

**THE TENDENCIES AND OBSTACLES OF  
THE DEVELOPMENT OF SECURITIES  
MARKET OF UZBEKISTAN BEYOND  
INTERNATIONAL EXPERIENCE AND  
GOVERNMENTAL MACROECONOMIC  
POLICIES**

SHOHA'ZAMIY SHOHMANSUR

Tashkent Financial Institute, Uzbekistan

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**Key words:** Securities market, investment, indicators, Uzbek model of development, macroeconomic policy, integration, hypotheses, contrasting and experimental analysis

**Abstract:** The article is dedicated to analysis of the condition, trend and problems of the development bond market Uzbekistan in collation with 76 developing countries of the world. On base of the system analysis between countries are given useful for Uzbekistan findings and recommendations on the further development bond market.

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### Introduction and problem

Securities market (SM) of Uzbekistan in comparison to developed countries (e.g. USA, Germany and other European countries, Japan, China, Korea and other) by enhancing its role within the economy and increasing private investments of industrial growth is considered to be a crucial issue.<sup>1</sup> Particular problem especially becomes into first line at the stage of economic globalization through at the level of satisfiable macroeconomic policy of government.<sup>2</sup> Significance of these issues is seen in cases as:

1. National SM developed in years 1992-1995 and growing step by step (in years 1996-1998, 2003-2005, 2006-2007, 2008-2009) is not fully fitting with pace and the requirements of advanced macroeconomic policies. Particularly, in periods shown above the economic role of SM (as calculated in percentages of "Ratio of GDP to Capitalization") is staying at low levels at – 0.8%, the volume of stock market (in percentages of GDP) is only 0.2%.<sup>3</sup> Particular figures are showing the signs of unformed and undeveloped infrastructure of national SM (loss of transformation of savings into investment) and low degree within countries economy.
2. Uzbekistan being a valuable part of world economy, national SM is continues being nonintegrated to world securities market;<sup>4</sup>
3. There was not given much objective attention to countries SM at the level of countries macroeconomic policy, also, and significantly less amount of scientific and research works based on

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<sup>1</sup> Shoha'zamiy Sh.Sh. The financial the market and securities. Book I.-T.: Economy-Finance, 2005.-792 p, it. The financial market and securities. Book II.-T.: Economy-Finance, 2005.-849 page.; it. Bases financial engineering.-T.: Economy-Finance, 2005.-264 p.; it. Bases securitiesmetric.-T.: Economy-Finance, 2005.-376 p.

<sup>2</sup> Karimov I.A. World financial and economic crisis, ways and measures on its overcoming in conditions of Uzbekistan.-T.: Uzbekistan, 2009.-48 page.; the Decree of President RUz. №UP-4058 from November, 28th, 2008 «About the program of measures on support of the enterprises of key economic branches of real sector of economy, maintenance of their stable work and increase in an export potential»; the Decision of President RUz №PP-1072 from 3/12/2009 «About the Program of measures on realization of the major projects on modernization, technical and technological re-equipment of manufacture for 2009-2014»; the Order of President RUz. From November, 19th, 2008 №P-4010 «About the statement of the order of realization to commercial banks of economically insolvent enterprises».

<sup>3</sup> www.worldbank/wdi.org.

<sup>4</sup> For today securities of domestic emitters didn't enter the foreign markets. Though between foreign institutes Republican stock exchange "Tashkent" and the state authorized body are adjusted relations.

integration of Uzbek SM into world's securities market taking into account advanced analysis of world tendencies and local conditions.

### **Informational base**

#### **The information base to contrast analysis showing expanding tendencies of developing countries SM**

In order to employ contrasting analysis of developing countries SM and to implement useful results in the case of Uzbekistan, via using informational base of World Bank, World Federation of Exchange and Standard & Poor's (S&P) there were retrieved and identified the list of direct contrasting of 76 countries and group of macroeconomic indicators.<sup>5</sup> For instance, there has been done research to find the relationship between indicators as investment and SM capitalization, inflation and income of society, investment flow and savings. So that to reach it we have implemented correlation analysis, plotted the scatter diagram, and set the regression equation<sup>6</sup>. Selected from developing 76 countries, the results and relationships gained through empirical analysis present factors of development. The quantitative parameters can be used as important data to use as comparative valuation of Uzbek SM reserves.

