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PENSION DEVELOPMENT IN GEORGIA

REPORT

FINAL

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PENSION DEVELOPMENT IN GEORGIA

SUBTITLE

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ABSTRACT

The goal of this assignment is to make a comprehensive analysis of demographic and macroeconomic data that are essential for pension development, and to perform estimations and projections in order to define potential sources of accumulated savings.

The study has been performed to overview the current public pension system and to make some assumptions and analysis with regard to the existing pension system and also potential supplementary pension systems, particularly, World Bank Pillar II[1] (Pillar II), i.e., mandatory pension savings and World Bank Pillar III[2] (Pillar III) — voluntary pension systems. Some attempts were carried out to presuppose the development of the mandatory and voluntary pension systems by producing and composing mandatory pension savings and voluntary pension scenarios.

The initial tasks involve gathering, organizing and analyzing demographic and economic data and indicators from the National Statistics Office of Georgia (Geostat), National Bank of Georgia (NBG) and Social Service Agency (SSA). Based on these statistical data, we made our estimations and projections.

Keywords: Demographic and socioeconomic indicators: population (births and deaths), labor force participation, number of employees in formal and informal (self-employed) sectors, Real and Nominal gross domestic product (GDP), GDP deflator, consumer price index (CPI), wages/salaries and incomes (for self-employed) and the number of pensioners receiving public pension payments.

[1] According to our assumption, Pillar II is a mandatory pension savings scheme. Participation is mandatory for employees below the age of 45 with a monthly salary/income of Georgia Lari (GEL) 400 or more.

[2] According to our assumption, Pillar III is a voluntary pension scheme where participants in the nonstate pension funds are employees with a monthly salary/income of over GEL 1000.

ABBREVIATIONS

CPI	Consumer Price Index
Geostat	National Statistics Office of Georgia
GoG	Government of Georgia
NBG	National Bank of Georgia
Nominal GDP	Gross Domestic Product in current prices
Real GDP	Gross Domestic Product in constant prices
SSA	Social Service Agency

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I. EXECUTIVE SUMMARY

The state pension system in Georgia exists over a long time, which involves age (65 years for male and 60 years for female), disability, survivors, internally displaced people and others specified by the Georgian legislation. The current pension system in Georgia is a universal pay-as-you-go pension model where payouts are allocated from the state budget.

The current voluntary private pension schemes do not have, and are not designed to have, the ability to generate long-term capital for long-term investments. This is primarily due to the ability of the participants‘ to access their savings and withdraw from the accumulated sources for purposes other than retirement income The amount of voluntary pension fund assets, at this time, is very insignificant making is very difficult to factor in any type of investment decisions. Nowadays, there is no tax incentive concerning nonstate pension assets.

There are basic differences for establishing a supplementary pension system between the Pillar II and Pillar III models both of which involve creating a system to institute a decent retirement income through self-provision. Pillar II is strictly a defined contribution scheme where an individual‘s savings (contribution and earnings) accumulate to finance his/her retirement income. On the other hand Pillar III, may be a defined contribution scheme or a defined benefit plan where pension is a guaranteed amount and the plan sponsor or pension provider funds the accruing pension liabilities.

The goal of this assignment is to make a comprehensive analysis of demographic and macroeconomic data that are essential for pension development, and to perform estimations and projections in order to define potential sources of accumulated savings.

The goal of this work is to overview the current public pension system and make some assumptions and analysis about the supplementary pension systems, particularly, mandatory pension savings (Pillar II) and voluntary pension (Pillar III) systems. Some attempts were made to presuppose the development of the mandatory and voluntary pension systems by producing and composing mandatory pension savings and voluntary pension scenarios.

The initial tasks involve gathering, organizing and analyzing demographic and economic data and indicators from Geostat, NBG and SSA. Based on these statistical data, we worked-out our estimations and projections.

Calculations (assumptions, estimations, projections, etc.) have been conducted in an MS Office Excel program and explanations of these calculations are presented in this report. To add clarity and detail the calculations, the Excel workbook is attached to this report (Annex 4).

The following have been taken for analysis: Demographic data (population births and deaths) calculation of labor force participation, number of employees in formal and informal (self-employed) sectors and pension beneficiaries. The employment indicators (labor force, hired employees and self-employed) have been estimated in order to define participants in Pillar II and Pillar III systems; CPI, Real and Nominal GDP — in order to propose the growth of wages/salaries and incomes (for self-employed) and the current pension payments.

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A. BACKGROUND

CURRENT PENSION SYSTEM

The current pension system in Georgia is a universal pay-as-you-go pension model. According to the State Pension Act of Georgia, older Georgian citizens, men over the age of 65 and women over the age of 60, have to apply to the regional branch of the SSA in order to receive pension. During the last few years, the pension benefit (payment) has been increased several times. Since September 15, 2011, the current pension payment increased from GEL 80 per month to GEL 100 per month. The regular increase of the monthly pension benefits is not directly related to economic growth, but instead it is based on the commitment of the GoG to support those older citizens.

There are some factors having impact on pension system development (condition) in the country. They include economic, political, demographic and external reasons.

The current state pension system involves different social benefit programs such as old age, disability, internally displaced people, surviving spouses of breadwinners and others.

The number of state pension beneficiaries decreased while old-age pensioners are increasing year after year.

Table 1: The State Pension Recent Statistics

	2008	2009	2010	2011 (August)	2011[3]
State pension beneficiaries	842,246	838,493	835,901	828,203	828,203
State pension payments, mln	647,5	741,7	781,4	516,9	581,5
Old-age pension beneficiaries	658,310	659,964	662,288	662,978	662,978
Single pension payment	55-70	80	80	80	100
Old-age pension payments[4], mln	509,4	599,6	634,5	423,5 [5]	795,6 [6]
Pension/GDP, percent	2,9	3,5	3,1	2,7	3,4[7]

[3] Not statistical data, but an estimated calculation is presented for 2011.

[4] Actually paid during the years.

[5] During January – August, 2011.

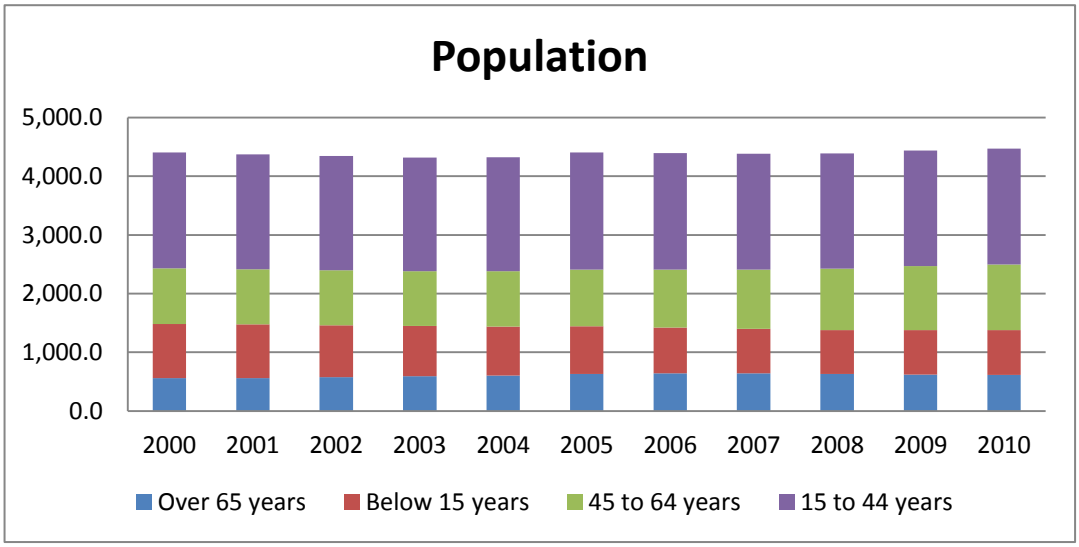
[6] Implicit amount based on the number of pensioners by August 2011.

Source: SSA

POPULATION

Since 2007, the total population of Georgia, both females and males, has had a positive trend (Table 2), increasing from 4,382 Mln in 2007 to 4,469 Mln in 2010. The population, both male and female age 15 and over, has also grown since 2005 (3,591 Mln in 2005 and 3,710 Mln in 2010). The population group representing 45 to 64 year olds also shows an increasing trend (969 Mln in 2005 and 1,120 Mln in 2010). However, the age groups of males and females from 15 to 44 have undergone slight changes over the last six years. While the number of males in 2010 increased in comparison with 2005, the number of females decreased (Table 2). Overall, the population between the ages of 45 to 64 has risen since 2002, which logically results in an increase in the number of elderly people in the near future. During this period, the number of pension-age people declined slightly. This was mainly caused by a sliding scale of the younger generation (from 45 to 64 years old) in years 1989 to 2002.

Diagram 1: Population 2000-2010



Source: Geostat

Table 2: Demographic Statistics, 2005-2010

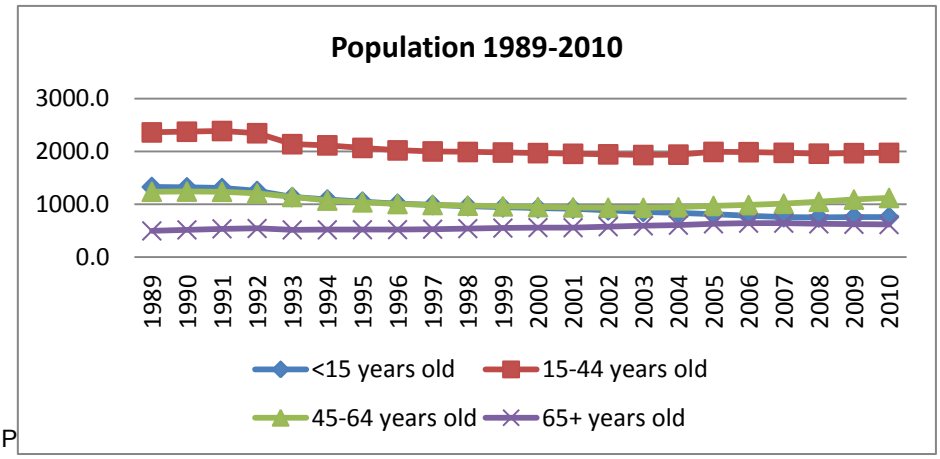
	2005	2006	2007	2008	2009	2010
POPULATION (total)	**4 401,3**	**4 394,7**	**4 382,1**	**4 385,4**	**4 436,4**	**4 469,3**
Male	**2 083,9**	**2 079,5**	**2 078,4**	**2 080,8**	**2 108,9**	**2 127,4**
Female	**2 317,4**	**2 315,2**	**2 303,7**	**2 304,6**	**2 327,5**	**2 341,9**

[7] Nominal GDP for 2011 is not an actual value.

