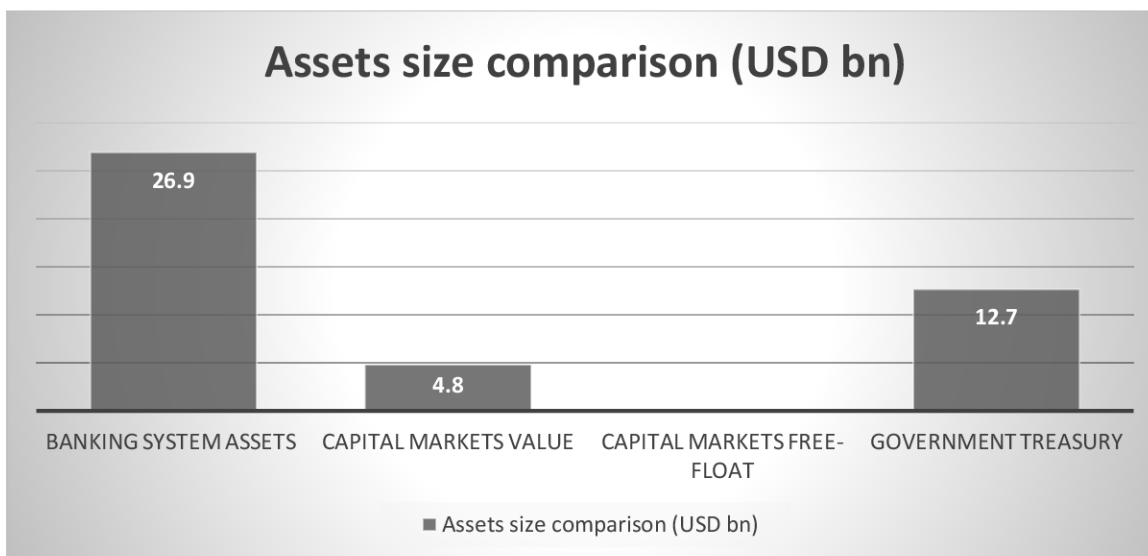
Source: Personal elaboration from CMDA

Table 4.5. Rule of Law Index within CIS Countries

No	Country	2019 (126 countries)		2020 (128 countries)		Change in rank (↑↓)
		score	global rank	score	global rank	
1	Kazakhstan	0.52	65	0.52	62	↑3
2	Belarus	0.52	66	0.51	68	↓2
3	Moldova	0.49	83	0.50	82	↑1
4	Kyrgyzstan	0.48	85	0.48	87	↓2
5	Russia	0.47	88	0.47	94	↓6
6	Uzbekistan	0.46	94	0.47	92	↑4 *

Source: worldjusticeproject.org, WJP Rule of Law Index 2020

6) Uzbekistan has made significant economic improvement within the last 5 years, its World Bank's Doing Business ratings were risen up from 141 to 69 (Figure 4.5). Especially

relevant for the current research indicator "Investor protection", which was improved to the 70-th position.

Figure 4.5. Uzbekistan in Doing Business Index 2015-2020

Sources: Infographics Uzbekistan in Doing Business Index 2015-2020, review.uz, 29.03.2021

7) The World bank prognosing the slowly recovery of Uzbekistan's economy (Table 4.6). In comparison to the fastest rates of economies: USA by 6.8% and China (the fastest) by 8.5% in 2021.

Table 4.6. Forecasting for Uzbekistan

Annually change %	2018	2019	2020	2021	2022	2023
Uzbekistan	5.4	5.8	1.6	4.8	5.5	5.8

Source: Personal elaboration from WB

8) The Central Bank of the Republic of Uzbekistan in 2017 provided the legal basis for repatriation of capital earnings.

In conclusion, mentioning all above stated positive changes, the macroenvironment can be evaluated as an Average, since changes of regulation regarding Capital markets should still be done.

Step 3. Analysis of conditions for proper capital market creation/ existence:

1) Regulatory framework related to capital markets;

2) Population (in particular, financial literacy);

3) Infrastructure of the capital market.

Implementation:

1) The characteristic of the strong legislative correlation between all financial institutions can be estimated by observing over 50 legal acts impacting capital markets connecting CMDA with the Ministry of Finance, the Central Bank of Uzbekistan, Ministry of Justice, Ministry of Economy, State Tax Committee etc. They are Law on Joint-Stock companies and protection stockholders' rights, Law on securities market, Presidential Order #5630 dated 14.01.2019 and Presidential Decree #4127 dated 24.01.2019 regarding the creation and functioning of the CM regulator; Resolution of President on measures for further develop Securities Market, 27.09.2006 #RP-475, Decree of President on measures for implementation of modern corporate governance practices in JSC, 24.04.2015 # DP-4720, etc. Absence of appropriate and clear Capital Markets Policies and Principles, probably the separate Law. The code of conduct of professional market players is absent. Taking into account the Civil Law system's tendencies, the over regulation is taking place, but, at the same time, the related ones are likely to be identified.

2) Population diagnostic (level of financial literacy)

How does the financial literacy of the population effect the economy of the country and in particular the capital markets development indicators can be observed by the simple regression model (the creation the data base to use were explained in the Chapter 3), where to estimate the dependency between "Market capitalization share to GDP" dimension, assuming it as Y - depending or target variable, with "Adults who are financially literate (% to the population)" to be an explanatory variable.

Y (*Market capitalization share*) = β0 + β1 (*Adults who are financially literate (% to the population)*) + ξ

Table 4.7. Summary output

Regression Statistics	
Multiple R	0.671376
R Square	0.450746
Adjusted R Square	0.437015
Standard Error	45.8473
Observations	42

ANOVA

	df	SS	MS	F	Significance F
Regression	1	68999.57	68999.57	32.82607	1.13E-06
Residual	40	84078.99	2101.975		
Total	41	153078.6			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-66.7922	22.90938	-2.9155	0.005794	-113.094	-20.4906	-113.094	-20.4906
X Variable 1	2.67519	0.466923	5.729404	1.13E-06	1.731504	3.618877	1.731504	3.618877

Source: Personal elaboration by means of Excel Data Analysis

When to analyzing the value of the R2 (in the Regression statistics Table above) which is almost 0,45 we can state that the more than 45% of changes in the number of Market capitalization share is caused by the number adults who are financially literate, what is significant for the only independent variable.

For the purposes of estimation of the level of population development the Standard & Poor's Ratings Services Global Financial Literacy Survey, which is the world's largest, most comprehensive global measurement of financial literacy. It probes knowledge of four basic financial concepts: risk diversification, inflation, numeracy, and interest compounding. The survey's goal is to provide the most accurate measure of financial literacy around the world. It also aims to provide information to policy makers, regulators, the private sector, and academics to empower them to develop effective financial education policies and programs.

Financial illiteracy is a critical barrier to financial inclusion. Because of a lack of knowledge about finance and financial products, many people are unable to access banking and financial services,

and are therefore kept out of financial markets. Financial literacy is therefore highly important to people's financial well-being and to the overall health of a country's economy.

Without an understanding of basic financial concepts, people are not well equipped to make decisions related to financial management. People who are financially literate have the ability to make informed financial choices regarding saving, investing, borrowing, and more.

Figure 4.6. Financial literacy in several countries
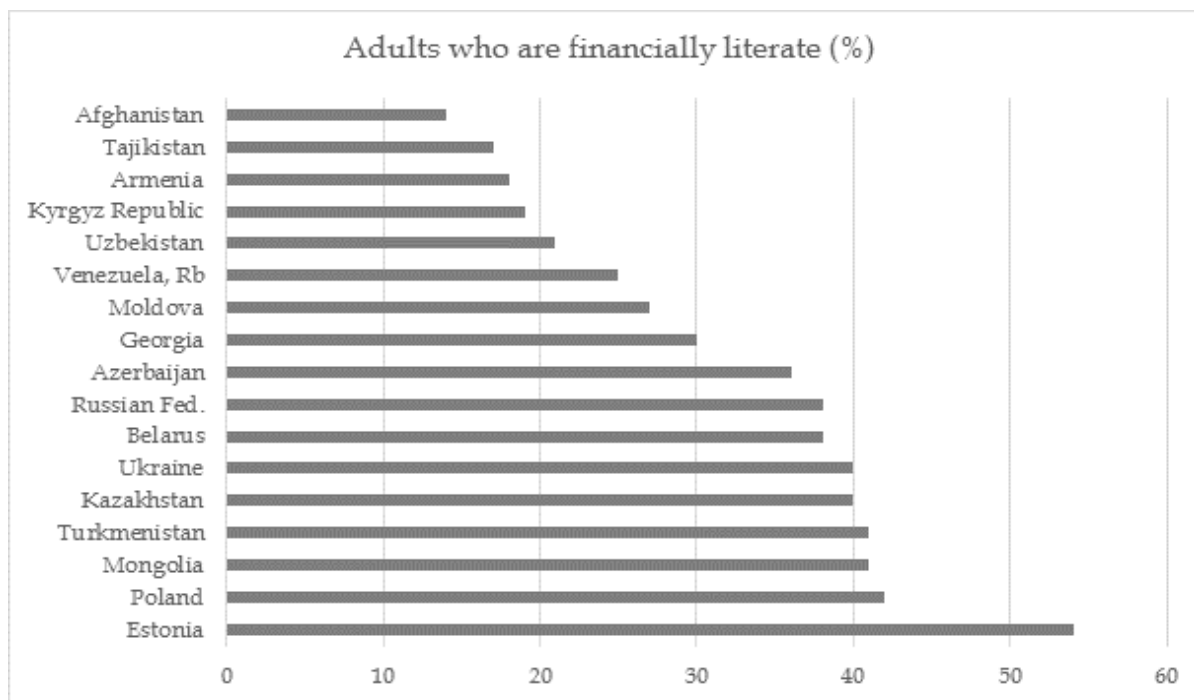
Source: The Standard & Poor's Ratings Services Global Financial Literacy Survey, https://gflec.org/initiatives/sp-global-finlit-survey/

