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THE EFFECT OF NET FOREIGN ASSETS ON SAVING RATE

Observing empirical data we find that many countries try to delay the decision of increasing saving rate in order to avoid a decrease of the living standards. However the delay leads a deterioration of countries financial stability.

We present a simple theoretical model that connects between countries' saving rate and their net foreign assets. Using cross section data set of 135 countries in 2010 we estimated the econometric relation between saving rate in 2010 as dependent variable and two explanatory variables: the current account in 2010 and the aggregated current account during 1980-2010. Our findings show that industrial countries in a bad financial state tend to decrease their saving rate as external debt is larger causing to deterioration in external debt while countries with good financial state tend to increase their saving rate and the tendency increase as financial state becomes better. Only in countries with a very large external debt saving rate tends to grow. The results point that gross foreign debt will keep increasing and will worsen world financial state causing increased risk of getting into a world crisis.

Key words: foreign assets, saving rates, living standards

1. Introduction

Basic economic theory claims that capital will flow from countries with low marginal product of capital into countries with high marginal product (or from developed countries with high per-capita level of capital into developing countries with low per-capita level of capital).

However, according to Eswar, Raghuram, & Arvind, (2007) stylizes facts shows that in contrast to the neoclassical theory capital is not flowing from rich to poor countries, on the contrary, in the years previous to 2007 it seems that capital makes the opposite movement. In addition one would expect flow of capital, to fastest growing developing countries, in greater intensity then to countries with low growth rate. As it turns out according to Eswar et al., these are not the facts. Particularly, China, the fastest growing developing country, runs a surplus in its current account for the previous years to 2004. During the

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years 2000 to 2004 high growth countries exported significant amount of capital while the low growth countries received a significant amount. Moreover, looking at the correlation between long run growth in nonindustrial countries and the current account balance they reveal a positive correlation (not negative as one would expect). The explanation the researcher offer is that poor countries do not have the financial system that can easily absorb and ramp investment up substantially. Secondly, domestic saving is growing substantially in poor countries that are growing rapidly because it takes a while until households respond in rising consumption to the rising income. Gruber and Kamin (2007) tried to explain the large surpluses in Asia's current accounts and the large deficit in U.S. current accounts in the years previous to 2007. Estimating a regression model that includes classical explanatory variables identified in the literature (per capita income, output growth, fiscal balances, net foreign assets and economic openness) they got poor regression result. After adding the financial crisis's as an explanatory variables it largely improved the explanation to the emergence of developing Asia's current account surpluses. However they failed to explain why those Asians' surpluses ended up mainly in U.S deficit rather than being spread more evenly throughout the world. Ferrucci and Miralles (2007) examined the drivers of private savings behavior in a panel of developed and developing economies. They emphasized the dynamics allowing separation between short run adjustment and long run equilibrium markets. The researchers estimated the short run private saving rate compared with that of the long term in emerging economies and in developed economies. The results shows that private saving rate in the short run, in emerging economies, shifted up from the long run equilibrium, particularly in Asia. The researchers relate this short run movement to demographic factors and financial catching-up. Moreover, they suggested that looking ahead and adjusting to long run will cause a considerable fall in saving in those countries and that further progress in financial deepening will smooth saving rate among countries in the global economy. In developed countries, however, private saving in the short run is bellow long run equilibrium Chinn and Ito (2008) investigated the factors influencing current account and saving rate with an aim to explain the world saving glut. They found that government budget balances play an important role in the determination of current account balances. Sun (2011) examined empirically the differences of private savings in developing countries and its impact on current account balances. He found that economic growth is accompanied with structural changes in productivity and in job reallocations, which in turn affect private savings. According to Sun, different growth patterns of economic sectors create new income and employment distributions. High productivity creates large wage variation across industries and sectors therefore raises saving, while faster employment growth moves labor from low income sectors to high income sectors therefore reduce saving.