POPULATION over 15 years	**3 591,3**	**3 615,5**	**3 627,1**	**3 635,8**	**3 679,9**	**3 709,8**
Male	**1 663,2**	**1 673,5**	**1 682,8**	**1 685,4**	**1 710,2**	**1 727,0**
Female	**1 928,1**	**1 942,0**	**1 944,3**	**1 950,4**	**1 969,7**	**1 982,8**
POPULATION below 15 years	**810,0**	**779,2**	**755,0**	**749,6**	**756,5**	**759,4**
Male	**420,7**	**406,0**	**395,6**	**395,4**	**398,7**	**400,3**
Female	**389,3**	**373,2**	**359,4**	**354,2**	**357,8**	**359,1**
POPULATION from 15 to 44 years	**1 991,0**	**1 986,4**	**1 973,8**	**1 958,1**	**1 967,8**	**1 972,7**
Male	**976,0**	**974,9**	**973,8**	**967,5**	**975,9**	**981,7**
Female	**1 015,0**	**1 011,5**	**1 000,0**	**990,6**	**991,9**	**991,0**
POPULATION from 45 to 64 years	**969,4**	**985,8**	**1 010,4**	**1 047,4**	**1 090,2**	**1 120,5**
Male	**442,9**	**450,3**	**462,6**	**478,4**	**499,1**	**512,5**
Female	**526,5**	**535,5**	**547,8**	**569,0**	**591,1**	**608,0**
POPULATION over 65 years old	**630,9**	**643,3**	**642,9**	**630,3**	**621,9**	**616,6**
Male	**244,3**	**248,3**	**246,4**	**239,5**	**235,2**	**232,8**
Female	**386,6**	**395,0**	**396,5**	**390,8**	**386,7**	**383,8**
POPULATION from 15 to 64 years	**2 960,4**	**2 972,2**	**2 984,2**	**3 005,5**	**3 058,0**	**3 093,2**
Male	**1 418,9**	**1 425,2**	**1 436,4**	**1 445,9**	**1 475,0**	**1 494,2**
Female	**1 541,5**	**1 547,0**	**1 547,8**	**1 559,6**	**1 583,0**	**1 599,0**

Source: Geostat

Diagram 2: Population of Georgia since 1989



Source: Geostat

ECONOMIC INDICATORS

Due to the dual effects of the 2008 war and the world financial crisis that also impacted the Georgian economy, Real GDP declined by 3.8% in 2009, having grown by 2.4% in 2008. Real GDP growth was evident in 2010, growing by 6.4**%.** In 2010, average annual inflation (CPI change) has been fixed to 7.1% while it was 1.7% in 2009, basically because of the higher international prices for commodities and agricultural products.

Table 3: Basic Economic Indicators, 2005-2010[8]

	2005	2006	2007	2008	2009	2010
GDP (nominal), mln	11621,0	13790,0	16994,0	19075,0	17986,0	20791,0
GDP (real), mln	8561,4	9365,0	10521,0	10774,7	10365,6	11026,5
GDP (real), changes	9,6%	9,4%	12,3%	2,4%	-3,8%	6,4%
GDP deflator changes	7,9%	8,5%	9,7%	9,6%	-2,0%	8,7%
GDP deflator, index	135,7	147,3	161,5	177,0	173,5	188,6
GDP per capita, nominal	2689,1	3133,1	3866,9	4352,9	4101,3	4686,5
GDP per capita, real	1981,1	2127,7	2394,0	2458,8	2363,7	2485,5
CPI, index	132,5	144,6	158,0	173,8	176,8	189,4
Average inflation rate	8,3%	9,2%	9,2%	10,0%	1,7%	7,1%

LABOR FORCE[9]

Active labor, which is the working population of Georgia over age of 15, is around two million and has slightly declined since 2006. In 2009, it increased by 3.9 percent as compared to 2008. In 2009, approximately 53 percent of the working population was self-employed, mainly in agriculture, trade and services. Despite the 2.4 percent decrease in total active labor in 2010 compared to the previous year, the number of hired employees increased from 2008 to 2010 by 8 percent, while those who are self-employed decreased by 2.1 percent. As a consequence of the mutual outcome of the war in 2008 and the world financial crisis that also had an impact on Georgia, unemployment level increased from 13.3 percent to 16.9 percent from 2007 to 2009 and slightly declined to 16.3 percent in 2010.

According to Geostat the average nominal monthly salary of hired employees in Georgia has grown rapidly over the last few years and reached GEL 535 in 2008 and GEL 609 in 2010, as compared to GEL 368 in 2007 and GEL 277 in 2006. The salary increases of hired

[8] Source: www.imf.org. This table was used for projections of CPI and real and nominal GDP

[9] All statistical data is from Geostat

employees in the private sector also caused by raises in the average salary levels in state institutions employees. This development made public jobs more attractive for the qualified workforce.

Table 4: Employment Statistics

** in thousands*	2006	2007	2008	2009	2010
Total Population	4,401.3	4,394.7	4,382.1	4,385.4	4,469.3
Labour Force (aged 15 and over)	2,021.8	1,965.3	1,917.8	1,991.8	1,944.9
Average Monthly Earnings (GEL)	277.9	368.1	534.9	556.8	609.4
Employed	1,747.3	1,704.3	1,601.9	1,656.1	1628.1
Hired	*603.9*	*625.4*	*572.4*	*596.0*	618.6
Self-employed	*1,141.6*	*1,078.8*	*1,028.5*	*1,059.0*	1007.1
Not-identified	*1.8*	*0.1*	*1.1*	*1.2*	1.2
Unemployed	274.5	261.0	315.8	335.6	318.3
People Beyond the Labor Force	1128	1138.6	1145.2	1139.3	1083.3
Activity Rate[10] *(%)*	62.2	63.3	62.6	63.6	64.2
Unemployment Rate *(%)*	13.6	13.3	16.5	16.9	16.3
Employment Rate by Age Groups *(%)*	53.8	54,9	52.3	52.9	53.8
15-24 years	23.0	21.4	23.1	22.7	24.2
25-34 years	56.8	59.5	55.9	54.6	56.5
35-44 years	68.9	70.7	68.1	68.8	70.6
45 years and over	59.5	61.1	56.9	58.0	58.3

Source: Geostat

[10] According to the Geostat standard measurement, the Activity Rate is a ratio of the total labor force to the number of total labor force and the people beyond the labor force.

Table 5: Employment Statistics (in thousands)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Active Labor by Years	**1972,8**	**1939,3**	**2049,2**	**2113,3**	**2104,2**	**2050,8**	**2041,0**	**2023,9**	**2021,8**	**1965,3**	**1917,8**	**1991,8**	**1944,9**
Male	1035,4	1021,7	1062,2	1093,6	1109,6	1082,0	1069,7	1074,4	1085,8	1031,8	1028,0	1071,3	1037,1
Female	937,4	917,6	987,0	1019,7	994,6	968,7	971,3	949,5	935,9	933,5	889,7	920,5	907,9
Employed	**1728,5**	**1694,4**	**1837,2**	**1877,7**	**1839,2**	**1814,9**	**1783,3**	**1744,6**	**1747,3**	**1704,3**	**1601,9**	**1656,1**	**1628,1**
Male	905,3	879,1	945,5	966,7	954,1	957,9	926,5	915,2	920,4	888,1	855,6	877,6	851,4
Female	823,2	815,3	891,7	911,0	885,1	857,0	856,9	829,4	826,8	816,2	746,3	778,6	776,7
Hired/salared labors	**724,4**	**697,5**	**683,9**	**654,3**	**650,9**	**618,5**	**600,9**	**600,5**	**603,9**	**625,4**	**572,4**	**596,0**	**618,6**
Male	374,9	370,7	354,4	336,0	333,0	323,6	304,4	314,1	316,5	331,9	313,1	317,4	318,3
Female	349,6	326,8	329,5	318,3	317,9	294,9	296,5	286,4	287,4	293,5	259,2	278,5	300,2
Self-emploeyd	**987,1**	**918,6**	**1041,2**	**1136,1**	**1184,9**	**1195,2**	**1180,8**	**1143,3**	**1141,6**	**1078,8**	**1028,5**	**1059,0**	**1007,1**
Male	520,6	472,9	536,0	584,0	618,4	633,4	620,8	600,5	602,6	556,2	541,5	559,0	531,5
Female	466,6	445,7	505,2	552,0	566,5	561,7	560,1	542,8	539,0	522,6	487,0	500,0	475,6
Undefined	**17,0**	**78,4**	**112,1**	**87,3**	**3,4**	**1,3**	**1,6**	**0,8**	**1,8**	**0,1**	**1,1**	**1,2**	**2,4**
Male	9,9	35,5	55,1	46,7	2,7	0,8	1,3	0,6	1,4	0,0	1,0	1,2	1,6
Female	7,1	42,9	56,9	40,7	0,7	0,4	0,2	0,2	0,4	0,1	0,1	0,1	0,8
Unemployed	**244,2**	**244,9**	**212,0**	**235,6**	**265,0**	**235,9**	**257,6**	**279,3**	**274,5**	**261,0**	**315,8**	**335,6**	**316,9**
Male	130,0	142,6	116,7	126,9	155,5	124,2	143,2	159,2	165,4	143,7	172,4	193,7	185,6
Female	114,2	102,3	95,3	108,7	109,5	111,7	114,4	120,1	109,1	117,3	143,4	141,9	131,2
People beyond labor force	**1044,0**	**1086,9**	**1092,3**	**1077,7**	**1135,3**	**1048,4**	**1105,9**	**1136,1**	**1228,0**	**1138,6**	**1145,2**	**1139,3**	**1083,3**

B. METHODOLOGY

The assumptions and estimations of the demographic, employment and economic indicators, which are needed for possible projection scenarios of the pension systems, are, in most cases, based on the statistical data and their trend of dynamics. The population and employment data are obtained (www.geostat.ge) or retrieved from Geostat. In several cases, Geostat has prepared statistical information, which is not presented in their website.