According to the data presented above, it's obvious the population in Uzbekistan has a weak level of financially, which in consequence affected stock market participation. According to the information provided in 2019 there were 21% only of mature population who financially literate, 37% only with the own bank account. There are no programs, classes on personal finance in local schools, colleges or universities. Thus, the basic information on how to save and invest is lack within the mature population, as well as the obvious lack of effecting on the capitalization of the market, or its development.

3) Infrastructure of the capital market.

The Figure 4.7 illustrates the current generalized structure or system of capital markets of the Republic of Uzbekistan. Mainly all relationships between security issuers and investors the pools of which is specific and poorly diversified, there are intermediaries providing the infrastructure of the system: Regulator of the Capital markets is the Capital Market development Agency (CMDA); CMDA is an authorized State body for the regulation of the securities market and lottery activities, as well as for the development of corporate governance; then there are several public entities participating into capital markets like State Assets Management Agency (the State Assets Management Agency of the Republic of Uzbekistan is a government body, through the areas of activity of which is the maintenance of a unified state policy for the management of state assets); one of the key figure in Uzbekistan Capital markets is the financial system regulator – The Central Bank of the republic of Uzbekistan; and the key formator of the legal framework and financial system policy maker is Ministry of finance. Key supporters and providers of infrastructure are OTC - Elsis-Savdo (OTC trading organizer trading system), Republican Stock Exchange-Toshkent, CD- Central Securities Depository. Obviously, there are auditors and lawyers, brokers, consultancies (here can be added that the level of competence of last two mentioned is quite high).

4.2. Necessary conditions/Supporting factors

 After conduct the diagnostic, as for results of its first 3 steps implementation the whole picture of existing challenges for Uzbekistan can be built, those are the points to be taking into account when creating the CMDmodel. Moreover, there was a mini survey conduct on the challenges in the capital market within local capital markets professional participants. The following are major recent incidents and/or Challenges in Securities and Capital Markets:

• Overregulation;

• Excess concentration of shares as State ownership;

• Securities market has not been able to become a real alternative against banks in money accumulation and investment;

Secondary market's weakness with the absence of clear market guidelines, rules, regulation;

• Dependence of the capital markets regulating operations within of between several financial institutions;

Figure 4.7. The capital markets system of the Republic of Uzbekistan

Investors

Issuers

Government

CMDA

State Assets Management Agency- UzSAMA

Central Bank

Ministry of Finance

Information resource center for capital market"

OTC - Elsis-Savdo

CD- Central Securities Depository

Republican Stock Exchange-Toshkent

Pool of auditors and lawyers

Pool of brokers, consultancies

Banks, investment funds
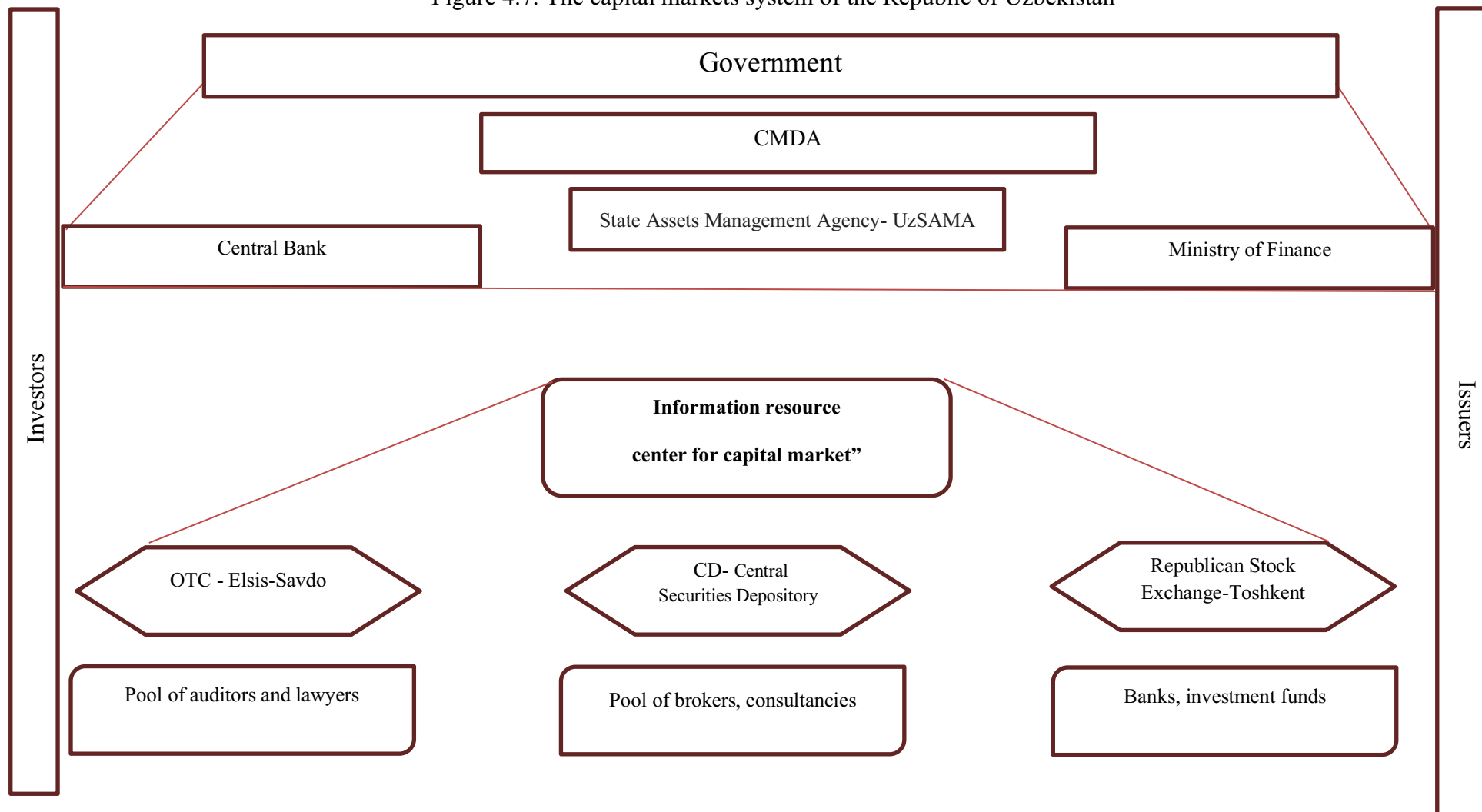
Source: Personal elaboration from CMDA.gov.uz

Specific Challenges in Equity Market:

•   Delay in payment of dividends to minority shareholders;

•   Non-transparent market for different type of investors;

•   Infrastructure modernization for stock selling;

•   Sluggish derivatives market;

Specific Challenges in Bond Market

•   Revitalizing the corporate bond market through simplification the issue process;

•   Infrastructure modernization for bond selling.

Moreover, there is a languish interdependence between the GDP dimensions and the volume of issued local stock which can be observed from the graphical representation. The same tendency of decrease is observed on corporate bonds market.