Apart from the papers mentioned above, the existing literature suggested many factors that might explain the level of savings, among them: financial development, demographic differences and the pension system (see Masson, Bayoumi and Samiei (1998), Loayza, Schmidt-Hebbel and Serven (2000).

We suppose that the changes in countries' saving rates are the most dominant factors in determining current accounts and that getting into financial instability might be a signal for policy makers to take steps in order to stabilize the economy. Our aim in this paper is to examine the effect of financial stability determined by aggregated level of current accounts in past 30 years and current account in present period on saving rate of 135 developed and developing countries.

The paper is organized in the following manner. A theoretical analysis of how current account effect steady state equilibrium within a Solow's' model is laid down in section II. An empirical estimation of the relation between saving rate and financial stability indicators is presented in section III. Section IV presents the summary.

2. Theoretical analysis

According to Solow (1956) the condition for long term steady state growth equilibrium is:

$$(1) \qquad sY = (n+d)k\ ,$$

For: s – saving rate,

$\quad Y = f(k)$ – per capita production,

$\quad$ d – depreciation rate and
$\quad$ k – Per capita amount of capital.

When the economy is open to trade and to capital movements, we get that in equilibrium:-

$$(2) \qquad I = S + IM - EX$$

For: I – Total net investment,
$\quad$ S – Total savings,
$\quad$ EX – Total export and
$\quad$ IM – Total import.

Let us define: $S_{net} = S + M\ - K\quad$ and:

$$(3) \qquad s_{net} = \frac{S + IM - EX}{Y}$$

s_{net} - represent net saving rate in open economy.

In open economy equilibrium condition will be changed into:

$$(4) \qquad s_{net} Y = (n + d)k \ .$$

In order to present the effect of opening economies to trade and to capital movements, let us consider 2 countries with equal production function, equal population growth rate and equal depreciation rate. The only factor differentiating the countries is saving rate which is assumed to be higher in country 2.

Figure 1: *Presents long term equilibrium for each of the countries for economies that are closed to capital movements and to trade.*
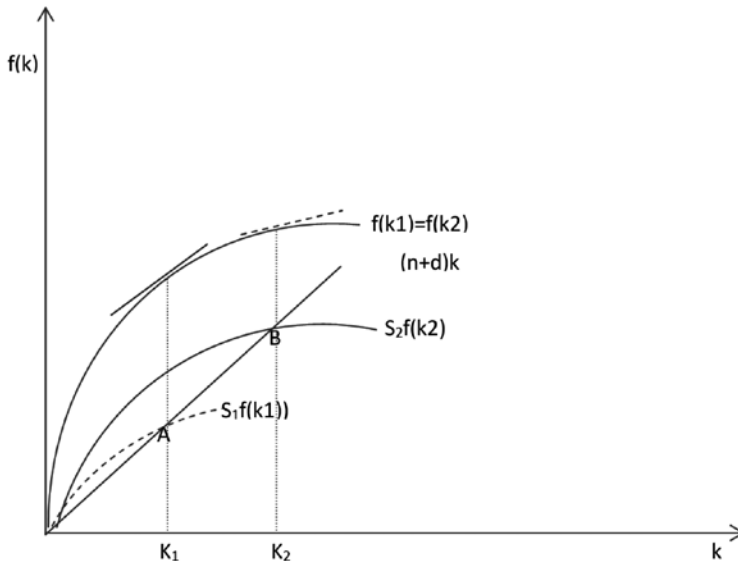
The dashed line represents the saving curve of the country with the lower saving rate.

Equilibrium of capital per-capita is lower in country 1 and marginal product of capital is higher - $f`(k_2) < f`(k_1)$ (see red line slope).

When economies are open to capital and goods movements, we expect that capital will flow from country 2 into country 1 and will seas flowing when marginal production in both countries will be equal.