In order to project population growth for the next 50 years, we used the birth and mortality rates for the last period. Based on these rates, the population growth table is structured.

The employment growth is connected to the population growth and is estimated as a product of total labor force and the average ratio of the employees. For calculations of the average ratio of a particular age group, the specific age group rate (share of the age group in total labor) is taken into consideration.

For the projection of the average monthly salary, the projected economic growth and average inflation are taken into account.

GDP growth rate for the next 20 years is based on the average growth rate over last 15 years and the CPI growth rate is based on the International Monetary Fund (IMF) forecast. These two indicators are directly connected to the projections of the average salary and public pension level.

A detailed explanation of the estimations is presented below in the subsections.

POPULATION GROWTH

Year-by-year population growth is composed based on the mortality table and fertility rate. The population time series does not imply any shocks or disturbances over the projected period. The live birth rate for the last period was approximately 14.4 per 1,000 people that are also compatible with data from the European Economic Community (EEC) and former soviet countries. As the population growth has a positive trend, the birth rate of 14.4 per 1,000 seems to be a modest coefficient and it may possibly increase in future. According to projected population growth table, the total population will increase from 4,469 million in 2010 to 4,676 million in 2032 and 5,680 million in 2062 (Table 6). The population growing tendency for the first 20 years is mainly evident in the population groups ‗below 15 years-old', '45 to 64 years old' and ‗over 65 years old'. The 15 to 44 year old population group will decline by an average of 0.8 percent until 2037. Also, the 15 to 44 year old population will decrease until 2037, because during the last 20 years we have had a negative trend of population growth in the below 15-year old age group.

Because of the recent trend of increasing the fertility rate, we have fixed it at 14.4 (it can be increased by 10-year periods) per 1,000 population, regardless of the gender. This has persuaded us to project a birth growth with the same rate, which has increased the population number in the long-run forecast (it is especially distinct in the population below 15 years).

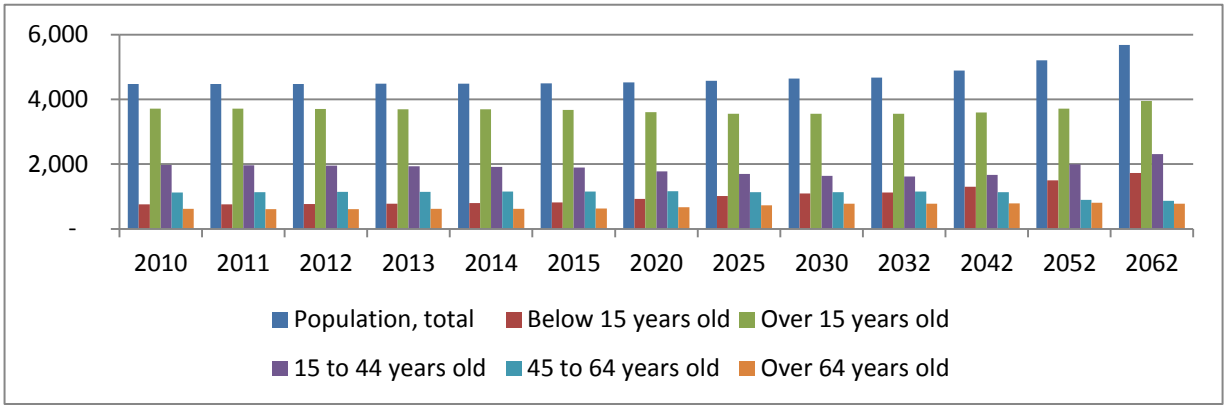
Table 6: Population growth by age (in thousands)

Population	2010	2011	2012	2013	2014	2015	2020	2025	2030	2032	2042	2052	2062
Total	4 469	4 472	4 477	4 481	4 486	4 491	4 525	4 574	4 643	4 676	4 888	5207	5680

Population	2010	2011	2012	2013	2014	2015	2020	2025	2030	2032	2042	2052	2062
Male	2 127	2 130	2 134	2 137	2 141	2 145	2 171	2 207	2 252	2 273	2 397	2576	2830
Female	2 342	2 342	2 343	2 344	2 345	2 346	2 354	2 367	2 391	2 403	2 491	2631	2850
Below 15 years old	**759**	**769**	**771**	**783**	**797**	**816**	**925**	**1017**	**1093**	**1124**	**1297**	**1497**	**1727**
Male	400	402	406	411	418	427	481	526	565	582	671	774	893
Female	359	361	366	372	379	389	444	491	527	543	626	722	833
Over 15 years old	**3 710**	**3 709**	**3 706**	**3 698**	**3 689**	**3 675**	**3 600**	**3 557**	**3 550**	**3 552**	**3 591**	**3710**	**3953**
Male	1 727	1 729	1 728	1 726	1 723	1 718	1 690	1 681	1 687	1 691	1 726	1801	1936
Female	1 983	1 981	1 978	1 972	1 966	1 957	1 910	1 876	1 863	1 860	1 865	1909	2017
15 to 44 years old	**1973**	**1962**	**1951**	**1933**	**1917**	**1891**	**1775**	**1695**	**1639**	**1620**	**1669**	**1998**	**2308**
Male	982	979	975	968	962	951	899	865	839	831	857	1021	1177
Female	991	983	976	965	955	940	876	829	799	789	811	977	1130
45 to 64 years old	**1121**	**1134**	**1140**	**1148**	**1151**	**1153**	**1159**	**1136**	**1134**	**1151**	**1132**	**900**	**869**
Male	513	519	522	526	528	530	539	535	544	556	556	448	437
Female	608	615	618	621	623	623	620	601	590	596	576	451	432
Over 64 years old	**617**	**613**	**615**	**617**	**622**	**632**	**667**	**726**	**778**	**780**	**790**	**812**	**776**
Male	233	231	231	231	233	237	252	280	304	305	313	332	322
Female	384	382	384	385	389	395	414	445	474	475	477	480	454

Source: Geostat

Diagram 1: Population growth projection (in thousands)



AVERAGE INFLATION AND ECONOMIC GROWTH

The average expected inflation rate is 7.9 percent and the Real GDP growth rate is estimated at 6 percent in 2012. In order to avoid disturbances and to be more optimistic, we assumed the economic growth to settle at 6 percent[11] until 2032, decrease by one percentage point in 2033 and remain 5 percent until 2062. The average inflation rate has been projected by 7.9 percent in 2012, 2013 — 6.25 percent, 2014 — 5.8 percent, 2015 — 5.5 percent and 2016 — 5.4 percent. The source of this approach in projecting inflation rates

[11] Based on average economic growth rate 5.93% from 1995 to 2010

is drawn from to the IMF report (April 2011). We further assumed that the expected average annual inflation rate from 2017 to 2023 is fixed at 5 percent and from 2024 to 2062 at 4 percent. These two indicators are directly connected to the projections of the average salary and public pension level[12].

Table 7: GDP and Average Inflation Projection

	2010	2011	2012	2013	2014	2015	2020	2025	2030	2032	2042	2052	2062
Real GDP growth	6,4%	5,5%	6,0%	6,0%	6,0%	6,0%	6,0%	6,0%	6,0%	6,0%	5,0%	5,0%	5,0%
Average Inflation	7,1%	12,6%	7,9%	25%	5,8%	5,5%	5,0%	4,0%	4,0%	4,0%	4,0%	4,0%	4,0%
Nominal GDP, mln GEL	20 791	23 577	26 617	29 839	33 289	37 139	63 886	107 046	174 288	211 810	510 708	1 231 400	969 105

EMPLOYMENT ASSUMPTIONS

In order to compose scenarios for Pillar II[13], where the people entering the pension scheme is between 15 to 44 (formal) and 25 to 44 (self-employed), on the basis of the annually aged population (table), we projected year-by-year increase in the labor force, taking into account aged-base ratios for each of the labor categories (~~"~~GEL400+ formal" and ~~"~~GEL400+ informal"). This means that at the start stage, in 2012, people involved in the system are from 15 to 44 years old and for every subsequent year the system participants' age increases by one year, i.e., year-by-year and single-year.

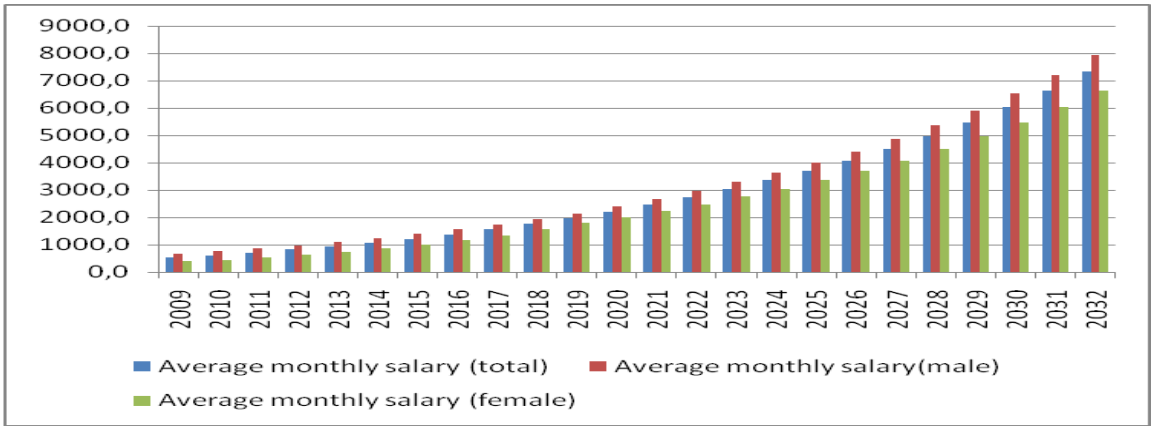
The formal (hired) labor projection is composed as a product of the total labor force and the average ratio of the hired employees. For calculations of the average ratio of a particular age group, the specific age group rate (share of the age group in total labor) is taken into consideration. For example, the last five-year average employment rate for the hired labor group (15 to 44 years) is 18.6 percent and by multiplying it with the total labor force, we determined the number of 15 to 44 year old hired employees.