Figure 4.8. Correlation of GDP to issued stocks
(bn sums)
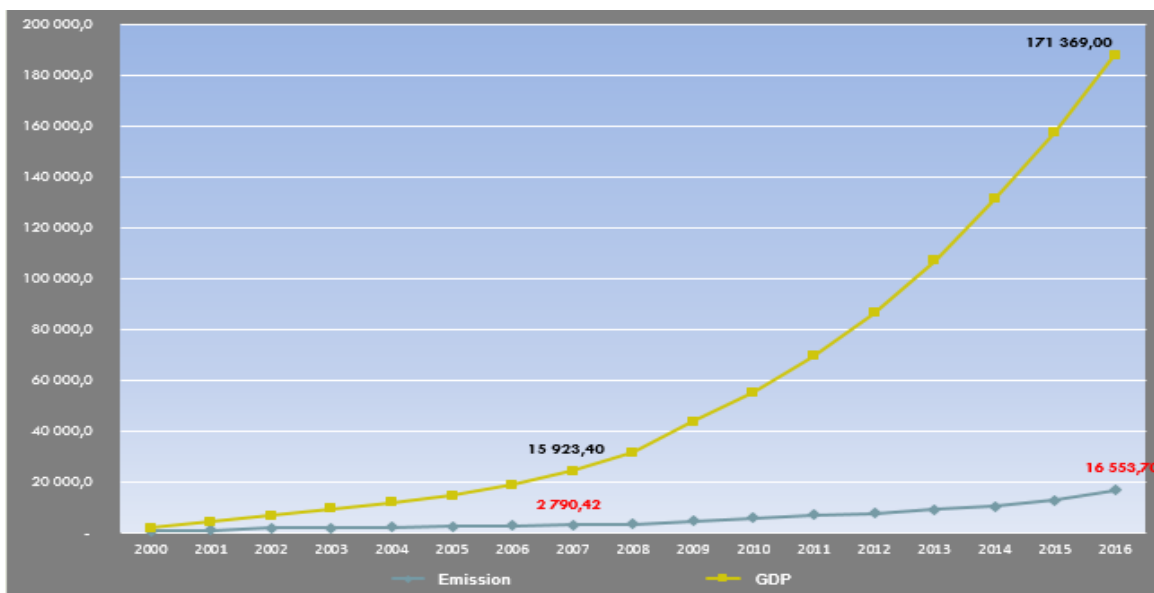
Source: State Assets Management Agency of the Republic of Uzbekistan

Figure 4.9. Dynamics of corporate bonds market
(in mln sums)
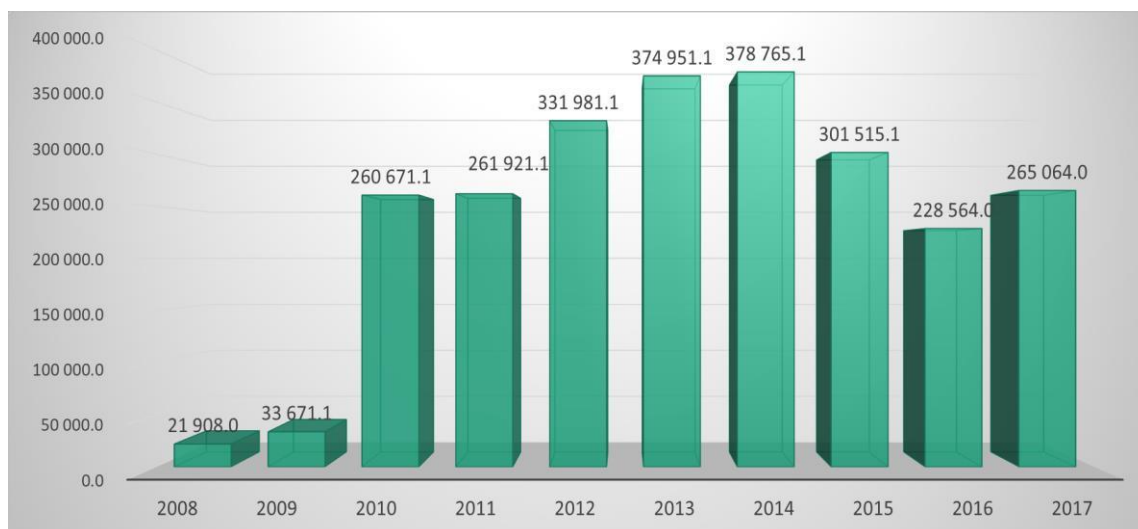
Source: State Assets Management Agency of the Republic of Uzbekistan

In the survey the representatives of the following organizations participated: Central Depository of the Republic of Uzbekistan, investing and broker companies like Portfolio Investments LLC, Avesta Group, RSE "Tashkent", National center training of new markets specialists, professors of Branch of Westminster international university in Tashkent and several others.

The most popular answers regarding challenges market players are facing when operating in the capital market of the Republic of Uzbekistan:

- law level of awareness of the general population about the potential and opportunities of the stock market and absence of assistance in attracting free funds of the population;

- weak level of transparency, the quality of information provided;

- imperfection of state policy in the field of the securities market;

- imperfection of the corporate governance system in joint stock companies;

- imperfection of the system of control and supervision over the activities of insurance market entities;

- imperfection the requirements for automating the processes of insurance activities;

- imperfection of minority investors' protection tools;

- imperfection of listing regulations on RSE;

- lack of Central depository functional tools diversification;

- imperfection of the technological abilities of the market, issues with infostructure;

 - lack of institutional investors and investment professionals;

- low level of financial literacy, low lever trust.

4.4. Summary of the model

Since the module is a bit complicated to be implemented all at one work (supposed to be investigated further within the PhD research), we will focus on some elements of each complex side of the infrastructure. For example, from the left side we would focus on "Sovereign funds (domestic and foreign)" in particular on that expression of it as "crowdfunding". In the middle round of elements, we would choose the transformation related to the "Central Depository", as well as a suggestion of a new type of financial instrument involvement, and programs related to financial literacy development implementation (ecosystem of the model). Finally, from the right side of elements complex we would concentrate our attention on "Start-ups and Development of the Private sector's capitalization".

According to the general model presented on the Figure 4.7 the comprehensive version of capital markets system of the Republic of Uzbekistan is presented on the Figure 4.10. Here the diversification of the market players is suggested, in particular, as an additional object from the part of infrastructure (center) there is a financial center. The idea and analysis of this option is not the subject of the current research, but, since the CMDA has informed that intention of its creation on the territory of the Republic of Uzbekistan officially, even has started research on the Tashkent financial center[54], the allocation of the possible financial center on the current model was suggested. The diversification of the pool of Special infrastructure pool of intermediaries of capital markets could be the consequences of the market development and the financial literacy level of population increase, as well as CMDA's programs on investing attraction fulfillment. As an example, after the first International Forum implementation in 2019 after which one of the most significant results the creation of mutual fund between American investment fund and local Stock

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[54] CMDA.gov.uz

Exchange Association and local investment fund with an initial capital of $5 mln directed to investments into the capital market of Uzbekistan[55]. The diversification from the side of Securities issuers is regarding the "Start-ups", and "Administrative, territorial bodies". In accordance to the lack of municipal bonds, as well as absence of securities issued by Start-up, the current options are mentioned in the model. Again, the issue of the ways of their development is out of the scope of the current research. As of the CD, the detailed information on its role transformation, diversification is presented in the next chapter.

Necessary conditions for the ecosystem

Summarizing the necessary activities, focuses: Legislative changes, Establishing rules and procedures in accordance with international standards (SEC and OECD corporate governance rules), establishing transparency on the possible protection of the rights of international capital market participants; Changes in the functions of local capital market infrastructure participants (changes in the status of CMDA, changes of Central depository features); attracting international banks; obtaining positive results on international rankings or indices.

Supporting factors Implementation and Expected results

Implementation: Creation of the infrastructure and ecosystem for the crowdfunding, SUKUK financial certificates involvement.

Expected results: Being a secular state Uzbekistan has 96.5 % of Muslim population. The principals of Sukuk, mentioned in the Chapter 3 could be more attractive to the local households then other existing traditional ones. Moreover, the existence of such instruments is tending to increase foreign investors with similar religious beliefs. Consequently, this activity would lead to market volume increase.

At the present time there are only 2 types of securities on the market: equity in the form of shares, debt, in the form of corporate bonds.