#### **Informational base representing the developing tendencies of Uzbekistan SM**

Statistical data regarding the Uzbekistan can be found from Government Statistical Bureau, Center for coordination and control of securities market (CCCSM), Central Bank of Uzbekistan, Republican Currency Exchange (RCE), Republican Stock exchanges informational base "Toshkent". According to statistics, infrastructure and the development tendencies of Uzbekistan's SM can be explained with the current 1- and 2-tables constructed by the author.

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<sup>5</sup> In purpose of the achievement and undertaking the comparable analysis, as well as achievements to similarities of the countries, the following countries are deleted from list: industrial developed countries, country with population less 1 mln. human, country with very low level develop (on one person GDP less 500 USA doll.), equatorial countries of the Africa not having industrial sector, country with strong deforming the economy (for example Turkmenistan provides 80% GDP from export of the gas), country having border, military, civil conflicts. That similarity of the groups of the countries was a high country data necessary to divide into 2 groups: country having spares of the hydrocarbon (the oil, gas) and country not having given spare.

<sup>6</sup> Shoha'zamiy Sh.Sh., Chepel S.V. Educational the methodical grant on use of the data of the World bank on world economy in the analysis economic conditions of development SM for studying of corresponding themes on discipline of "Finansometrika".-T.: Economy-Finance, 2009.-48 p.; Shoha'zamiy Sh.Sh. Bases securitiesmetric.-T.: Economy-Finance, 2005.-376 p.; it. The comparative analysis of securities markets of a developing world and conclusions for Uzbekistan.//Economy and Finance.-Moscow, №2 (155), 2009.-pp.26-27; it. Economics systemology: conception and implement.-T.: Economy-Finance, 2010.-420 p.

<b>SM industry's institutions<sup>8</sup></b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Stock issuer	2114	2017	1925	1822	1619
Corporate bond issuers	9	1	-	46	23
Commercial banks	29	28	29	30	30
Insurance companies	25	26	27	30	31
Investors, i.e:	1029372	1106960	1193712	1203230	1345121
Individuals	1001761	1068106	1113750	1121720	1221342
Other participants	27611	38854	79962	81510	123779
Stock exchange and exchange participants	2	2	2	2	2
Professional participants	318	312	300	221	153
Investment intermediary	91	89	92	99	61
Investment company*	12	12	12	no	no
Investment adviser	25	24	22	21	17
Depository	36	38	38	37	34
Register handling*	46	47	47	no	no
Managing company	65	65	58	51	26
Investment Fund (IF)	17	13	11	10	7
Private IF	8	5	2	2	2
Account-clearing house	2	2	2	2	2
Nominal holding*	16	15	15	no	no
Traders out of Exchange	1	2	2	2	2
Transfer-agent**	-	-	-	-	2

<b>Indicators</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
GDP, %	107,0	107,3	109,5	109,0	108,1
GDP bln. Soums	15210,4	20759,3	28186,2	36839,4	48097
Amount of stock issued, in millions.	4623,0	2093,7	2928,0	3761,5	2145,2
Stock volume in trade turnover, %	5,93	11,42	12,51	15,56	15,8
Stock issue quantity	214	113	118	128	245
Volume of Stock Market, in bln soums, mainly:	142,5	330,79	389,72	705,7	748,1
Primary market, bln soums	61,578	53,33	268,77	483,4	560,4
-organized markets	1,72	2,77	135,11	31,0	18,5
-unorganized markets	59,85	50,56	133,66	452,4	541,9
Secondary market, bln soums	53,8	218,2	120,95	222,3	187,7
-organized markets	26,3	115,3	77,45	87,9	73,4
-unorganized markets	27,5	102,9	43,5	134,4	114,3
Corporate bonds volume, bln soums	11,106	0,012	4,5	5,0	1,5
- Primary market	11,7	2,3	4,5	2,2	0,9
- Secondary market	12,1	9,0	2,7	0,4	0,6
Government short term bonds, bln soums	18,2	1,5	68,4	45,5	No trade
Government middle term bonds, bln soums	36,1	57,6	n.i	n.i	29,4
Bonds of Central bank, bln soums	2,9	206,0	n.i	n.i	n.t
Deposit certifications, bln soums	34,7	50,3	68,1	n.i.	5,5
Savings certifications, bln soums	440,3	670,4	990,1	1500,0	202,0
Volume of stock market to GDP, %	1,1	1,65	1,79	1,914	1,92
Stock market capitalization to GDP, %*	0,2	0,2	0,2	0,3	0,2