For the projection of the average monthly salary, the projected economic growth and average inflation are taken into account. Average annual growth of monthly average salary from 2011 to 2032 is likely to be 12.2 percent, which is lower than the last four-year average annual (22.8 percent). Despite the fact that economic growth and average inflation do not directly cause a change in the salary level, these macroeconomic parameters impact the long-term salary growth.

Diagram 2: Average monthly salary growth

[12] Average projected salary at ***t*** period is calculated as the product of estimated average inflation and economic growth rates at ***t*** period times the average projected salary at ***t-1*** period. Calculation is presented in the subsection 'Wages and Incomes' (p. 13). Different estimations of Public Pension Payments are presented in the section 'Projections of Current Pension System Development' (p.15).

[13] The same assumptions are applied in calculation of average salary and number of employees with salary of above GEL 1,000 that is used in Pillar III scenarios



According to the assumption for Pillar II, participants are employees with a monthly salary over GEL 400 (before personal income tax (PIT). Specifically, these are referred to as ‗GEL 400+formal' for hired employees and ‗GEL 400+informal' for the self-employed. In order to calculate the number of ‗GEL 400+ formal' we need to know the ‗GEL 400+formal' average monthly salary level. We assumed that the formal labors' salaries are normally distributed. Knowing the average monthly salaries for the total salary basket and the standard deviation of the average monthly salaries for the years 2006 to 2010 from Geostat, we estimated the percentage of male and female employees with salaries above GEL 400. The same approach is conducted with salaries GEL 1,000 (for Pillar III).

The next step is to find out the number of ‗GEL 400+formal' employees. As stated above, we calculated the ratios of male and female hired employees with salaries above GEL 400 corresponding to the years 2006 to 2010. By using a linear regression *(in diagrams 5 and 6 we see male and female hired employees' (with salaries over GEL 400) the ratios linear trend, where in case of male R^2=0.68 and in case of female R^2=0.99)* of the stated ratios and knowing the total number of hired employees we calculated the number of hired employees with the salary above 400 GEL.

Diagram 3: Linear trend of male hired employees with salaries above GEL 400

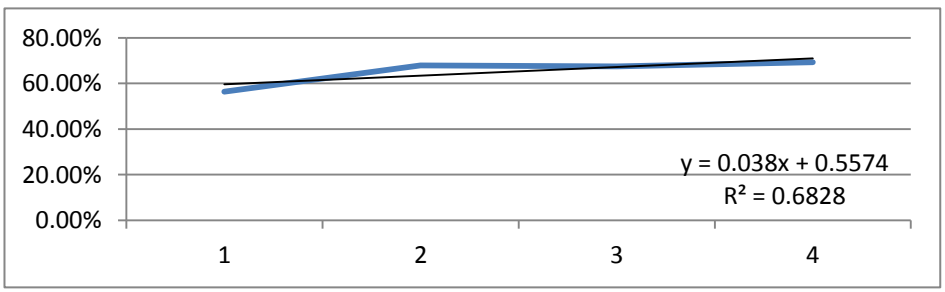
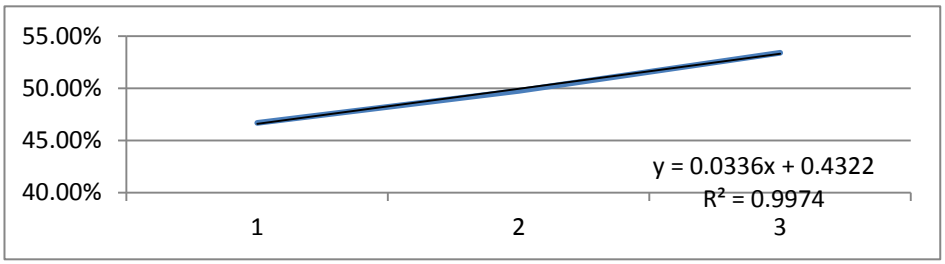


Diagram 4: Linear trend of female hired employees with salaries above GEL 400



According to the same linear equation, we proposed that 94 percent of hired male employees will have GEL 400, even more after six years, and 90 percent of females will have GEL 400, even more after 11 years.

We also need to know the average salaries for males and females with salaries above GEL 400. For the calculation of the average salary above GEL 400 for the formal sector, we used the same standard deviations of the hired employees‘ average monthly salaries between 2006–2010 that we obtained from Geostat to calculate approximate percentage of hired employees with salaries above GEL 400.

In order to calculate the mean of monthly salaries above GEL 400, we need to assume an average monthly salary below GEL 400. We consider it to be GEL 300 for male and GEL 200 for female. Using the percentage of hired employees with the salaries above GEL 400 and assumed average salary of the employees under GEL 400 (GEL 300 for male and GEL 200 for female) we have calculated the average monthly salary of the employees above GEL 400 (the calculation is shown in Annex 4, cells J60-62 in the sheet ~~„~~GEL400+Formal”).

We calculated the average monthly salary above GEL 400 in 2010 for male with the following formula:

Average monthly salary above GEL 400 =	Average monthly salary — (1 percent of male empl. with salary above GEL 400)*GEL 300/percent of male empl. with salary above GEL 400

For example:

M – Average Salary (762.9)

U – Average salary below GEL 400 (GEL 300 by our assumption)

A - Average salary over GEL 400 (that we need to find out)

U% - share of employees with a salary over GEL 400 (31% as calculated)

A% - share of employees with a salary over GEL 400 (69% as calculated)

U*U% + A*A% = M

A*A% = M - U*U%

A = (M - U*U%) / A%

A = (762.9 – 300*31%)/69%

In spite of the different factors causing low participation rates of the informal sector‘s (self-employed people) in the mandatory pension system (Pillar II), which is likewise a situation that is not always expressed in the statistical data, the participation of people in the informal sector in the system is proposed.

In order to estimate the average monthly earnings and the number of self-employed people with income over GEL 400, there was no real need to conduct all the above-mentioned assumptions and calculations with regard to the formal sector, as the statistical data of these parameters regarding the informal sector was obtainable from Geostat. Although it may not as precise and reliable, as gathering information from households has some complications, we did however, apply those data in our estimations. A full 81 percent of the self-employed

people are rural inhabitants and the rest,19 percent reside in Tbilisi as well as in small cities and towns. We have made assumption with respect to the number of self-employed participants that is only 15 percent of rural and 50 percent of urban. These self-employed participants' income will be tax incentivized for the mandatory pension system, which in average is 22 percent.

Based on the above mentioned information, we projected the yearly based total salary funds of the employees with the salary above GEL 400. We needed this information to apply to the Pillar II scenarios.

We know the number of mandatory participants (Annex 4, cells 65-67 in the sheets ~~-G~~EL400+Formal" and ~~-G~~EL400+Informal") and calculated contributions (Annex 4, cells 78-79; 84-85; and 90-91 in the sheets ~~-G~~EL400+Formal" and ~~-G~~EL400+Informal").

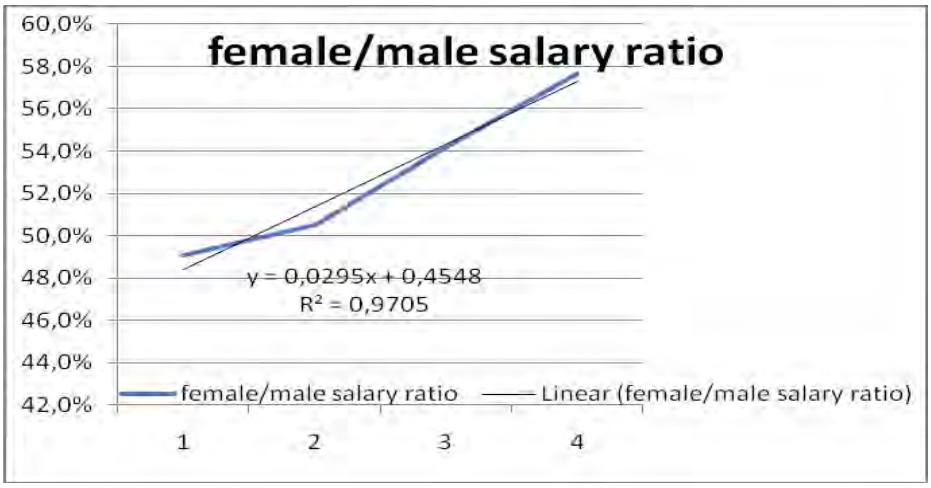
So for the total informal sector, the self-employed participants' average tax incentivized income intended for the mandatory pension system is assumed to be 22%. The number of self-employed participants is adjusted again because of the assumed participation rate, which varies in different scenarios. Net investment return is considered 6 percent and 4 percent, net for both formal and informal sectors.

WAGES AND INCOMES

The average salary growth in our projections is connected with economic growth and average inflation rates because, under normal conditions, salary growth is related to changes in these economic indicators. Due to this assumption, the calculated average annual growth of the average salary from 2011 to 2032 is about 12.2 percent. The same average for the last four years is 22.8 percent.

In order to calculate the estimated average annual salary from 2012 to 2032 for the male hired employees, we multiplied the previous year's salary with average inflation and economic growth rates, so as $W_{(t+1)}=W_{(t)}*(1+\pi_{(t+1)})*(1+g_{(t+1)})$, where π denotes a rate of average annual inflation and g – the annual economic growth. In order to make females' salary projection we used linear equation of the last four year female to male salary ratios and by using Diagram 7' (presented below), we have made linear regression of the females' salary growth. In the diagram, we see an upward trend of the female to male salary ratio. The female to male average monthly salary ratio in 2010 was 57.5 percent. Using the linear trend of the stated equation, we assumed that the ratio would be increased over nine years from 60.2 in 2011 to 83.8 percent in 2019 and will be remained constant till 2032.

Diagram 5: hired female to male salary ratio



C. FINDINGS

PROJECTIONS OF CURRENT PENSION SYSTEM DEVELOPMENT

This section reviews the current pension system and the potential impact of population aging on pension expenditures, considering the projected impact of aging.