The new equilibrium is depicted in figure 2 below:

Figure 2: *New equilibrium*
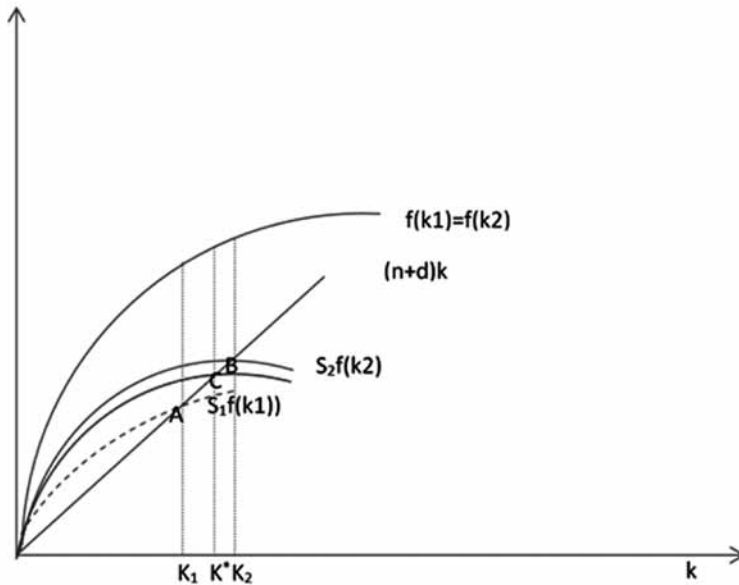
Both economies will converge to point C with equal long run capital - K^* and equal product per-capita.

We should notice that country 1 will have negative trade balance while country 2 will have positive trade balance. Given that each country persist with the same savings rate, population growth, depreciation rate and production function, the net deficit in foreign asset of country 1 and the net positive foreign asset of country 2 will persist to grow.

What will stop foreign debt from growing?

When the foreign debt grows, countries' financial state is perceived as more dangerous by other countries. At the first stage interest rate on foreign loans rise, a process that might increase local savings while decreasing local investment, causing improvement in trade balance and slowing the growth rate of foreign debt. In some countries the rise of interest rate might not stop local consumption and the deterioration of countries financial state. Under such conditions, foreign global organizations such as the „world bank"," international monetary fund" or other institutions or friendly governments will suggest financial aid that generally include a new proper economic program for decreasing local consumption while increasing local savings.

If the process described above characterize reality we expect that as long as foreign debt is low, a country has the freedom of decreasing savings without

decreasing private consumption and net investment. However, when foreign debt increases above a given threshold, the country will be perceived as financially instable and will be expected to increase savings while decreasing consumption and investment. Local saving rate is expected to be determined as a positive function of countries' external debt per capita.

The connection between external debt and the saving rate

If a country that has a large external debt accompanied by trade balance deficit starts increasing saving rate it can move to an acceptable level of external debt per capita. Given that the country is initially at point C (figure 2), capital and production per capita should not change following the increase in gross savings, however consumption should be reduced, trade balance will improve and investment stay constant.

Reduction in net investment might occur when a country is perceived as financially more dangerous. Higher risk pushes the local interest rate up leading to higher marginal product of capital and lower amount of capital per capita.

Figure 3 and figure 4 present a country with initial long term equilibrium of capital per capita in point C. Savings rate, S_1, determines a large negative trade balance and high consumption level ($CONS_1$).

The country can persist with the low saving rate as long as external debt is at an acceptable level.

However, when the external debt is crossing a given level, the country is forced to increase saving rate (see figure 4). The increase in savings is accompanied with consumption reduction to $Cons^1_1$ (see figure 3).