<sup>7</sup> Note: \*- These institutes according to the Republic Uzbekistan Law «About a securities market» (2010 y, 28 jule) have been destroyed. The securities market in Uzbekistan basically is coordinated and supervised from the state and in it self-regulating institutes aren't available. As in the maintenance of the above-stated Law they aren't provided. \*\* - use in Law.

<sup>8</sup> The professional participant security market are determined following standards: join-stock companies and investment funds 400 thous. USA doll; The large commercial banks - 5,0 mln. Euro, small commercial banks - 2,5 mln. Euro; controlling companies 50,0 thous.. Euro; the depository and accounting-clearing chamber 100,0 thous. Euro; the investment consultants 10,0 thous.. Euro; transfer-agent 20,0 thous. Euro; the organizers organizers outside of exchange tenders 200,0 thous.. Euro.

<sup>9</sup> Source: Uzbekistan statistics committee, Central bank and CCCSM information (created by the author). Source: n.t. – not trade, n.i. – not information, \*-World bank information.

Popular profits, bln.sums	9989,8	12954,9	16872,7	22626,3	29866,7
M2 (roust in year), %	54,3	36,8	46,1	32,4	39,8
Coefficient of monetization, %	14,2	14,9	17,3	18,8	20,0
Rate of the refunding, %	16,0	14,0	14,0	14,0	14,0
Rate of the obligatory standby, %	15,0	15,0	15,0	15,0	14,0
Profit tax, %	15,0	12,0	10,0	10,0	10,0
Foreign investment volume, %	107,0	109,3	122,9	128,3	124,8
Through SM, %	8,8	5,1	4,4	11,5	4,0
Primary market, %	185,0	59,4	18,5	26,7	24,7
Secondary market, %	9,3	5,5	5,8	30,4	6,1

### Hypothesis and set questions to test

Hypothesis: “In order to objectively assess the current status of national SM and on the basis of withdrawals and recommendations made from international expertise in particular sphere, it can positively foster to integration of Uzbekistan’s SM through fulfilling the requirements of macroeconomic policy and conditions within the country”. So that to test the hypothesis methodologically one ought to answer below questions: “How does the results of development tendencies of Uzbekistan SM identifying its national macroeconomic role and does it fitting to the requirement of modern macroeconomic policy of the country? “How beneficial extractions can be made to Uzbekistan from with comparative analysis of developing countries SM?”

As an initial answer for the first question 1- and 2-tables can be base as statistical data. These statistical data demonstrating: SM was segmented.<sup>10</sup> National SM doesn’t fulfilling the requirements of active investment policies. Particular figures are showing the signs of unformed and undeveloped infrastructure of national SM (loss of transformation of savings into investment) and low degree within countries economy.

### Experimental analysis

#### Correlation-regression analysis of macroeconomics policy (or, GDP, income, tendency of monetary and fiscal policies) effect to SM volume<sup>11</sup> on the basis of statistical data of 1- and 2-tables

In above mentioned statistical data for Uzbekistan, the correlation coefficient between GDP and volume of SM is equal to 0.969 or  $R^2=0.939$  (according to Cheddok correlation degree is too high.). Also volume of SM, GDP and income of population correlation, according to Table 3 is equal to  $R=0.977$  and  $R^2=0.956$ . This figures mean that as GDP and income rises it causes to volume of SM also to increase.