There are three assumptions the pension payments will be calculated as:

a) Yearly adjusted to $CPI_{(t-1)}$ or to $CPI_{(t-1)}$ and economic $growth_{(t-1)}$

b) Every two years adjusted to $CPI_{(t-1)*(t-2)}$ or to $CPI_{(t-1)*(t-2)}$ and economic $growth_{(t-1)*(t-2)}$

c) Every five years adjusted to $CPI_{(t-1)*\ldots*(t-5)}$ or to $CPI_{(t-1)*\ldots*(t-5)}$ and economic $growth_{(t-1)*\ldots*(t-5)}$

Tables 8 and 9 show pension amounts taking into account the above-mentioned adjustments.

Only CPI-adjusted pension (especially those adjusted over five years) did not increase much and will be much lower than actual payments on that time.

Table 8: Pension Amounts (projection)

	2011	2012	2013	2014	2015	2020	2025	2030	2032
Yearly adjusted to CPI	100	113	121	129	136	175	222	270	292
Two years adjusted to CPI	100	100	121	121	136	167	222	259	280
Five years adjusted to CPI	100	100	100	100	100	144	184	230	280

Both, CPI and economic growth adjusted pension gives a more optimistic and realistic picture.

Table 9: Pension Amounts (projection)

	2011	2012	2013	2014	2015	2020	2025	2030	2032
Yearly adjusted to CPI and Economic Growth	100	114	131	147	165	284	480	782	950
Two years adjusted to CPI and Economic Growth	100	100	135	135	170	263	496	733	890
Five years adjusted to CPI and Economic Growth	100	100	100	100	100	191	328	550	895

Once we have made some assumptions with respect to the minimum old-age pension payments and conduct a projection of the pension-age population growth, we can calculate the estimated fund for the system. The number of pensioners is dependent on the aged population growth.

Table 10: Number of Old-age Pensioners (projection)

in thousands	2010	2011	2012	2013	2014	2015	2020	2025	2030	2032
Number of Pensioners (Male 65+, Female 60+)	**662,3**	**663,0**	**670,5**	**673,8**	**681,1**	**690,4**	**738,5**	**793,4**	**820,1**	**823,4**

By multiplying the above-shown payments with the number of pensioners, we have total expenditures:

Table 11: Pension Expenditures (In million GEL)

In million GEL	2011	2012	2013	2014	2015	2020	2025	2030	2032
Yearly adjusted to CPI	690	906	982	1 053	1 128	1 553	2 110	2 653	2 881
Two years adjusted to CPI	690	805	982	993	1 128	1 479	2 110	2 551	2 770
Five years adjusted to CPI	690	805	809	817	828	1 273	1 752	2 268	2 770

Table 12: Pension Expenditures (In million GEL)

In million GEL	2011	2012	2013	2014	2015	2020	2025	2030	2032
Yearly adjusted to CPI and economic growth	690	920	1 058	1 201	1 365	2 515	4 570	7 691	9 385
Two years adjusted to CPI and Economic Growth	690	805	1 093	1 105	1 411	2 335	4 724	7 211	8 799
Five years adjusted to CPI and Economic Growth	690	805	809	817	828	1 696	3 123	5 408	8 841

In case of a CPI-adjusted pension system, there is downscale trend of pension expenditures to Nominal GDP from 2011 to 2032, while in case of adjusting pension payments with regard to CPI and economic growth we have more positive projection during this period.

Table 13: Pension Expenditures/GDP ratio

		2011	2012	2013	2014	2015	2020	2025	2030	2032
Yearly adjusted to CPI	Pension/Nom. GDP	2,9%	3,4%	3,3%	3,2%	3,0%	2,4%	2,0%	1,5%	1,4%
Two years adjusted to CPI	Pension/Nom. GDP	2,9%	3,0%	3,3%	3,0%	3,0%	2,3%	2,0%	1,5%	1,3%
Five years adjusted to CPI	Pension/Nom. GDP	2,9%	3,0%	2,7%	2,5%	2,2%	2,0%	1,6%	1,3%	1,3%

Table 94: Pension Expenditures/GDP ratio

		2011	2012	2013	2014	2015	2020	2025	2030	2032
Yearly adjusted to CPI and Economic Growth	Pension/Nom. GDP	2,9%	3,5%	3,5%	3,6%	3,7%	3,9%	4,3%	4,4%	4,4%
Two years adjusted to CPI and Economic Growth	Pension/Nom. GDP	2,9%	3,0%	3,7%	3,3%	3,8%	3,7%	4,4%	4,1%	4,2%
Five years adjusted to CPI and Economic Growth	Pension/Nom. GDP	2,9%	3,0%	2,7%	2,5%	2,2%	2,7%	2,9%	3,1%	4,2%

The projection of the number of pensioners in Georgia has a positive trend and will be increased as the population of elderly is growing. If we take into account that the minimum

nominal pension payment after September 15, 2011 is GEL 100 per pensioner, the amount of pension expenditures in will likewise exist in the future.

There is a positive trend of the number of pensioners from 2012 to 2032. The shift of nominal pension level also increases the necessary funding from the budget. The ratio of projected to CPI-adjusted pension expenditures to nominal GDP is declining (Table 13) while the ratio of projected pension expenditures adjusted to CPI and economic growth to nominal GDP is rising (Table 14).

PILLAR II[14]

A predictable consequence of population aging in Georgia, as in many Eastern European and former Soviet countries, age-pension spending is expected to rise. This is an especially sensitive issue of in countries with substantial pension spending.

Pillar II as well as Pillar III pension scenarios are based on the past and current statistical data of Georgian socioeconomic indicators and related analytical projections of these indicators. Calculations (assumptions, estimations, projections, etc.) have been conducted in an MS Office Excel program. To increase clarity, the Excel workbook is attached to this report (Annex 4).

The numerous result tables that are the outputs of the calculations of the scenarios are presented in Annex 1.

PILLAR III[15]

The current voluntary private pension schemes do not have, and are not designed to have, the ability to generate long-term capital for long-term investments. This is primarily due to the ability of the participants' to access their savings and withdraw from the accumulated sources for purposes other than retirement income The amount of voluntary pension fund assets, at this time, is very insignificant making is very difficult to factor in any type of investment decisions. It is also remarkable that there is no tax incentive with respect to these assets.

Table 15: Private Pension schemes in 2010

	Founder	Contributions (GEL)	Number of valid agreements as at 31/12/2010	Number of participants	Number of participants, receiving pension	Pension paid (GEL)	Amounts withdrawn from pension schemes	Pension reserves as at 31/12/2010 (GEL)	Income from investment of pension reserves
1	JSC Insurance Company Aldagi BCI	1 662 570	217	5 412	0	0	745 111	4 949 031	512 158
2	JSC GPI Holding	696 320	11 440	11 429	0	0	415 215	2 712 945	238 320
3	JSC Insurance company Imedi-L	34 398	7	38	0	0	192	253 374	24 571
4	Insurance Company TAO Ltd	0	0	0	0	0	40 105	0	0
5	International Insurance Company IRAO Ltd	0	0	0	0	0	0	0	0
6	Insurance Company Partner Ltd	0	0	0	0	0	0	0	0
	Total	**2 393 288**	**11 664**	**16 879**	**0**	**0**	**1 200 623**	**7 915 350**	**775 049**

[14] Pillar II scenarios are presented in Annex 1. All calculations are presented in Annex 4.

[15] Pillar III scenarios are presented in Annex 2 (withdrawals from accumulated assets) and Annex 2-2 (withdrawals from annual contributions only). All calculations are presented in Annex 4.

D. CONSIDERATIONS

- There is a positive trend of the number of pensioners projected from 2012 to 2032. The increase of nominal pension also increases the needed expenditures from budget. As the ratio of CPI-adjusted pension expenditures to Nominal GDP is declining *(Table 13)* and the ratio of CPI and economic growth adjusted pension expenditures to Nominal GDP is rising *(Table 14)* it can be calculated to assume that public pension levels can be increased by more than the average inflation rate.
- The projected population growth for the 20-year period beginning in 2012 is mainly evident in the population groups ‗below 15 year olds', '45 to 64 year olds' and ‗over 65 years old'. It is expected that the 15 to 44 year-old' population group will be declining until 2037 on average by about 0.8 percent and the 15 to 44 years-old population will be decreasing until 2037. As projected, there will be a downward trend of the population for the age group below 15 years. This down-sliding dynamic between 2012–2036 is expected to negatively reflect to the dynamic of the 45 to 64 age group, which is projected to start decreasing from 2037 until 2057. From its side, there will be a declining pension-age population after 2055, which has risen since 2013 (it is shown in Table 6).
- The average projected salary growth is connected with economic growth and average inflation rates as salary growth should be related to these economic indicators. Due to this assumption, the average annual growth of the average salary from 2011 to 2032 is about 12 percent. The same average for the last four years (2007-2010) is 22.7 percent.
- A solid amount of net pension assets is accumulated in Pillar II scenarios, which has even reached 32.6 percent of GDP at the end of 2032. Pillar II can accumulate a source of investing to different financial instruments. Although there is number of reasons, which may derive uncertain outcomes in the future, the country will not meet the system requirements.
- There is another source for accumulation pension assets once the government payrolls 1/2th (i.e. 10 percentage points) or 1/4th (i.e. 5 percentage points) of PIT towards the individual accumulation account of the pension system participants (Table 16).