Figure 3: *The increase in savings accompanied with consumption reduction*
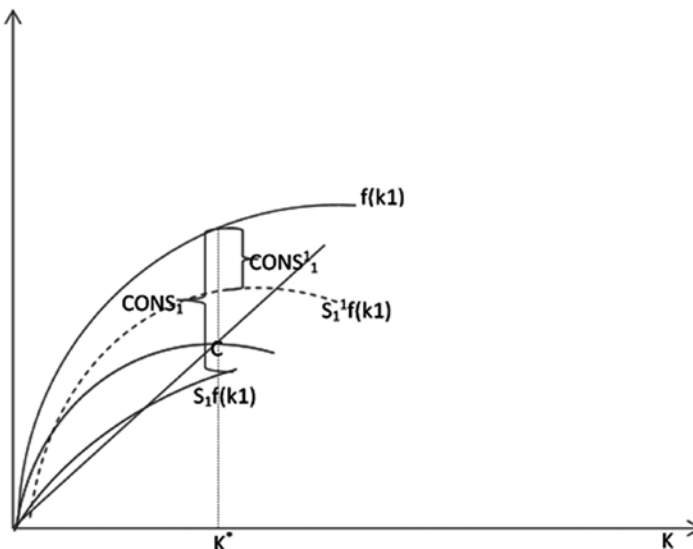
Figure 4: *The external debt crossing a given level - the country forced to increase saving rate*

Saving rate

A₁

A

S_1 s^1_1 External Debt
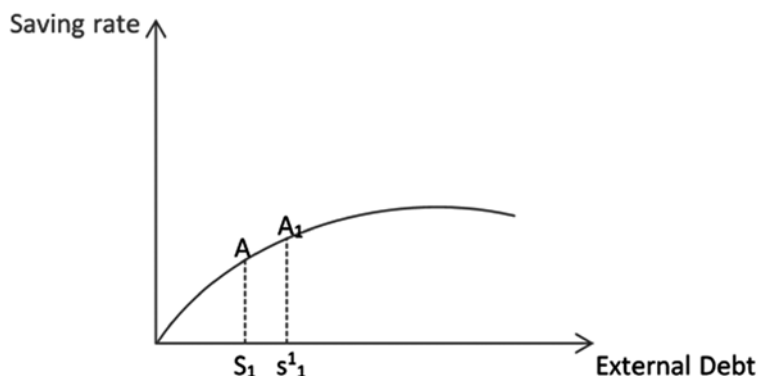
Should a country create external debt?

A country with a low saving rate reaches a low equilibrium level of capital when trade balance is balanced. Starting at point A in figure 1 the country can move instantly to point C by creating a trade balance deficit. In point C capital level, production and private consumption grow, together with foreign debt.   As long as foreign debt is low, gross saving rate can persist to be low.

However as foreign debt crosses a given threshold, the country is forced to increase its gross saving rate and reduce consumption.

One can think of situations where creation of a large external debt is worthy, especially if the debtors agree to give up some of the debt as part of a rescue plan that include decrease in consumption and increased savings in the borrowing country.

How should we define countries' financial state?

At first, we thought that the most obvious variable to represent financial risk is net foreign assets. However after examining data published by the „world bank" we were surprised to reveal that the aggregate net foreign assets of all countries sum into a huge amount of over 13,000 billion American dollars in 2010. This contradicts the common knowledge that aggregate net foreign assets of all countries must be summed to zero, since a positive net foreign asset in one country should be accompanied by a negative net foreign asset of the same amount in other countries. It is well known that such odd results occur when definitions of variables according to statistical agencies that are responsible for collecting the data differ from classical economic definitions. Since worlds bank definition of foreign net assets do not include investment in real estate assets abroad or other capital movement, we get that aggregate net foreign assets differ largely from zero.

In figure 5 we depicted the connection between gross saving rate and the net foreign assets rate (from GDP) for 135 countries in 2010.