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[55] CMDA.gov.uz

Figure 4.10. The comprehensive version of capital markets system of the Republic of Uzbekistan
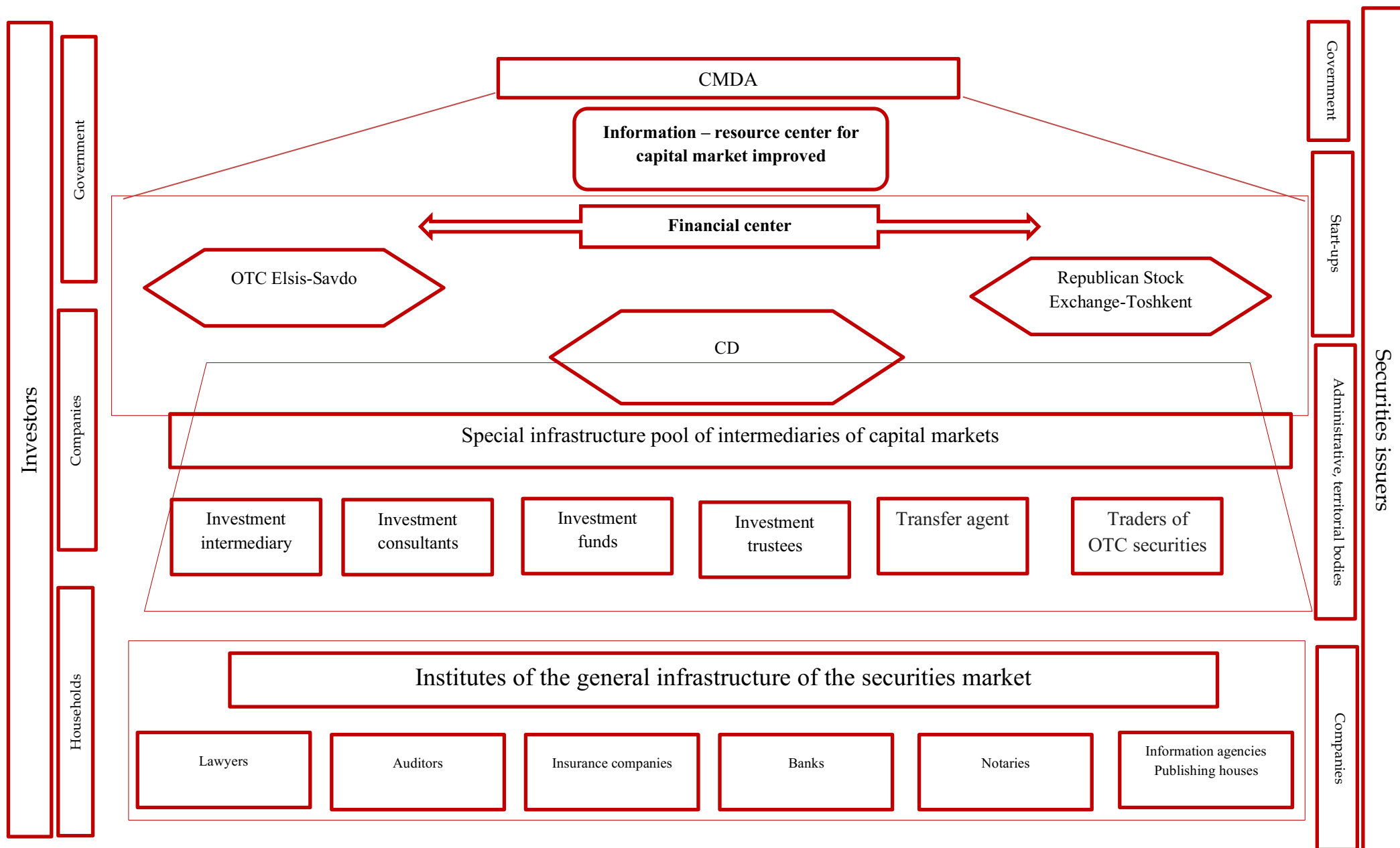
Source: Elaboration from CMDA.gov.uz, Kobilov, B and Heese J from HBS

Implementation: Activities on capitalization support program for local companies through crowdfunding (detailly described in Chapter 3.3).

As was mentioned earlier, from the right side of the model, from the side of elements complex we would concentrate our attention on "Start-ups and Development of the Private sector's capitalization". According to characteristics of Uzbekistan's population, the suggestion in the choice could be the platform with sharia compliance. One of the applicable methods for realization is the usage of the "Beehive", Leading Middle East Fintech Platform. This platform is the first regulated Platform in the Middle East, is providing services on sharia (Certified Sharia Platform) and conventional financing. It gained acknowledgement: Fintech Innovation of the year 2017, Disruptive Entrepreneur 2016, Entrepreneur of the year 2015 and 2016, Start-up of the year 2015. Beehive sources and credit assesses SMEs that require debt finance, then provides the platform over which institutions and individuals choose and lend directly to the SMEs (Figure 4.11). During 5 years of operation, it gains the significant results, with the size of the fund of $ 60mln, reached 12% of gross return, served to more than 300 businesses and with level of NPLs (Non- Performing Loans) less than 1%, with the level of written finance in 2018 more than AED 30 mln (or more than $ 8 mln).

Figure 4.11. Beehive's operation

Investors

SMEs

Source: Beehive, Connecting for growth, DFCA 2018

Figure 4.12. Finance Written
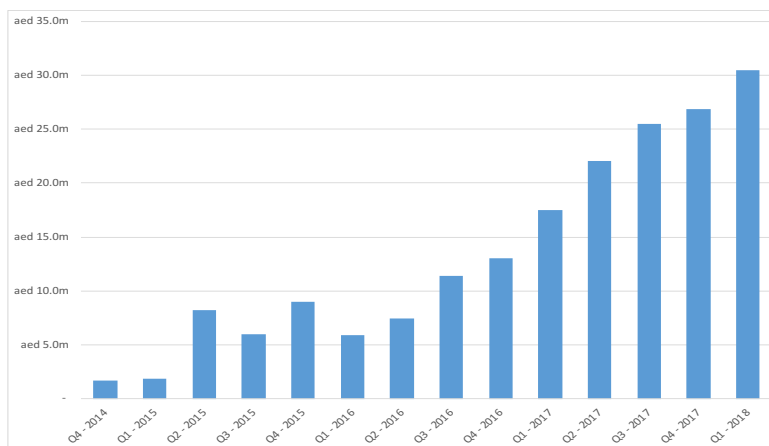
Source: Beehive, Connecting for growth, DFCA 2018

The subject to a corresponding change in legislation (as was mentioned earlier), the implementation of programs to increase the financial literacy of the population, the following positive effects are possible.

Expected results: attracting free funds of the population to the economy, activating the secondary securities market, strengthening the SME sector, increasing the well-being of citizens through participation in the growth of capitalization of the national economy.

Implementation: Transformation of the current infrastructure.

Expected results: Provision with an opportunity for investment funds and custodians to open securities and cash accounts with the central depository. Possibility to establish mutually beneficial relationships with two principal greatest securities clearing houses in the Eurozone – Euroclear, Clearstream. Euroclear verifies data provided by market mediators, involved in a securities transaction, it verifies the settlement of equities and bonds transacted on the European exchanges, it clears and settles securities trades; is functioning as a central securities depository, here it acts as a custodian as well for major financial institutions involved; at the same time, it handles orders in derivatives and fixed income securities. It's a great opportunity to increase possibilities, broaden the market. That would be infrastructural decision for the support of submission of Uzbek issuers' corporate securities to foreign markets and the possibility of foreign securities entering the local stock market.

Implementation: Development and introduction of the law "On the capital market" and the law "On the Agency for the Development of the Capital Market of the Republic of Uzbekistan" (on the basis of international legal practice).

Expected results: Clear rules for all market participants (including foreign ones) / reliable protection of investors' rights; Inclusion in international indices, international recognition achievement; Joining international depositories for the mutual opening of sites; Increasing the level of protection of minority shareholders.

Implementation: The strategic plans could be framed by the restrictions of the international rating systems.

To be included in the rating, you must have 2 listed companies that meet the following criteria: Market capitalization of USD 776 million; Amount of placement USD 61 million; The liquidity of the placement is 2.5% of the average annual indicator of traded shares.

Expected results: The mentioned goal achievement would provide the entry into the international raking list. Index guarantees high liquidity of traded shares, which will significantly expand the base of international institutional investors.

Implementation: Program of overcoming the changes in the requirements for listed companies:

    1) the presence of a remuneration committee on the supervisory board
    2) the presence of a committee of minority shareholders on the supervisory board
    3) provision of a corporate annual report, including in English (Annual report) to premium categories.

Expected results: The increase of level of transparency and availability of information to the foreign investors, audition companies, rating agencies. The Annual Report is a comprehensive report on the activities of a company for the previous year. Annual reports are intended to provide shareholders and other interested parties with information on the company's activities and financial results. Most jurisdictions require companies to prepare and disclose annual reports, and many require that the annual report be registered with the company register. Companies listed on the stock exchange are also required to report at more frequent intervals (depending on the rules of participation in the exchange).

A typical annual report consists of the following parts:

- General corporate information,

- Operational and financial overview,

- Director's report,

- Information on corporate governance,

- Statement by Chairs,

- Audit report,

- Financial statements, including balance sheet, income statement, statement of changes in equity, statement of cash flows,

- Notes to the financial statements,

- Accounting policy

- Other benefits

Moreover, companies that have adopted the International Accounting Standards (IAS) have been able to attract a significantly broader pool of foreign investors by reducing the cost of obtaining and processing information, as well as the fact that firms have achieved a reduction in the cost of capital.