Table 16: Government contribution to public pension system

	2012	2015	2020	2025	2030	2032
PIT	1 593	2 223	3 823	6 406	10 430	12 676
GOG Contribution 1/4 PIT	398	556	956	1 602	2 608	3 169
GOG Contribution 1/2 PIT	796	1 111	1 912	3 203	5 215	6 338

E. PROS AND CONS OF THE PENSION SYSTEMS

	Public Pension/Current System	Pillar II	Pillar III
Advantages	• Easy to implement • Sustainable pension payments • Can be adjusted to inflation • Low administrative costs	• Accumulated pension savings — source for investment • Income-related pension payments	• Available for all categories • Relatively easy to supervise • Not strictly Income-related contributions and pension payments
Disadvantages (risk factors)	• Depending on economic, political and other factors • Not adequate to the income • Pension payments regardless of work history • No availability of pension savings accumulation	• Long-term supervision is needed • Lack of investment infrastructure • Possible unpredictable inflation • Unpredictable risk factors (pension scheme‘s failure; company bankruptcy) • Problems with participation of informal sector • Manipulation factors (tax evasion, gaps in labor contract, etc.) — between employer-employee • Increased administrative and compliance costs • Inequality regarding to low-income people • Pension contributions can be invested in other instruments • Constrains (penalties and fees) with regard to early withdrawal	• Small amount of accumulated pension assets • Lack of investment infrastructure • Possible unpredictable inflation • Unpredictable risk factors (pension scheme‘s failure; company bankruptcy) • Long-term supervision is needed

F. ADDITIONAL INFORMATION

ANNEX 1: PILLAR II SCENARIOS

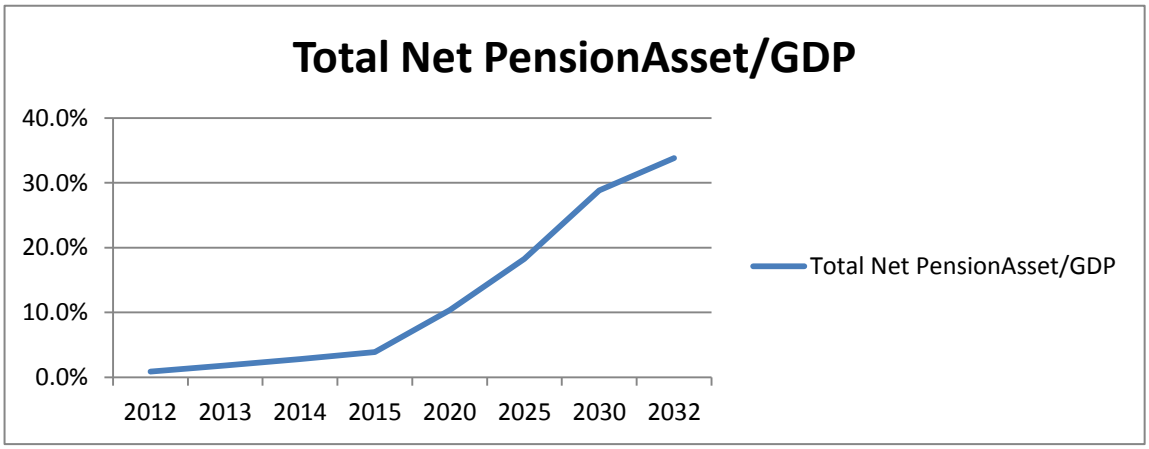
- Scenario 1a– Formal Sector
  - Mandatory participation: 15 years to 45 years old on the effective date of the pension and with monthly gross salary or wage of GEL 400 or more;
  - Contribution rate: 7.5% percent of salary or wage;
  - Net investment return of: 6% compounding quarterly;
  - Amounts of PIT incentive.[16][17]

Table 1: Scenario 1a

Mln. GEL. Formal Sector-Pillar II, Scenario 1 a								
R=6%, Contribution 7,5%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	231	285	350	428	976	1 867	3 367	4 242
Investment income	9	26	47	74	336	935	2 145	2 902
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	239	550	947	1 449	6 180	16 883	38 386	51 809
Net Pension assets / GDP	0,9%	1,8%	2,8%	3,9%	9,7%	15,8%	22,0%	24,5%
Amount of PIT incentives (Accumulated) EEE	48	110	189	290	1 236	3 377	7 677	10 362
Amount of PIT incentives (Accumulated) EET	48	110	189	290	1 236	3 377	7 677	10 362

During the next 20 years the net total pension assets will be increased till 49 bln. GEL and consists of 33.8 percent of projected nominal GDP.

Diagram 1: Scenario 1a



- Scenario 1b – Formal Sector

[16] EEE –Exempt, Exempt, Exempt stands for contribution, earnings and withdrawals tax exemptions

[17] EET – Exempt, Exempt, Taxed means exemption of contribution and earnings and taxed withdrawals

- Mandatory participation: 15 years to 45 years old on the effective date of the pension and with monthly gross salary or wage of GEL 400 or more;
- Contribution rate: 7.5% percent of salary or wage;
- Net investment return of: 4%, compounding quarterly;
- Amount of PIT incentive.

Table 2: Scenario 1b

Mln. GEL. Formal Sector-Pillar II, Scenario 1 b								
R=4%, Contribution 7,5%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	231	285	350	428	976	1 867	3 367	4 242
Investment income	6	17	31	48	209	563	1 253	1 675
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	236	538	919	1 395	5 733	15 146	33 376	44 523
Net Pension assets / GDP	0,9%	1,8%	2,8%	3,8%	9,0%	14,1%	19,1%	21,0%
Amount of PIT incentives (Accumulated) EEE	47	108	184	279	1 147	3 029	6 675	8 905
Amount of PIT incentives (Accumulated) EET	47	108	184	279	1 147	3 029	6 675	8 905

- Scenario 2a – Formal Sector
  - Mandatory participation: 15 years to 45 years old on the effective date of the pension and with monthly gross salary or wage of GEL 400 or more;
  - Contribution rate: 10% percent of salary or wage;
  - Net investment return of: 6%, compounding quarterly;
  - Amount of PIT incentive.

Table 3: Scenario 2a

Mln. GEL. Formal Sector-Pillar II, Scenario 2a								
R=6%, Contribution 10%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	307	380	467	570	1 302	2 490	4 490	5 656
Investment income	12	34	63	99	448	1 247	2 860	3 870
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	319	733	1 263	1 933	8 240	22 510	51 181	69 078
Net Pension assets / GDP	1,2%	2,5%	3,8%	5,2%	12,9%	21,0%	29,4%	32,6%
Amount of PIT incentives (Accumulated) EEE	64	147	253	387	1 648	4 502	10 236	13 816
Amount of PIT incentives (Accumulated) EET	64	147	253	387	1 648	4 502	10 236	13 816

- Scenario 2b – Formal Sector
  - Mandatory participation: 15 years to 45 years old on the effective date of the pension and with monthly gross salary or wage of GEL 400 or more;
  - Contribution rate: 10% percent of salary or wage;
  - Net investment return of: 4%, compounding quarterly;
  - Amount of PIT incentive.

Table 4: Scenario 2b

Mln. GEL. Formal Sector-Pillar II, Scenario 2b								
R=4%, Contribution 10%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	307	380	467	570	1 302	2 490	4 490	5 656
Investment income	8	22	41	64	279	751	1 670	2 233
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	315	718	1 226	1 860	7 645	20 195	44 501	59 363
Net Pension assets / GDP	1,2%	2,4%	3,7%	5,0%	12,0%	18,9%	25,5%	28,0%
Amount of PIT incentives (Accumulated) EEE	63	144	245	372	1 529	4 039	8 900	11 873
Amount of PIT incentives (Accumulated) EET	63	144	245	372	1 529	4 039	8 900	11 873

- Scenario 3a – Formal Sector
  - Mandatory participation age: 15 years to 45 years old on the effective date of the pension;
  - Contribution rate: 2% in 2012. 3% in 2013; 5% on 2014; 7% in 2015, 10% in 2016, of salary or wage;
  - Net investment return of: (a) 6%, compounding quarterly;
  - Amount of PIT incentive

Table 5: Scenario 3a

Mln. GEL. Formal Sector-Pillar II, Scenario 3a								
R=6%, Contr. 2012-2%; 2013-3%; 2014-5%; 2015-7%; 2016-2032-10%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	61	114	234	399	1 302	2 490	4 490	5 656
Investment income	2	8	20	42	366	1 137	2 712	3 702
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	64	186	440	881	6 824	20 603	48 612	66 185
Net Pension assets / GDP	0,2%	0,6%	1,3%	2,4%	10,7%	19,2%	27,9%	31,2%
Amount of PIT incentives (Accumulated) EEE	13	37	88	176	1 365	4 121	9 722	13 237
Amount of PIT incentives (Accumulated) EET	13	37	88	176	1 365	4 121	9 722	13 237

- Scenario 3b – Formal Sector
  - Mandatory participation age: 15 years to 45 years old on the effective date of the pension;
  - Contribution rate: 2% in 2012. 3% in 2013; 5% on 2014; 7% in 2015, 10% in 2016, of salary or wage;
  - Net investment return of: (a) 4%, compounding quarterly;
  - Amount of PIT incentive

Table 6: Scenario 3b

Mln. GEL. Formal Sector-Pillar II, Scenario 3b								
R=4%, Contr. 2012-2%; 2013-3%; 2014-5%; 2015-7%; 2016-2032-10%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	61	114	234	399	1 302	2 490	4 490	5 656
Investment income	2	5	13	28	231	693	1 599	2 156
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	63	182	429	856	6 419	18 700	42 677	57 388
Net Pension assets / GDP	0,2%	0,6%	1,3%	2,3%	10,0%	17,5%	24,5%	27,1%
Amount of PIT incentives (Accumulated) EEE	13	36	86	171	1 284	3 740	8 535	11 478
Amount of PIT incentives (Accumulated) EET	13	36	86	171	1 284	3 740	8 535	11 478

- Scenario 4a – Informal Sector
  - Mandatory participation age: 25 years to 45 years old on the effective date of the pension;
  - Participation rate: 10% in 2012, 20% in 2013, 40% in 2014, 60% in 2015; 90% in 2016
  - Contribution rate: 7.5% of taxable income;
  - Net investment return of: 6%, compounding quarterly;
  - Amount of PIT incentive

Table 7: Scenario 4a

Mln. GEL. Informal Sector-Pillar II, Scenario 4a								
R=6%, Contribution 7,5%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	5	12	32	63	285	646	1 337	1 772
Investment income	0	1	2	6	70	249	667	949
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	5	17	52	120	1 311	4 553	12 036	17 094
Net Pension assets / GDP	0,02%	0,06%	0,15%	0,32%	2,05%	4,25%	6,91%	8,07%
Amount of PIT incentives (Accumulated) EEE	1	3	10	24	262	911	2 407	3 419
Amount of PIT incentives (Accumulated) EET	1	3	10	24	262	911	2 407	3 419