<sup>10</sup> Depending on kinds of securities they are divided into following segments: 1) The state short-term coupon bonds (SSCB), The state intermediate term coupon bonds (SSIB), Central Bank bonds (CBB). 2) Segment of corporate securities – shears and corporate bonds. 3) Segment of bank certificates. At the first and second segment of the market securities happen in circulation on primary and the secondary markets. Thus securities happen objects of the reference organized (exchange and off-exchange electronic systems) and unorganized (depository and a notoriety) trading system.

<sup>11</sup> Source: Uzbekistan statistics committee, Central bank and CCCSM information; Kh. M. Akramov. Macroeconomics policy effect to SM of the Republic of Uzbekistan//PhD, BFA, 2010.-22 p.

Years	GDP X1	Income X2	volume of SM Y
	Bln. Soums		
2000	3255,6	2377,4	17,11
2001	4925,3	3605,6	26,13
2002	7450,2	5196,7	41,74
2003	9664,1	6490,4	74,70
2004	12189,5	7781,6	115,03
2005	15210,4	9989,8	142,40
2006	20759,3	12954,9	330,80
2007	28186,2	16872,7	408,00
2008	36839,4	22626,3	708,30
2009	48097	29866,7	748,1

The relationship between dynamics of SM volume and the monetary and fiscal policies indicators is depicted in Table 4. For this as result factor we have included money supply value change, monetization coefficient, refinancing rate, compulsory reserve ratio and rate of profit tax.

Years	Annual increase of M2	monetization coefficient X2	Refinancing rate X3	compulsory reserve ratio X4	Profit tax X5	SM volume Y
	%					Bln. soums
2000	37,1	10,2	32,3	20,0	31,0	17,11
2001	54,3	10,2	26,8	20,0	26,0	26,13
2002	29,7	9,4	34,5	20,0	24,0	41,74
2003	27,1	9,3	27,1	20,0	20,0	74,70
2004	47,8	10,3	18,8	20,0	18,0	115,03
2005	54,3	14,2	16,0	15,0	15,0	142,40
2006	36,8	14,9	14,0	15,0	12,0	330,80
2007	46,1	17,3	14,0	13,0	10,0	408,00
2008	32,4	18,8	14,0	15,0	10,0	708,30
2009	39,8	20,0	14,0	14,0	10,0	748,1

Particular statistical data results in Table 4 was gained with a computer software (Table 5).

Statistical regression			
Multiple R	0,939467		
R square	0,882599		
Adjusted R square	0,809223		
Standard error.	90,57579		
Observations	14		
	<i>Coefficients</i>	Standard error	<i>T statistics</i>
Y-independent	-38,3689	325,9357	-0,11772
X 1 dependent	-2,9207	1,631243	-1,79048
X 2 dependent	33,75092	9,432177	3,578274
X 3 dependent	4,43306	4,111204	1,078287
X 4 dependent	15,89646	20,07746	0,791756
X 5 dependent	-24,3665	6,975449	-3,49318

As can be seen from retrieved results, R square representing the “goodness of fit” is equal to 0,88 (Table 5). According to Cheddock scale particular economic indicators show that they are positively

<sup>12</sup> Uzbekistan Economy. Information and analytical review. Annual publications and according to information gained by author from Central Bank of the Republic of Uzbekistan.

<sup>13</sup> *ibid*

correlated. Other gained coefficients relationship of monetization and compulsory reserve norms changes source huge effect to securities market trade turnover. The effect of reserves to SM volume is low. Because capital of investors is directed mainly to banking system. In turn banking system, namely, insurance companies' investment opportunities within SM is considered to be of high degree.