The role of the remuneration committee is great in the foreign corporate governance practice, it supposed existence of an appropriate remuneration policy that engages and motivates executives to achieve the long-term interests of shareholders. To be effective, the committee needs to define the overall policy of the organization for remuneration of key management personnel (managers and directors) and specific compensation packages for each executive director.

Implementation: Attraction of KRX (Korea Stock Exchange) as a strategic investor with a controlling stake in the RSE "Toshkent".

Expected results: A global brand, modern trading rules, financial investments and know-how in the market infrastructure.

Implementation: The programs on financial literacy development.

Expected results: Positive effect on the Market turnover, increase of capitalization level.

Implementation: Provision of the attractive environment for Institutional investors

Expected results: Such institutional investors as Pension funds, Insurance companies, etc. increase a volume of Domestic investors. Is one of the methods of an effective mechanism for transforming free savings into highly profitable investment instruments creation. The huge role plays pension system in the countries concentration of the capital. Pension savings are the long-term, most expensive activities in each individual's life. Consequently, pension funds (state or private) posses' great impact on capital availability in the economy. Funded systems stimulate the capital markets, they boost capital seeking investments, and potentially they are able to contribute significant impact on the activity of the local capital market.

4.5. Model implementation

The model is supposed to be implemented by the regulator on behalf of the government, by collaboration with other financial institutions and banking sector. Thus, strengthening the relevant capital market's system, enhancement of the risk management of the Capital Markets. The model will help to support the growth of the capital Markets development, to develop the ground financial sector and in the Emerging Markets. The model suggests simultaneous improvement of the ecosystem by building capacity of the market players by means of the proposals of financial literacy development activities.

1. The great positive step from the side of CDMA regarding mention issue is identified: there were memorandum of cooperation with the Republican School of Business and Management in Uzbekistan signed, the main purpose is designing and fulfillment of financial literacy programs[56]. The main purpose of the memorandum is the Capital markets academy creation.

At the same time, the spin-offs on the basis of institutions could be created. The positive outcomes are explained in the Chapter 2.3.

2. The diversification of the central depository. The central depository plays one of the main roles in well-functioning of the capital market system, is one of the core elements of its infrastructure. At the present time the structure of the clients and participants of the Central Securities Depository of Uzbekistan is in the Figure 4.11.

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[56] "Подписан Меморандум о сотрудничестве между РВШБУ и Агентством по развитию рынка капитала Республики Узбекистан," Republican Higher Business School of Uzbekistan Website, May 12, 2019 https://rgsbm.uz/ru/news/podpisan-memorandum-o-sotrudnichestve-mezhdu-rvshbu-i-agentsvom-po-razvitiju-rynka-kapitala-respubliki-uzbekistan

Being the key element to support the development of the Capital Markets, CSD of Uzbekistan is quite underdeveloped. Below the Table 4.8, Appendix 3, show the comparison with the foreign depository systems. Thus, CSD doesn't offer service of corporate actions in relation to international standards. Consequently, the establishment of correspondent relations with central depositories of other countries is impossible on the current level.

Moreover, the CSD could serve as a problem solver for the lack of transparency and increase of trust when shareholders meetings implementations as well as when accounting the results of voting. The system works principally easy, but the basis and outcome for all participants are significant. As an information keeper, CSD could offer the platform of online participation on meetings and online voting. Since, the service is going to be provided by the authoritative unbiased entity, which possess information on all shareholders and could identify them, the level of trust from the side of minorities would increase.

Expected results: a) For shareholders: participation in the meeting, regardless of the location of the shareholder and the place of the general meeting, lack of expenses, reduction of voting errors. b) For the issuer: acceleration of the processing and counting of votes, information on the voting process in real time, reduction of administrative costs, smooth voting with more than 500 shareholders, transparency of voting for controlling bodies, increasing the level of corporate governance and investment attractiveness.

Figure 4.11. clients and participants of the CSD
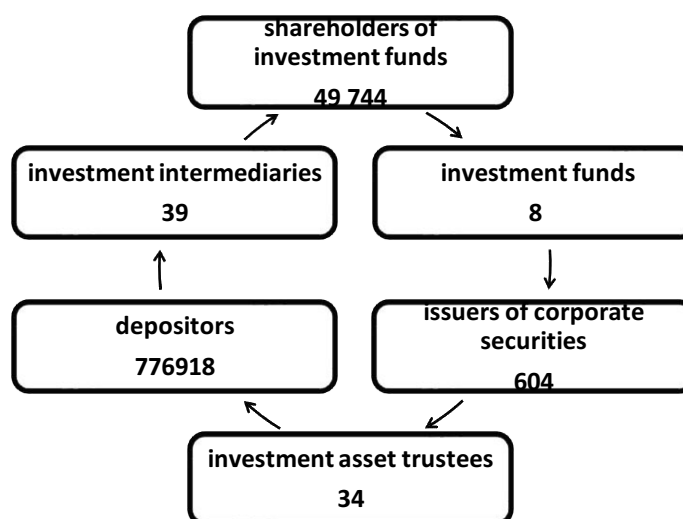
Source: Personal elaboration from the state enterprise "Central securities depository" deponent.uz

For the state: improving the quality of corporate governance, investment attractiveness of the stock market.

Table 4.8. Comparison with the foreign depository systems

	Foreign depository systems (Europe, South Korea, Russia, Kazakhstan)	CSD of Uzbekistan
Custody For Shareholders, for clients	+	+
For Nominee shareholders- residents: - Investment intermediaries; - Custodians	+ +	+ -
For Nominee shareholders- nonresidents	+	-
Corporate activities Securities settlement and Payment of nominal value on repayment of financial instruments	+ +	Partially -
Settlement of transactions That on securities That on money	+ +	+ -

Source: Personal elaboration from the state enterprise "Central securities depository" deponent.uz, Appendix 3, Table 3

Figure 4.12. CSD's corporate activities service expansion
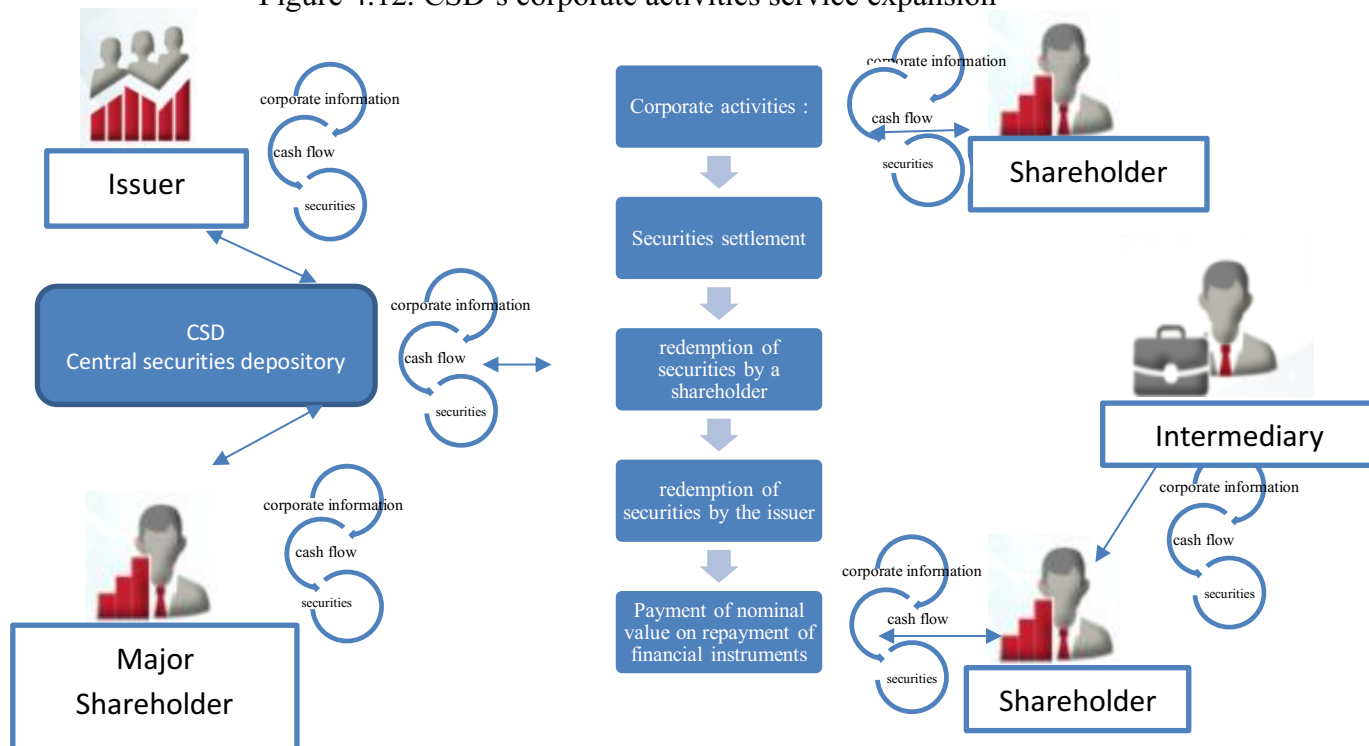
Source: Personal elaboration from the state enterprise "Central securities depository" deponent.uz

With the intention of the corporate activities service expansion, the proposed scheme of CSD's operation with the adjustment of underdevelopment factors identified in the Table 4.8 (created on the basis of Appendix 3, Table 3) is presented below in the Figure 4.12.