Figure 5: *Saving rate and the foreign assets rate*
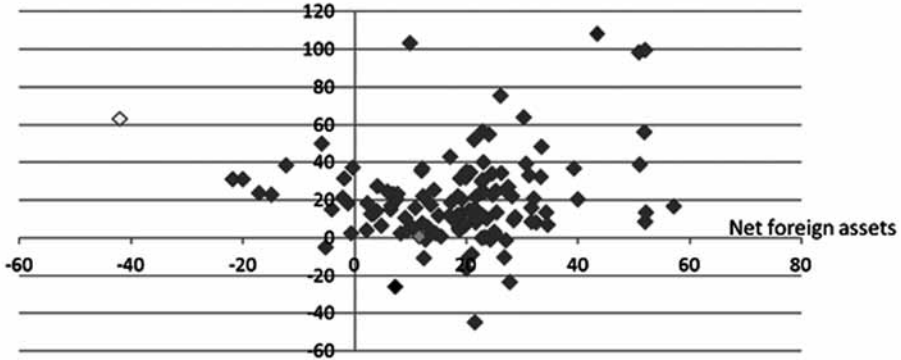
Legend: Yellow: Lesoto; Red: Afganistan; Green: U.S.A; Purple: South Arabia; Black: Greece; Gray: Portugal

We can see that for a vast majority of the countries, net foreign assets rate is positive and only in 13 out of 135 countries it is negative (See in appendix 2 the gross saving rate and net foreign assets rate for all 135 countries). We do not intend to get here into an argument of why world bank data on net foreign assets do not represent countries financial risk, but preffer to search for a better risk indicator.

Alternative indicator for financial stability
If we would measure correctly all capital movements in each year, net foreign assets in period t should equal to the aggregated current accounts that starts in period 0 and ends at period t.

Equation (5) defines the connection between net foreign assets and current account.

$$(5) \quad NFT_T = NFT_0 + \sum_{t=1}^{T} CA_t$$

For:
NF_t- net foreign asset in period t
CA_t- Current account in period t.

We can see that aggregation of current account for a long enough period of time can be a good indicator for the total net foreign assets of a country.
Using IMF data of Current account ratio to GDP (CA ratio) we calculated for each country the aggregated CA ratios for the period 1980-2010.

Figure 6 presents the connection between aggregated Current account ratio DURING 1980-2010 and Gross Savings ratio to GDP in 2010 (see data in appendix 1).

Figure 6: *Saving rate in 2010 and agrregate current acount in 1980-2010.*
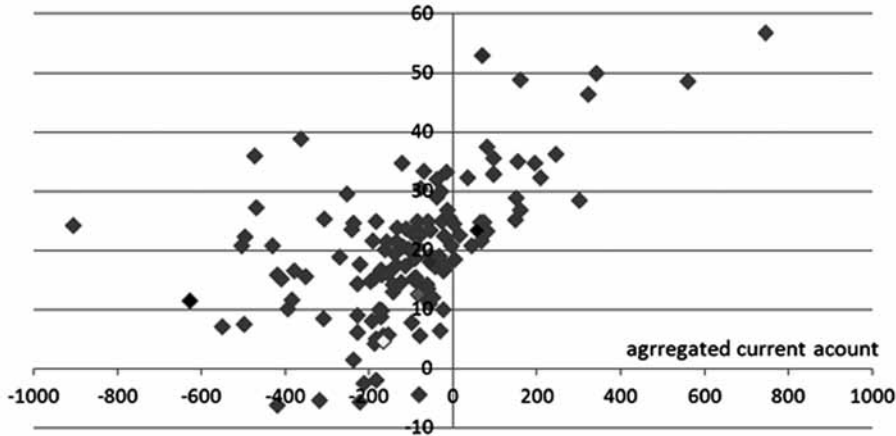
Legend: Greece: yellow; Germany: black; China: red; Brazil: purple; U.S.A: Green; Katar: gray; Nicaragua: brown

We can see that according to figure 6 worlds' countries aggregated current account is distributed as expected, with many countries having a negative aggregated CA ratio.

3. Empirical model

In this part we estimated an econometric equation with saving rate as dependent variable and two explanatory variables defining countries' financial risk: the current account and the aggregated current account.

$$(6) \quad savings = \alpha_1 D_1 + \alpha_2 D_2 + \alpha_3 D_3 + \beta_1 AGCUR * D_1 + \beta_2 AGCUR * D_2$$
$$+ \beta_3 AGCUR * D_3 + \delta_1 AGCUR^2 * D_1 + \delta_2 AGCUR^2 * D_2 + \delta_3 AGCUR^2 * D_3$$
$$+ \gamma_1 * CUR2010 * D_1 + \gamma_2 * CUR2010 * D_2 + \gamma_3 * CUR2010 * D_3 + u$$

For:
Savings - saving rate ratio in 2010.
AGCURR - aggregated CA ratio in years 1980-2010.
CURR2010 – Current account in 2010.