Countries macroeconomic policies effect to the development of SM is controlled via utilizing through this handles:

Central Banks refinancing rate; compulsory reserve ratios; open-market operations; foreign currency exchange regulations. In current stage national currency (sums) to US dollars is continuing to devaluate. Therefore, it leads to increased costs of imports for residents, stocks issued in national currency lose its real value while investing.

**As an answer for the second question below we presented analytical results and conclusions**

The difference of SM development in analyzed 76 countries is huge. While comparing second indicator (capitalization and trade volume) we can shed some light that, in particular countries, there wasn't used all the possibilities of SM.<sup>14</sup> Investment inflow of foreign portfolio (as average stock portfolio 0,1 and bonds portfolio 0,8) is not large enough, last indicator average capital outflow is observed as (-2,7). Here these determinants standard error is large (or 1010,9; 1886,7 and 6636,8 respectively), and in this countries the low levels of capital inflow and high levels of capital outflow show the signs of much unstableness.<sup>15</sup> Investment flows into bonds portfolio can be observed in many countries (excluding Thailand, Slovakia, Moldova, Mexico and Bulgaria) Within Islamic countries Malaysia is especially ought to be underlined showing 1,20. Investment inflows in other countries included to this group is not considerable. However, countries of this group (except Jordan) stock portfolio's average investment flow is positive. In all the countries stock portfolio's average investment flow is about +0,1 (the lowest figure is -1,8 and the highest one is +1,4). Additionally, in years 2007-2009 huge amount of investment was injected into these countries from rest of the world<sup>16</sup>. Notably, these is closely related with favourable investment conditions and macroeconomic sustainability in Arabian countries. Even though it is expected that after world financial-economic crisis investments into this countries will be switched to developed countries.

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<sup>14</sup> For example, if not a securities market of the republic of South Africa the stock value listing companies makes 189 % from GDP, the volume of transactions on them is equal only 75,9 % from GDP. Following states completely have taken advantage of a securities market: China (489,1 % and 234,4 %), the republic of South Africa (189,4 % and 75,9 %), Saudi Arabia (87 % and 150,7 %), Singapore (173,5 % and 92,7 %), Jordan (140,1 % and 61,8 %), Kuwait (100,7 % and 68,2 %). From the developing 76 countries only in 5 from them growth of tendencies of a securities market (China, the republic of South Africa, Saudi Arabia, Singapore, Jordan) was observed. The highest indicators of capitalization on a securities market in 2002 27 % from GDP in 2006 has grown on 174 %, and also in Jordan (from 74 % to 140 %). These indicators prove that the states rich with mineral stocks have advantages in securities market development.

<sup>15</sup> Except Argentina, Bulgaria, Ecuador, Mongolia, Pakistan, Paraguay, Sri Lanka and Ukraine in all other states if not to take streams portfolio investments on the action and the bond all volumes are negative (as much as possible proceeding stream of the capital-26,7, in other countries as much as possible entering stream of the capital to +1,5).

<sup>16</sup> On database WFE.

We think that the reason for poor investment portfolios in developing countries is related with political and macroeconomic conditions, and property system of investors who transfer FDI's . This is also true in the case of Uzbekistan.

After above analysis it is undoubtedly can be seen that there should be adopted investment policy of Uzbekistan and there is need for objective programs for monitoring Foreign Direct Investments. Particular program have to encompass several features as: required volume of FDI, list of purchased sectors, governmental privileges, more concentrated monitoring system over FDI (industries, types of technologies, specification regarding investors country and industry, capital share, determination of investment period); FDI effectiveness analysis (share of investment directed to renewal of production funds in companies which are under control, working effectiveness dynamics in purchased company, competitiveness degree of sector, the net profit share of investors to be withdrawn).

The important determinants of SM development in 76 countries were considered to be gross savings, monetization, capitalization, the quality of governmental institutions<sup>17</sup>, and rose of FDI.