Expected results: As the result of the expansion of the corporate activities service of the CSD would be: the establishment of correspondent relations, entry of Uzbek issuers to world capital markets, implementation of corporate activities in connection with international standards, integration into international structures of the financial market, establishment of correspondent relations with central depositories of foreign countries, separation of correspondent relations carried out in the capital market from the banking system.

Furthermore, having the current tendencies of Capital markets development and forecasts, made by CMDA, the forecast with some additional degree of facilitation is considered to be justifiable.

Table 4.9. Possible dimensions

	Inscription	2020	2021	2022	2023	2024
1	Free-float	0.65% GDP 362 Mn	1.4% GDP 761 Mn	2.0% GDP 1,199 Mn	2.7% GDP 1,677 Mn	3.5% GDP 2,235 Mn
2	AuM - Asset under Management Local Institutional Investors	USD 40 Mn 63,700	USD 96 Mn 145,000	USD 205 Mn 293,000	USD 320 Mn 437,000	USD 450 Mn 584,000
3	AuM Local Retail Investors	USD 201 Mn 637,000	USD 478 Mn 1,435,000	USD 610 Mn 1,750,000	USD 744 Mn 2,030,000	USD 893 Mn 2,330,000
4	Liquidity in the equity market	0.5% ATVR	1% ATVR	Premium secr. trading daily 3% ATVR	11% ATVR	16% ATVR

Source: Personal elaboration from CMDA 2020 – 2025 (ATVR/ Traded Value Ratio Annual (measure velocity))

The general 5 years goal for the CMDA from the moment of its establishment was the following: increase in market capitalization, Free float at the level of 10% of GDP, or 60 tln sums or $ 6 bn US 33% by means of government bonds, company shares, corporate bonds, planned to attract 2.5 million local investors (expected investment 6% savings). The current research showed that the stated goals are likely to be an overestimation, since the huge number of underdevelopments all over the local capital market's system was identified.

5. Conclusions

In the current work the obviousness of beneficial factors for the capital markets development in the countries with emerging markets, particularly in Uzbekistan, were additionally approved. The presence of modern possibilities, mentioning the catching up process, and successful financial sector development patterns which are already exist and proved by other more developed countries, as well as patterns on development of capital markets, and, in addition, diversified data base of international organizations' experience provide the huge source of methodological material on the basis of which the adjusted model was created. According to professional estimation, the economy of Uzbekistan possesses key factors to boost the economy development by means of comprehensive capital market development model. Moreover, it was identified that with quite developed banking system, it's huge share in the financial assets of the country, taking into account the high rates of loans 23% average, with only 0.15% of the shareholders to the total population, with all investigated factors mentioned in the paper, there are favorable grounds in capital market development of the Republic of Uzbekistan.

In summary, several conclusions can be done: there is no the unified pattern of the capital development model, it's impossible just copy the one successfully implemented in another country, each of them has unique structure, main focus aspects etc., nonetheless, there are some common benchmarks, thanks to international organizations, on the basis of which and together with the identification of the preconditions, were done the adjustments of the model. The following factors were taking into consideration and were analyzed: from the side of important macroeconomic preconditional aspects GDP growth, the population size, the size of the government's debt, Competitive index, financial markets preconditional aspects as for Financial development index, Easy of doing business index, market capitalization share to GDP, Score-Paying taxes, Score-Protecting minority investors, institutional preconditional aspects like the Rule of law index, regulatory framework, Freedom of economy, Adults who are financially literate (% of population).

As a conclusion, the capital market development model (CMD model) with adjustments, suggestions, expected results explanations was created and described. Moreover, there were offered several examples with detailed implementation of mentioned factors of the CMD model. According to the current level of the financial system of Uzbekistan, the focus of the CMD model

was directed on 1- legislation adjustment, 2- financial literacy of population increase, 3- diversification of the existing financial instruments with sukuk, and 4- improvement of the infrastructure with crowdfunding platform (the particular example was offered), with diversification of the CSD functionality as on the main parts of the market infrastructure, 5- increase of capital markets transparency, 6- protection of minority investors. Furthermore, the suggested transformations on the mentioned legislation adjustments, involvement of new financial instruments (in particular sukuk), and introduction of crowdfunding, as well as increase of capital markets transparency is of the greatest interest on the current topic, which could be deeply investigated in future.

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Appendix 1

Table 1. Countries analysis list

	Economy	Freedom of economy	GDP (US $, mln)	Financial development index	Debt % to GDP	Adults who are financially literate (%)	Score-Protecting minority investors	Score-Paying taxes	Competitive index	Ease of doing business score	Population	Regulatory framework[57]	Market capitalization share to GDP
1	Armenia	71.90	12251.00	0.26	69.88	18.00	40.00	74.00	61.30	73.20	2963243.00	0.00	34.90
2	Austria	73.90	481796.00	0.65	87.17	53.00	70.00	83.50	76.60	78.70	9006398.00	0.00	16931.10
3	Belarus	61.00	60725.00	0.17	45.72	38.00	60.00	70.70	0.00	74.40	9449323.00	0.00	2.60
4	Belgium	70.10	578996.00	0.65	115.86	55.00	68.00	77.50	76.40	74.70	11589623.00	0.00	67.80
5	Bulgaria	70.40	77782.00	0.38	25.00	35.00	74.00	72.00	64.90	71.80	6948445.00	0.00	23.30
6	Cada	77.90	1883487.00	0.90	117.84	68.00	84.00	88.10	79.60	79.70	37742154.00	1.00	154.20
7	Chile	75.20	307938.00	0.49	32.54	41.00	66.00	75.30	70.50	72.30	19116201.00	0.00	66.20
8	Croatia	63.60	65217.00	0.49	88.70	44.00	70.00	81.80	61.90	73.00	4105267.00	0.00	37.10
9	Cyprus	71.40	26479.00	0.55	118.20	35.00	76.00	80.80	66.40	72.80	1207359.00	1.00	7.80
10	Czech Republic	73.80	276109.00	0.48	38.10	58.00	62.00	81.40	70.90	76.30	10708981.00	0.00	238.90
11	Denmark	77.80	392570.00	0.65	42.20	71.00	72.00	91.10	81.20	85.20	5792202.00	0.00	162.20
12	Estonia	78.20	35187.00	0.28	18.20	54.00	58.00	89.60	70.90	80.80	1326535.00	0.00	10.40
13	Finland	76.10	300484.00	0.72	69.20	63.00	62.00	90.60	80.20	80.00	5540720.00	0.00	121.90
14	France	65.70	2938271.00	0.79	115.70	52.00	68.00	79.30	78.80	76.80	65273511.00	0.00	106.10
15	Georgia	77.20	16163.00	0.30	63.86	30.00	84.00	89.00	60.60	83.50	3989167.00	0.00	0.10
16	Germany	72.50	4319286.00	0.73	69.80	66.00	62.00	82.10	81.80	79.30	83783942.00	0.00	56.10
17	Hungary	67.20	176543.00	0.41	80.40	54.00	54.00	79.20	65.10	73.20	9660351.00	0.00	16.70
18	Iceland	77.40	24155.00	0.48	61.15	56.00	72.00	84.20	74.70	79.00	341243.00	0.00	51.50
19	Ireland	81.40	476663.00	0.67	59.50	55.00	80.00	94.60	75.10	79.60	4937786.00	1.00	37.80
20	Israel	73.80	446708.00	0.58	59.98	68.00	78.00	80.20	76.70	75.00	8655535.00	1.00	64.80
21	Italy	64.90	2106287.00	0.77	155.80	37.00	66.00	66.30	71.50	73.00	60461826.00	0.00	36.70
22	Japan	74.10	5378136.00	0.89	256.49	43.00	64.00	81.60	82.30	78.00	126476461.00	0.00	128.80
23	Kazakhstan	71.10	187836.00	0.34	27.36	40.00	84.00	78.00	62.90	78.00	18776707.00	0.00	22.40

[57] The dummy variable: 0 stands for Civil Law (or on the basis of the Civil Law), and 1- Common Law