D1 – a dummy variable equal to 1 for 45 countries with the lowest aggregate current account in years 1980-2010.

D2 – a dummy variable equal to 1 for 45 countries with middle aggregate current account in years 1980-2010.

D3 – a dummy variable equal to 1 for 45 countries with the highest aggregate current account in years 1980-2010.

Table 1: *Results of the regression after correcting for Heteroskedasticity and removing non-significant variables*

Significant level	Coefficient	Variable
0.0000	15.66787	D1
0.0000	28.20771	D2
0.0000	22.69293	D3
0.0119	-0.024005	CURRENT*D1
0.0007	0.027577	CURRENT*D3
0.0066	-0.000255	CURRENT^2*D2
0.0000	0.727978	CURR2010*D1
0.0000	1.131170	CURR2010*D2
0.0000	1.013667	CURR2010*D3
0.0022	-0.020227	CURR2010^2*D3
R-squared=0.665208		

The estimated equations are as follows:
for countries with a very large negative aggregated current account:

$$(7) \quad savings^f = 15.66787 - 0.024005 * AGCURRENT + 0.727978 * CURR2010$$

For countries with large or medium negative aggregated current account (in absolute values):

$$(8) \quad savings^f = 28.20771 - 0.000255 * AG\,CURRENT + 1.131170 * CURR\,2010$$

For countries with a small negative or with positive aggregated current account:

$$(9) \quad savings^f = 22.69293 + 0.027577 * AGCURRENT + 1.013667 * CURR2010 - 0.020227 * CURR2010^2$$

Notice that we can interpret the coefficients of dummy variables as basic saving rates.

We get that countries with very large negative aggregate current account (in the lower edge Equatorial Guinea with -907.35% aggregated CA and in the upper edge Portugal -170.49% aggregated CA) saving rate increases in a larger amount as aggregate current account is more negative (see equation 7 -negative coefficient multiplied by negative aggregated current account).

For countries with large and medium aggregated negative account (in the lower edge Costa Rika with -170.14% aggregated CA and in the upper edge El Salvador -55% aggregated CA) saving rate decreases in larger amount as aggregate CA is more negative (see equation 8 – negative coefficient multiplied by squared aggregated CA). Among this group we can find several industrial countries with negative aggregated CA, Greece with -166%, Poland with -155%, Australia -133%, Spain with -92%, U.S.A. with -82%, Ireland with -60% and other large economies such as, Turkey -59% and Brazil -56%.

In countries with relatively small negative aggregated current account (in the lower edge Mexico with -54% aggregated CA) saving rate decreases in larger amount as aggregate CA is more negative (see equation 9 – positive coefficient multiplied by negative aggregated CA). Among this group we can find several industrial countries with negative aggregated CA, United Kingdom -48%, Canada -32%, Italy -21% and other large economies such as India -38% and South Africa -24%.

Countries with positive aggregate current account (see equation 9[1]) tend to increase the saving rate in a larger amount as aggregated net foreign account is more positive. Among this group we can find Austria 1.8%, France 3.37%, Korea 33%, Germany 57%, Japan 80% and China 208%.

Current year current account have a negative effect on saving rate in all countries with negative aggregated current account, while in countries with positive current account the effect is positive but diminishes as current account is growing.

These results point that countries with negative medium or small aggregate current account will tend to „sink" deeper. In addition in these countries saving rate will decrease when current year current account is negative.

The results are troubling since this group includes some of the major worlds' economies, such as U.S.A, Australia, Spain, Turkey, Brazil, United Kingdom, Canada, Italy, India and South Africa.