The role of government institutions within SM development is analyzed via econometric models results. According to this, the most suitable regression model of progressively developing SM capitalization indicators (*CI*) looks as follows:

$$CI = -21,3 + 1,85*S + 0,30*M2 - 0,91*FDI*(4,24 - INST) \quad R^2=0,71$$

The amount of these indicators gives results of:

- Gross savings (*S*) increase by one unit, rises capitalization indicator of SM by 1,85 units;
- Monetization expansion of (*M2*) same unit, causes capitalization indicator of SM to change by positive 0,33 units;

And these mean to Uzbekistan: if monetization degree amounted to 55,6 %, it would be base for national SM capitalization to enhance by 12 units.

One more features of retrieved results prove that *FDI* inflow is considered to be useful for the development of SM only in the case when government institution degree will reach to 4,24 unit. Also the significance of FDI within SM will be huge, when CPI index will be above current figure (proof for this is -multiplication of  $0,91*CPI*(4,24 - Inst)$ ).

Analyses reveal that, volume of FDI is not primary base for the development of SM within progressively developing countries but indicators as high levels of reserves securing the monetization degree and the advancement of banking system or the government institutions were.

In developing countries large portion of savings comes from private savings. Institutional savings favourable effecting mechanism is based on high standards of guarantee of private property rights

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<sup>17</sup> Index CPI of corruption is applied to definition of quality of the state institutes (from 1 to 10 points). The above its scale the level of corruption of economy, business transactions is less than expenses are insignificant also legal, and also the immovable system works effectively. The given tendencies are significant for all countries of the world.

(namely, people savings and commercial banks assets), good competition conditions, low transaction costs and increased profit in private business sectors.

Analysis also shows that in the way to development of SM the role of growing economic monetization and gross savings is largely important. In most of the countries studied gross saving portion in the GDP is in the range between 15 to 35%.<sup>18</sup>

All in all, within CIS countries, namely in Uzbekistan the importance of effective government institutions is hugely valued beyond economic expansion of Securities market. While quality of government institutions advance investment portfolios outflows exceeds its inflows. The reasons for investment portfolios indicators neutrality towards monetization and gross savings can be extracted from FDI parameters, volumes and effectiveness.

Through selected 76 developing countries SM analysis indicators (except investment portfolio) show high degree of correlation. And this in the case of Uzbekistan stand for economic modernization, diversification of production process and technological renewal, innovational technologies policies intended, via macroeconomic policies of countries view, for countries SM development and advanced integration into world SM.

### **Conclusion**

Within progressively developing countries volume of FDI is not primary source for the development of SM, but indicators as high levels of reserves securing the monetization degree and the advancement of banking system or the government institutions were.

In developing countries investment portfolios flows being poor are related with political and macroeconomic conditions, namely, FDI accomplishing investor's property system. These reasons are also applicable in the case Uzbekistan. While government institutions quality expand the investment portfolios outflow will exceed its inflow.

National SM is not fully employing the macroeconomic policies and potentials as progressively developing countries. For this Uzbekistan SM, have to reach international macroeconomic policies experience and advance faster. In order to employ and reach the advanced levels of SM of Uzbekistan the most important features are considered to be available resources, sustainable macroeconomic policies and investment conditions, anti-crisis measures program and utilization of important investment projects are of a high potential.

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<sup>18</sup> The given requirements aren't answered with all states CIS. In particular savings at considered above have made years in Kyrgyzstan of 11 %, Tajikistan of 10 %, Georgia of 16 %. But in other CIS countries the savings which have reached high levels were created by a condition for securities market development. According to World Bank these indicators in Russia have made 31,6 %, in Kazakhstan of 24,2 %, in Ukraine of 26,3 %, in Belarus of 24 %, in Uzbekistan of 25,5 %. In many CIS countries monetization level remained low, for example, in Belarus of 13,7 %, in Kazakhstan of 18,3 %, in Kyrgyzstan of 14,7 %, in Russia of 24 %, in Ukraine of 26 %, in Uzbekistan of 18,8 % (in 2009 has made 20,0 %). Means developments of bank sector and an eminence of level of a monetization of economy over inflation in more the CIS countries including in Uzbekistan demands securities market development.