24	Kyrgyz Republic	63.70	7470.00	0.12	73.41	19.00	40.00	51.50	54.00	65.40	6524195.00	0.00	5.50
25	Latvia	72.30	37720.00	0.26	43.50	48.00	68.00	89.70	67.00	80.30	1886198.00	0.00	3.00
26	Lithuania	76.90	62198.00	0.23	47.30	39.00	68.00	88.70	68.40	81.00	2722289.00	0.00	9.10
27	Luxembourg	76.00	84077.00	0.74	24.90	53.00	54.00	87.40	77.00	69.60	625978.00	0.00	62.20
28	Moldova	62.50	11998.00	0.22	39.49	27.00	68.00	84.70	56.70	73.10	4033963.00	0.00	0.00
29	Montenegro	63.40	5651.00	0.00	94.58	48.00	62.00	76.70	60.80	73.70	628066.00	0.00	69.80
30	Netherlands	76.80	1012598.00	0.73	54.50	66.00	58.00	87.60	82.40	76.10	17134872.00	0.00	133.40
31	New Zealand	83.90	243332.00	0.59	41.34	61.00	86.00	91.10	76.70	87.00	4822233.00	1.00	52.10
32	Norway	73.40	444519.00	0.65	41.40	71.00	76.00	84.80	78.10	82.90	5421241.00	0.00	85.70
33	Poland	69.70	642121.00	0.47	57.50	42.00	66.00	76.50	68.90	76.90	37846611.00	0.00	46.00
34	Portugal	67.50	257391.00	0.68	133.60	26.00	62.00	83.70	70.40	76.40	10196709.00	0.00	36.20
35	Romania	69.50	289130.00	0.31	47.30	22.00	62.00	80.30	64.40	72.50	19237691.00	0.00	14.60
36	Russian Federation	61.50	1710734.00	0.49	13.80	38.00	58.00	79.60	66.70	77.40	145934462.00	0.00	34.50
37	Serbia	67.20	61035.00	0.25	58.37	38.00	62.00	74.80	60.90	73.90	8737371.00	0.00	9.60
38	Slovak Republic	66.30	117664.00	0.31	60.60	48.00	56.00	80.60	66.80	75.40	5459642.00	0.00	2.90
39	Slovenia	68.30	59132.00	0.37	80.80	44.00	78.00	83.30	70.20	76.40	2078938.00	0.00	14.90
40	Spain	69.90	1461552.00	0.86	120.00	49.00	70.00	84.60	75.30	77.70	46754778.00	0.00	84.50
41	Sweden	74.70	625948.00	0.77	39.90	71.00	72.00	85.30	81.20	82.00	10099265.00	0.00	177.00
42	Switzerland	81.90	824734.00	0.96	39.22	57.00	50.00	87.70	82.30	76.60	8654622.00	0.00	218.50
43	Tajikistan	55.20	7825.00	0.09	43.13	17.00	40.00	60.90	52.40	55.40	9537645.00	0.00	0.00
44	Turkey	64.00	794530.00	0.53	36.77	24.00	76.00	74.80	62.10	75.30	84339067.00	0.00	35.30
45	Ukraine	56.20	164593.00	0.21	58.12	40.00	66.00	79.40	57.00	69.10	43733762.00	0.00	3.40
46	United Kingdom	78.40	3124650.00	0.90	103.66	67.00	84.00	87.10	81.20	83.60	67886011.00	1.00	102.10
47	United States	74.80	22675271.00	0.90	132.84	57.00	71.60	84.10	83.70	83.60	331002651.00	1.00	147.90
48	Uzbekistan	58.30	61203.00	0.22	42.29	21.00	62.00	76.90	0.00	67.80	33469203.00	0.00	9.40

Appendix 2

Table 2. Countries analysis list shortlisted

	Economy	Freedom of economy	GDP (US $, mln)	Financial development index	Debt % to GDP	Adults who are financially literate (%)	Score-Protecting minority investors	Score-Paying taxes	Competitive index	Ease of doing business score	Population	Regulatory framework[58]	Market capitalization share to GDP
1	Belarus	61.00	60725.00	0.17	45.72	38.00	60.00	70.70	0.00	74.40	9449323.00	0.00	2.60
2	Belgium	70.10	578996.00	0.65	115.86	55.00	68.00	77.50	76.40	74.70	11589623.00	0.00	67.80
3	Bulgaria	70.40	77782.00	0.38	25.00	35.00	74.00	72.00	64.90	71.80	6948445.00	0.00	23.30
4	Cada	77.90	1883487.00	0.90	117.84	68.00	84.00	88.10	79.60	79.70	37742154.00	1.00	154.20
5	Chile	75.20	307938.00	0.49	32.54	41.00	66.00	75.30	70.50	72.30	19116201.00	0.00	66.20
6	Croatia	63.60	65217.00	0.49	88.70	44.00	70.00	81.80	61.90	73.00	4105267.00	0.00	37.10
7	Cyprus	71.40	26479.00	0.55	118.20	35.00	76.00	80.80	66.40	72.80	1207359.00	1.00	7.80
8	Czech Republic	73.80	276109.00	0.48	38.10	58.00	62.00	81.40	70.90	76.30	10708981.00	0.00	238.90
9	Denmark	77.80	392570.00	0.65	42.20	71.00	72.00	91.10	81.20	85.20	5792202.00	0.00	162.20
10	Estonia	78.20	35187.00	0.28	18.20	54.00	58.00	89.60	70.90	80.80	1326535.00	0.00	10.40
11	Finland	76.10	300484.00	0.72	69.20	63.00	62.00	90.60	80.20	80.00	5540720.00	0.00	121.90
12	France	65.70	2938271.00	0.79	115.70	52.00	68.00	79.30	78.80	76.80	65273511.00	0.00	106.10
13	Hungary	67.20	176543.00	0.41	80.40	54.00	54.00	79.20	65.10	73.20	9660351.00	0.00	16.70
14	Iceland	77.40	24155.00	0.48	61.15	56.00	72.00	84.20	74.70	79.00	341243.00	0.00	51.50
15	Ireland	81.40	476663.00	0.67	59.50	55.00	80.00	94.60	75.10	79.60	4937786.00	1.00	37.80
16	Israel	73.80	446708.00	0.58	59.98	68.00	78.00	80.20	76.70	75.00	8655535.00	1.00	64.80
17	Italy	64.90	2106287.00	0.77	155.80	37.00	66.00	66.30	71.50	73.00	60461826.00	0.00	36.70
18	Kazakhstan	71.10	187836.00	0.34	27.36	40.00	84.00	78.00	62.90	78.00	18776707.00	0.00	22.40
19	Kyrgyz Republic	63.70	7470.00	0.12	73.41	19.00	40.00	51.50	54.00	65.40	6524195.00	0.00	5.50
20	Latvia	72.30	37720.00	0.26	43.50	48.00	68.00	89.70	67.00	80.30	1886198.00	0.00	3.00
21	Lithuania	76.90	62198.00	0.23	47.30	39.00	68.00	88.70	68.40	81.00	2722289.00	0.00	9.10
22	Luxembourg	76.00	84077.00	0.74	24.90	53.00	54.00	87.40	77.00	69.60	625978.00	0.00	62.20
23	Moldova	62.50	11998.00	0.22	39.49	27.00	68.00	84.70	56.70	73.10	4033963.00	0.00	0.00

[58] The dummy variable: 0 stands for Civil Law (or on the basis of the Civil Law), and 1- Common Law

24	Montenegro	63.40	5651.00	0.00	94.58	48.00	62.00	76.70	60.80	73.70	628066.00	0.00	69.80
25	Netherlands	76.80	1012598.00	0.73	54.50	66.00	58.00	87.60	82.40	76.10	17134872.00	0.00	133.40
26	New Zealand	83.90	243332.00	0.59	41.34	61.00	86.00	91.10	76.70	87.00	4822233.00	1.00	52.10
27	Norway	73.40	444519.00	0.65	41.40	71.00	76.00	84.80	78.10	82.90	5421241.00	0.00	85.70
28	Poland	69.70	642121.00	0.47	57.50	42.00	66.00	76.50	68.90	76.90	37846611.00	0.00	46.00
29	Portugal	67.50	257391.00	0.68	133.60	26.00	62.00	83.70	70.40	76.40	10196709.00	0.00	36.20
30	Romania	69.50	289130.00	0.31	47.30	22.00	62.00	80.30	64.40	72.50	19237691.00	0.00	14.60
31	Russian Federation	61.50	1710734.00	0.49	13.80	38.00	58.00	79.60	66.70	77.40	145934462.00	0.00	34.50
32	Serbia	67.20	61035.00	0.25	58.37	38.00	62.00	74.80	60.90	73.90	8737371.00	0.00	9.60
33	Slovak Republic	66.30	117664.00	0.31	60.60	48.00	56.00	80.60	66.80	75.40	5459642.00	0.00	2.90
34	Slovenia	68.30	59132.00	0.37	80.80	44.00	78.00	83.30	70.20	76.40	2078938.00	0.00	14.90
35	Spain	69.90	1461552.00	0.86	120.00	49.00	70.00	84.60	75.30	77.70	46754778.00	0.00	84.50
36	Sweden	74.70	625948.00	0.77	39.90	71.00	72.00	85.30	81.20	82.00	10099265.00	0.00	177.00
37	Switzerland	81.90	824734.00	0.96	39.22	57.00	50.00	87.70	82.30	76.60	8654622.00	0.00	218.50
38	Tajikistan	55.20	7825.00	0.09	43.13	17.00	40.00	60.90	52.40	55.40	9537645.00	0.00	0.00
39	Turkey	64.00	794530.00	0.53	36.77	24.00	76.00	74.80	62.10	75.30	84339067.00	0.00	35.30
40	Ukraine	56.20	164593.00	0.21	58.12	40.00	66.00	79.40	57.00	69.10	43733762.00	0.00	3.40
41	United Kingdom	78.40	3124650.00	0.90	103.66	67.00	84.00	87.10	81.20	83.60	67886011.00	1.00	102.10
42	Uzbekistan	58.30	61203.00	0.22	42.29	21.00	62.00	76.90	0.00	67.80	33469203.00	0.00	9.40

Source: Personal elaboration from World Bank Development Research Group, International Monetary Fund, World economic forum, www.heritage.org, countryeconomy.com, CIA.gov the world factbook.