- Scenario 4b – Informal Sector
  - Mandatory participation age: 25 years to 45 years old on the effective date of the pension;
  - Participation rate: 10% in 2012, 20% in 2013, 40% in 2014, 60% in 2015; 90% in 2016
  - Contribution rate: 7.5% of taxable income;
  - Net investment return of: 4%, compounding quarterly;
  - Amount of PIT incentive

Table 8: Scenario 4b

Mln. GEL. Informal Sector-Pillar II, Scenario 4b								
R=4%, Contribution 7,5%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	5	12	32	63	285	646	1 337	1 772
Investment income	0	0	2	4	44	153	398	562
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	5	17	51	117	1 241	4 171	10 716	15 064
Net Pension assets / GDP	0,02%	0,06%	0,15%	0,32%	1,94%	3,90%	6,15%	7,11%
Amount of PIT incentives (Accumulated) EEE	1	3	10	23	248	834	2 143	3 013
Amount of PIT incentives (Accumulated) EET	1	3	10	23	248	834	2 143	3 013

- Scenario 5a – Informal Sector
  - Mandatory participation age: 25 years to 45 years old on the effective date of the pension;
  - Participation rate: 10% in 2012, 20% in 2013, 40% in 2014, 60% in 2015; 90% in 2016

- Contribution rate: 10% of taxable income;
- Net investment return of: 6%, compounding quarterly;
- Amount of PIT incentive

Table 9: Scenario 5a

Mln. GEL. Informal Sector-Pillar II, Scenario 5a								
R=6%, Contribution 10%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	6	16	42	84	380	861	1 782	2 363
Investment income	0	1	3	7	93	332	889	1 266
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	6	23	69	160	1 748	6 071	16 048	22 793
Net Pension assets / GDP	0,0%	0,1%	0,2%	0,4%	2,7%	5,7%	9,2%	10,8%
Amount of PIT incentives (Accumulated) EE	1	5	14	32	350	1 214	3 210	4 559
Amount of PIT incentives (Accumulated) EET	1	5	14	32	350	1 214	3 210	4 559

- Scenario 5b – Informal Sector
  - Mandatory participation age: 25 years to 45 years old on the effective date of the pension;
  - Participation rate: 10% in 2012, 20% in 2013, 40% in 2014, 60% in 2015; 90% in 2016
  - Contribution rate: 10% of taxable income;
  - Net investment return of: 4%, compounding quarterly;
  - Amount of PIT incentive

Table 10: Scenario 5b

Mln. GEL. Informal Sector-Pillar II, Scenario 5b								
R=4%, Contribution 10%	**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions	6	16	42	84	380	861	1 782	2 363
Investment income	0	1	2	5	59	204	531	749
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	6	23	67	156	1 654	5 562	14 288	20 085
Net Pension assets / GDP	0,0%	0,1%	0,2%	0,4%	2,6%	5,2%	8,2%	9,5%
Amount of PIT incentives (Accumulated) EE	1	5	13	31	331	1 112	2 858	4 017
Amount of PIT incentives (Accumulated) EET	1	5	13	31	331	1 112	2 858	4 017

- Scenario 6a – Informal Sector
  - Mandatory participation age: 25 years to 45 years old on the effective date of the pension;
  - Participation rate: 10% in 2012, 20% in 2013, 40% in 2014, 60% in 2015; 90% in 2016
  - Contribution rate: 2% in 2012. 3% in 2013; 5% on 2014; 7% in 2015, 10% in 2016, of taxable income;
  - Net investment return of: 6%, compounding quarterly;
  - Amount of PIT incentive

Table 11: Scenario 6a

Mln. GEL. Informal Sector-Pillar II, Scenario 6a								
R=6%, Contr. 2012-2%; 2013-3%; 2014-5%; 2015-7%; 2016-2032-10%	2012	2013	2014	2015	2020	2025	2030	2032
Contributions	1	5	21	59	380	861	1,782	2,363
Investment income	0	0	1	4	87	325	879	1,255
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	1	6	29	91	1,656	5,946	15,880	22,604
Net Pension assets / GDP	0.00%	0.02%	0.1%	0.2%	2.6%	5.6%	9.1%	10.7%
Amount of PIT incentives (Accumulated) EE	0	1	6	18	331	1,189	3,176	4,521
Amount of PIT incentives (Accumulated) EET	0	1	6	18	331	1,189	3,176	4,521

- Scenario 6b – Informal Sector
  - Mandatory participation age: 25 years to 45 years old on the effective date of the pension;
  - Participation rate: 10% in 2012, 20% in 2013, 40% in 2014, 60% in 2015; 90% in 2016
  - Contribution rate: 2% in 2012. 3% in 2013; 5% on 2014; 7% in 2015, 10% in 2016, of taxable income;
  - Net investment return of: 4%, compounding quarterly;
  - Amount of PIT incentive

Table 12: Scenario 6b

Mln. GEL. Informal Sector-Pillar II, Scenario 6b								
R=4%, Contr. 2012-2%; 2013-3%; 2014-5%; 2015-7%; 2016-2032-10%	2012	2013	2014	2015	2020	2025	2030	2032
Contributions	1	5	21	59	380	861	1 782	2 363
Investment income	0	0	1	3	56	200	527	744
Pension payments	-	-	-	-	-	-	-	-
Net Pension assets	1	6	28	90	1 573	5 463	14 167	19 954
Net Pension assets / GDP	0,00%	0,02%	0,1%	0,2%	2,5%	5,1%	8,1%	9,4%
Amount of PIT incentives (Accumulated) EE	0	1	6	18	315	1 093	2 833	3 991
Amount of PIT incentives (Accumulated) EET	0	1	6	18	315	1 093	2 833	3 991

ANNEX 2: PILLAR III SCENARIOS

Scenario 1: Voluntary Pension-Formal Sector

1. Participant's monthly income: GEL 1000 or more
2. The average amount of annual contribution: 1000
3. Net investment return of: 6% compounding quarterly
4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from accumulated assets

Table 1: Voluntary Pension-Formal Sector, Scenario 1

in Mln GEL. Formal Sector-Voluntary-Scenario-1									
Withdrawal rate 30%. R=6%. Annual contribution GEL 1000		2012	2013	2014	2015	2020	2025	2030	2032
Contributions		5.0	11.4	19.5	29.1	61.7	77.0	88.7	91.9
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.2	0.7	1.4	2.5	9.8	14.3	17.8	18.8
Withdrawals		-	1.6	4.7	9.6	57.0	81.1	99.6	104.8
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		5.2	15.7	31.9	53.9	190.0	270.2	332.1	349.5
Net Pension assets / GDP		0.02%	0.05%	0.1%	0.1%	0.3%	0.3%	0.2%	0.2%
Amount of PIT incentives (Accumulated) EEE		1.0	3.5	7.6	14.0	75.2	158.4	260.1	303.9
Amount of PIT incentives (Accumulated) EET		1.0	3.1	6.4	10.8	38.0	54.0	66.4	69.9

Scenario 2: *Voluntary Pension-Formal Sector*

1. Participant's monthly income: GEL 1000 or more
2. Contribution Rate: 7.5%
3. Net investment return of: 6% compounding quarterly
4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from accumulated assets

Table 210: Voluntary Pension-Formal Sector, Scenario 2

in Mln GEL. Formal Sector-Voluntary-Scenario-2									
Withdrawal rate 30%. R=6%. Annual contribution Rate 7,5%		**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions		7.7	19.7	37.5	62.6	225.9	467.8	874.9	1,102.0
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.3	1.1	2.6	5.0	30.1	69.6	138.2	176.0
Withdrawals		-	2.4	7.9	17.6	179.3	406.2	796.8	1,012.9
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		8.0	26.4	58.6	108.6	597.7	1,354.1	2,656.1	3,376.3
Net Pension assets / GDP		0.03%	0.09%	0.18%	0.29%	0.94%	1.26%	1.52%	1.59%
Amount of PIT incentives (Accumulated) EEE		1.6	5.8	13.8	27.3	212.0	623.1	1,432.0	1,915.2
Amount of PIT incentives (Accumulated) EET		1.6	5.3	11.7	21.7	119.5	270.8	531.2	675.3

Scenario 3: *Voluntary Pension-Informal Sector*

1. Participant's monthly income: GEL 1000 or more
2. The average amount of annual contribution: 1000
3. Net investment return of: 6% compounding quarterly
4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from accumulated assets

Table 311: Voluntary Pension-Informal Sector, Scenario 3

in Mln GEL. Informal Sector-Voluntary-Scenario-1									
Withdrawal rate 30% . R=6%. Annual contribution GEL1000		**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions		4.0	9.4	16.2	24.9	60.3	78.7	89.9	93.5
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.2	0.5	1.2	2.1	3.4	5.0	6.6	8.1
Withdrawals		-	1.3	3.9	7.9	53.7	81.5	100.8	106.3
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		4.2	12.9	26.4	45.5	179.1	271.8	335.8	354.3
Net Pension assets / GDP		0.02%	0.04%	0.08%	0.12%	0.28%	0.25%	0.19%	0.17%
Amount of PIT incentives (Accumulated) EEE		0.8	2.8	6.3	11.7	68.8	152.8	255.7	300.3
Amount of PIT incentives (Accumulated) EET		0.8	2.6	5.3	9.1	35.8	54.4	67.2	70.9

Scenario 4: *Voluntary Pension-Informal Sector*

1. Participant's monthly income: GEL 1000 or more
2. Contribution Rate: 5%
3. Net investment return of: 6% compounding quarterly
4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from accumulated assets

Table 4: Voluntary Pension-Informal Sector, Scenario 4

in Mln GEL. Informal Sector-Voluntary-Scenario-2									
Withdrawal rate 30% . R=6%. Annual contribution rate 5%		**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions		4.8	12.5	24.1	41.2	171.1	376.4	699.9	885.1
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.2	0.7	1.7	3.2	22.2	55.3	110.4	140.9
Withdrawals		-	1.5	5.0	11.2	131.4	321.6	636.1	811.0
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		5.0	16.6	37.4	70.7	437.9	1,071.9	2,120.3	2,703.4
Net Pension assets / GDP		0.02%	0.06%	0.11%	0.19%	0.69%	1.00%	1.22%	1.28%
Amount of PIT incentives (Accumulated) EEE		1.0	3.6	8.8	17.7	151.2	476.6	1,123.0	1,510.6
Amount of PIT incentives (Accumulated) EET		1.0	3.3	7.5	14.1	87.6	214.4	424.1	540.7