Appendix 3

Table 3. Background information on depositories of some countries of the world

Inscription	USA	South Korea	Russia	Kazakhstan
The official status of the CSD	Depository trust and clearing corporation (DTCC) - DTCC Depository trust and clearing cor provides clearing, settlement and information services on securities, corporate, municipal and government debt commitments The DTC subsidiary provides depository services.	Korea Securities Depository (Korea Securities Depository, KSD) is the central depository of Korea, which provides a wide range of post-trading services to stock market participants.	The non-bank credit organization National Settlement Depository (NSD) is the Central Securities Depository of Russia.	Joint Stock Company "Central Securities Depository" (KACD) - Central Securities Depository KACD is the only organization on the territory of the Republic of Kazakhstan that carries out depository activities. KACD has a license No. 2 to conduct the following banking operations in national and foreign currency dated January 20, 2006, issued by the Agency of the Republic of Kazakhstan on Regulation and Supervision of Financial Market and Financial Organizations: opening and maintaining bank accounts of legal entities; opening and maintaining correspondent accounts of banks and organizations engaged in certain types of banking operations; transfer operations: execution of orders of legal entities for payments and money transfers.
Corporate activities service	DTC is included into the Federal Reserve System of the United States and is a limited purpose trust company under the New York law. The US Central Securities Depository (DTCC), which is the central securities depository, provides settlement services for almost all shares, as well as transactions with	Korea Securities Depository is Korea's Central Securities Depository (CSD) providing centralized custody of securities, wire transfer and settlement of securities transactions. KSD settles on exchange transactions concluded on the Korean stock exchange, as well as over-the-counter transactions in stocks and bonds. Participants open depo accounts with KSD to hold their own and client's	NSD holds a Banking License No. 3294 issued on 04 August 2016 by the Bank of Russia: - Transfers of funds for settlements in financial markets; -Service cash accounts	KACD provides services for opening and maintaining bank accounts intended for settlements on transactions with financial instruments, payment of fees and principal amounts to be paid, as well as money transfers in cases established by the KACD Code of Rules. Nominal holding of securities, opening and maintaining bank

	corporate and municipal debt securities in the United States, institutional transactions, money market instruments and other financial liabilities. Settlement, consolidated process and the final stage of securities trading completes the transfer between the trading parties of ownership of the securities and funds.	securities. KSD members can be brokerage firms, banks, insurance companies, organizations specializing in futures transactions, institutional investors, foreign depositories and other structures admitted to serving in the depository.		accounts, assigning international identifiers to securities, paying agent.
Payment of dividends	Custody services include deposits, withdrawals and a wide range of corporate events such as dividend and interest payments, and corporate reorganizations.	On behalf of depositors, the Korea Securities Depository handles matters such as the exercise of rights in the deposited securities, and on behalf of the issuing companies, acts as their agent in all matters related to securities, such as the issuance of securities and the payment of dividends. KSD provides an easy-to-use payment processing system for transactions such as receiving dividends, par value at redemption and coupon payments. In respect of held KSD shares provides services for corporate actions, including participating in voting at meetings of shareholders, receiving and distributing dividends, exercising the right of a shareholder to demand the buyback of his shares at market value. With regard to bonds held in custody at KSD, the depositary provides services for the receipt and distribution of par value and coupon payments	NSD's dividends are distributed according to the following scheme: Registrars ask NSD how many shares and bonds are kept in private depositories, after which the companies transfer the money to NSD. NSD transfers money to private depositories. They, in turn, withhold personal income tax and transfer payments to the broker. And the broker is already crediting dividends to clients' accounts. NSD provides its depositors with services related to the payment of income on securities, which include: - compilation of a list of securities holders to receive income, redemption amounts and other payments on bonds of Russian issuers, the issue (state registration) of which or the assignment of an identification number to which was carried out before 01.01.2012. - transfer of income from securities to accounts of depositors; -informing depositors about upcoming payments of income,	The Central Securities Depository carries out transfer of money to the account of the holder of the securities; for this, a separate tariffication is established for the transfer of money when paying dividends. KACD is a paying agent of the National Bank, the Ministry of Finance of the Republic of Kazakhstan and local executive bodies of the Republic of Kazakhstan. KACD also carries out money transfers to holders of securities upon payment of remuneration and redemption of securities issued in accordance with the laws of states other than the Republic of Kazakhstan.

			amounts of redemption and other payments; -providing depositors with additional information necessary for calculating tax amounts; - transfer (receipt) of income on securities or funds from redemption of securities (hereinafter - payments) in a currency other than the currency of payment.	
From what year	1973	1974	1996	2005
Regulator	The SEC is the stock market regulator.	FSS - Financial Supervisory Service. The KSD is supervised by the Ministry of Strategy and Finance, the Financial Supervision Commission and the Financial Supervision Service. Republic of Korea.	Central bank. Federal Service for Financial Markets (FFMS).	National Bank of the Republic of Kazakhstan. Agency of the Republic of Kazakhstan for Regulation and Supervision of the Financial Market and Financial Organizations.
Relationship with Clearstream and Euroclear	The Central Securities Depository (DTCC) works closely with the international clearing systems Clearstream and Euroclear.	The depositary offers services for cross-border custody of securities and conducting cross-border settlements in order to assist Korean investors in transactions with foreign securities. KSD has commissioned six global custodians to settle transactions and service income payments on securities on behalf of KSD in various stock markets around the world. KSD works closely with international clearing systems Clearstream and Euroclear.	NSD is a client of Euroclear. NSD offers the following types of settlements through Euroclear and Clearstream: • Settlements with counterparties in Euroclear, Clearstream; • Settlements with counterparties in local markets using NSD accounts with Euroclear, Clearstream	Clearstream is the first international securities depository to open an access channel in Kazakhstan, with Citibank Kazakhstan JSC acting as a custodian bank and a correspondent bank for cash transactions.

Source: Personal elaboration from SEC.gov, ksd.or.kr, nsd.ru, kacd.kz

Appendix 4

Table 4. Correlation Matrix

	Finical development index	Freedom of economy	GDP (US $, mln)	Adults who are financially literate (%)	Score-Protecting minority investors	Score-Paying taxes	Competitive index	Ease of doing business score	Population	Market capitalization share	Debt % to GDP	Regulatory framework
Finical development index	1.00											
Freedom of economy	0.42	1.00										
GDP (US $, mln)	0.64	-0.02	1.00									
Adults who are financially literate (%)	0.55	0.62	0.23	1.00								
Score-Protecting minority investors	0.25	0.29	0.21	0.30	1.00							
Score-Paying taxes	0.38	0.65	0.00	0.63	0.36	1.00						
Competitive index	0.83	0.71	0.43	0.81	0.25	0.63	1.00					
Ease of doing business score	0.35	0.63	0.22	0.63	0.54	0.72	0.62	1.00				
Population	0.21	-0.43	0.70	-0.19	0.05	-0.21	-0.07	-0.01	1.00			
Market capitalization share	0.68	0.47	0.34	0.64	0.02	0.33	0.71	0.35	0.00	1.00		
Debt % to GDP	0.39	-0.23	0.45	-0.07	0.13	-0.17	0.11	-0.13	0.10	-0.03	1.00	
Regulatory framework	0.32	0.43	0.24	0.31	0.59	0.29	0.28	0.29	-0.01	0.04	0.23	1.00

Pearson's Correlation Table Dimensions

№	0.1	0.05	0.01
35	0.275	0.325	0.418
40	0.257	0.304	0.393

Source: Personal elaboration by means of Excel Data Analysis