ANNEX 2-2: PILLAR III SCENARIOS

Scenario 1: *Voluntary Pension-Formal Sector*

1. Participant's monthly income: GEL 1000 or more
2. The average amount of annual contribution: 1000
3. Net investment return of: 6% compounding quarterly
4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from annual contributions

Table 1: Voluntary Pension-Formal Sector, Scenario 1

in Mln GEL. Formal Sector-Voluntary-Scenario-1(2)									
Withdrawal rate 30%. R=6%. Annual contribution GEL 1000		2012	2013	2014	2015	2020	2025	2030	2032
Contributions		5.0	11.4	19.5	29.1	61.7	77.0	88.7	91.9
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.2	0.7	1.5	2.8	16.7	39.5	73.8	91.2
Withdrawals		-	1.5	3.4	5.8	18.5	23.1	26.6	27.6
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		5.2	15.8	33.3	59.4	310.7	710.2	1,307.0	1,608.8
Net Pension assets / GDP		0.02%	0.05%	0.1%	0.2%	0.5%	0.7%	0.7%	0.8%
Amount of PIT incentives (Accumulated) EEE		1.0	3.5	7.7	14.0	78.6	178.8	322.9	394.0
Amount of PIT incentives (Accumulated) EET		1.0	3.2	6.7	11.9	62.1	142.0	261.4	321.8

Scenario 2: *Voluntary Pension-Formal Sector*

1. Participant's monthly income: GEL 1000 or more
2. Contribution Rate: 7.5%
3. Net investment return of: 6% compounding quarterly
4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from annual contributions

Table 212: Voluntary Pension-Formal Sector, Scenario 2

in Mln GEL. Formal Sector-Voluntary-Scenario-2(2)									
Withdrawal rate 30%. R=6%. Annual contribution Rate 7,5%		**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions		7.7	19.7	37.5	62.6	225.9	467.8	874.9	1,102.0
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.3	1.1	2.7	5.5	46.0	146.8	364.0	501.4
Withdrawals		-	2.3	5.9	11.3	67.8	140.4	262.5	330.6
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		8.0	26.5	60.8	117.7	877.3	2,706.0	6,605.3	9,061.9
Net Pension assets / GDP		0.03%	0.09%	0.18%	0.32%	1.37%	2.53%	3.79%	4.28%
Amount of PIT incentives (Accumulated) EEE		1.6	5.8	13.8	27.4	219.2	678.2	1,643.8	2,246.5
Amount of PIT incentives (Accumulated) EET		1.6	5.3	12.2	23.5	175.5	541.2	1,321.1	1,812.4

Scenario 3: *Voluntary Pension-Informal Sector*

1. Participant's monthly income: GEL 1000 or more
2. The average amount of annual contribution: 1000
3. Net investment return of: 6% compounding quarterly

4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from annual contributions

Table 313: Voluntary Pension-Informal Sector, Scenario 3

in Mln GEL. Informal Sector-Voluntary-Scenario-1-2									
Withdrawal rate 30% . R=6%. Annual contribution GEL1000		**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions		4.0	9.4	16.2	24.9	60.3	78.7	89.9	93.5
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.2	0.5	1.3	2.4	4.0	6.3	8.9	11.9
Withdrawals		-	1.2	2.8	4.9	18.1	23.6	27.0	28.1
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		4.2	12.9	27.6	49.9	283.9	678.7	1,268.6	1,568.0
Net Pension assets / GDP		0.02%	0.04%	0.08%	0.13%	0.44%	0.63%	0.73%	0.74%
Amount of PIT incentives (Accumulated) EEE		0.8	2.8	6.3	11.8	71.6	170.9	314.1	384.8
Amount of PIT incentives (Accumulated) EET		0.8	2.6	5.5	10.0	56.8	135.7	253.7	313.6

Scenario 4: *Voluntary Pension-Informal Sector*

1. Participant's monthly income: GEL 1000 or more
2. Contribution Rate: 5%
3. Net investment return of: 6% compounding quarterly
4. PIT incentive: 100% of the premium paid
5. Withdrawal rate: 30% from annual contributions

Table 4: Voluntary Pension-Informal Sector, Scenario 4

in Mln GEL. Informal Sector-Voluntary-Scenario-2-2									
Withdrawal rate 30% . R=6%. Annual contribution rate 5%		**2012**	**2013**	**2014**	**2015**	**2020**	**2025**	**2030**	**2032**
Contributions		4.8	12.5	24.1	41.2	171.1	376.4	699.9	885.1
Participation Rate		5%	10%	15%	20%	30%	30%	30%	30%
Investment income		0.2	0.7	1.7	3.6	32.7	111.2	282.6	391.6
Withdrawals		-	1.4	3.7	7.2	51.3	112.9	210.0	265.5
Pension payments		-	-	-	-	-	-	-	-
Net Pension assets		5.0	16.7	38.8	76.3	626.1	2,056.6	5,135.7	7,087.0
Net Pension assets / GDP		0.02%	0.06%	0.12%	0.21%	0.98%	1.92%	2.95%	3.35%
Amount of PIT incentives (Accumulated) EEE		1.0	3.6	8.8	17.7	155.9	515.1	1,279.5	1,759.0
Amount of PIT incentives (Accumulated) EET		1.0	3.3	7.8	15.3	125.2	411.3	1,027.1	1,417.4

ANNEX 3: PENSION PAYMENTS[18]

Pension payments on per GEL 1000 savings and for all system accumulated asset by 2032

Table 1

5 year Termed Pension Payments							
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**Total**
Savings accumulation	1 000						
Rate of Return	6%						
period in month	60						
Monthly payment per '000 of savings	19	231	231	231	231	231	**1 154**
Contribution rate	7,5%						
Total Pension Payments from total asset, mln	51 809	11 960	11 960	11 960	11 960	11 960	**59 798**
5 year Termed Pension Payments							
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**Total**
Savings accumulation	1 000						
Rate of Return	8%						
period	60						
Monthly payment per '000 of savings	20	242	242	242	242	242	**1 209**
Contribution rate	7,5%						
Total Pension Payments from total asset, mln	51 809	12 522	12 522	12 522	12 522	12 522	**62 612**

[18] Formal sector only

Table 2

10 year Termed Pension Payments												
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**Total**
Savings accumulation	1 000											
Rate of Return	6%											
period in month	120											
Monthly payment per '000 of savings	11	133	133	133	133	133	133	133	133	133	133	**1 326**
Contribution rate	7,5%											
Total Pension Payments from total asset, mln	51 809	6 868	6 868	6 868	6 868	6 868	6 868	6 868	6 868	6 868	6 868	**68 679**
10 year Termed Pension Payments												
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**Total**
Savings accumulation	1 000											
Rate of Return	8%											
period in month	120											
Monthly payment per '000 of savings	12	145	145	145	145	145	145	145	145	145	145	**1 446**
Contribution rate	7,5%											
Total Pension Payments from total asset, mln	51 809	7 493	7 493	7 493	7 493	7 493	7 493	7 493	7 493	7 493	7 493	**74 931**

Table 3

15 year Termed Pension Payments																	
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**2 043**	2 044	2 045	2 046	2 047	**Total**
Savings accumulation	1 000																
Rate of Return	6%																
period in month	180																
Monthly payment per '000 of savings	8	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	**1 511**
Contribution rate	8%																
Total Pension Payments from total asset, mln	51 809	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	5 220	**78 303**
15 year Termed Pension Payments																	
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**2 043**	2 044	2 045	2 046	2 047	**Total**
Savings accumulation	1 000																
Rate of Return	8%																
period in month	180																
Monthly payment per '000 of savings	9	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	**1 709**
Contribution rate	7,5%																
Total Pension Payments from total asset, mln	51 809	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	5 902	**88 530**

Table 4[19]

Life Annuity. By Geostat longevity table 14 years is taken for male																
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**2 043**	**2 044**	**2 045**	**2 046**	**Total**
Savings accumulation	1 000															
Rate of Return	6%															
period in month	168															
Monthly payment per '000 of savings	9	105	105	105	105	105	105	105	105	105	105	105	105	105	105	**1 473**
Contribution rate	7,5%															
Total Pension Payments from total asset, mln	**51 809**	5 451	5 451	5 451	5 451	5 451	5 451	5 451	5 451	5 451	5 451	5 451	5 451	5 451	5 451	**76 320**
Life Annuity. By Geostat longevity table 14 years is taken for male																
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**2 043**	**2 044**	**2 045**	**2 046**	**Total**
Savings accumulation	1 000															
Rate of Return	8%															
period in month	168															
Monthly payment per '000 of savings	10	118	118	118	118	118	118	118	118	118	118	118	118	118	118	**1 654**
Contribution rate	7,5%															
Total Pension Payments from total asset, mln	**51 809**	6 122	6 122	6 122	6 122	6 122	6 122	6 122	6 122	6 122	6 122	6 122	6 122	6 122	6 122	**85 712**

[19] Based on Geostat longevity table, 14 years lifetime is considered for male

Table 5[20]

Life Annuity. By Geostat longevity table 18 years is taken for female																				
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**2 043**	**2 044**	**2 045**	**2 046**	**2 047**	**2 048**	**2 049**	**2 050**	**Total**
Savings accumulation	1 000																			
Rate of Return	6%																			
period in month	216																			
Monthly payment per '000 of savings	8	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	**1 629**
Contribution rate	7,5%																			
Total Pension Payments from total asset, mln	51 809	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	4 690	**84 422**
Life Annuity. By Geostat longevity table 18 years is taken for female																				
	2 032	**2 033**	**2 034**	**2 035**	**2 036**	**2 037**	**2 038**	**2 039**	**2 040**	**2 041**	**2 042**	**2 043**	**2 044**	**2 045**	**2 046**	**2 047**	**2 048**	**2 049**	**2 050**	**Total**
Savings accumulation	1 000																			
Rate of Return	8%																			
period in month	216																			
Monthly payment per '000 of savings	10	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	**2 097**
Contribution rate	7,5%																			
Total Pension Payments from total asset, mln	51 809	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	6 037	**108 663**

[20] Based on Geostat longevity table, 18 years lifetime is considered for female

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