Countries with positive aggregate current account (external assets) will tend to increase saving rate. In addition positive current year current account will increase saving rate even higher.

Our interpretation of the results is that countries' will tend to go to the edge, those with positive net foreign assets will keep increasing their assets while those

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[1]   Equation 9 was estimated on data of countries with small aggregated negative CA and on data of countries with positive aggregated CA.

with external debt will tend to increase debt as long as the debt is not very large. Only when external debt becomes very large, saving rate will start growing.

Since some of the largest economies belong to the group that keep increasing external debt due to continues reduction of the saving rate, we are concerned of the obvious conclusion that at some stage when debt will become too large, the world will go into a deep financial crisis.

We should mention that countries which have a middle level of aggregate current account have a higher basic saving rate 28.20771%, in comparison to the counties at the edges. Since most of the western countries can be classified as „middle countries", world institutions should concentrate at these counties which produce a major part of world production.

4. Summary

We presented a theoretical analysis of an economy that is open to international trade and to capital movements by using Solow's model (1956) as a frame. According to our analysis, a country can accelerate the convergence to long run steady state of per-capita production and capital by creating a negative current account and creating external debt. As long as the country is financially stable, it can keep a low saving rate and high consumption per-capita. However when external debt increases beyond acceptable level the country will not be able to borrow from abroad and will be forced to increase saving rate and improve current account, a process that will cause a reduction of external debt.

In the empirical part of the paper we suggest to measure financial stability of a country by the aggregated current account in the last 31 years (1980-2010). We think that this measure is better than the „net foreign assets" which does not include all financial factors that define countries' financial stability.

Using data of 135 countries we estimated a cross section econometric equation with saving rate as dependent variable and the current account and aggregated current account as explanatory variables.

Our findings show that countries with very high external debt tend to increase their saving rate, while countries with medium or low external debt tend to reduce their saving rate. The group of countries with medium and low external debt includes many of the most developed countries, among them U.S.A, United Kingdom and span.

Countries with positive aggregated current account tend to increase their saving rate as their aggregate CA is larger.

Our findings are troubling since they show that countries which are at the edge of becoming unstable financially tend to deteriorate into a worse financial state and only when financial state becomes extremely unstable they start incre-

asing saving rate. It seems that if this behavior will proceed, the world might fall into a deep crisis.

The finding point to the fact that deterioration of worlds' financial stability is due to the negative financial state of some of the most dominant and productive countries.

We believe that in order to stop deterioration, worlds' organization together with worlds' leading countries must concentrate on economic policy that will create a   change in the most developed countries which carry medium levels of external debt, but can risk all worlds' financial system.

Literature

- Chin, D.M. and Ito, H. (2008): „Global Current Account Imbalances: American Fiscal Policy versus East Asian Savings „, *Review of International Economics*, 2008, 16(3),pp. 479-498.
- Eswar, P., Raghuram, R. and A.Subramanian, A. (2007): *"Foreign Capital and Economic Growth"*, Brookings Papers on Economic Activity, 2007, 1, pp. 153-230
- Ferucci, G. and Miralles, C: (2007): "Saving Behaviour and Global Imbalances The Role of Emerging Market Economies", *European Central Bank Working Paper Series* No 842/ December 2007.
- Gruber, W.G. and Kamin, S.B.,(2007): "Explaining the global pattern of currentaccount imbalances", *Journal of International Money and Finance* 26 ,(2007), pp. 500-522.
- Loayza, N., Schmidt-Hebbel, K. and Serven, L. (2000):"What Drives Private Saving Across the World?", *The Review of Economics and Statistics* No 82(2), May pp. 165-181.
- Masson, P.R., Bayoumi, T. and Samiei, H. (1998):"International Evidence on tha Determinants of Private Saving", *The World Bank Economic Review*, No 12 (3) , pp 483-501.
- Solow, R.M. (1956). "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics* 70, pp.65-94.
- Sun. Y (2011): "Structural Change, Savings and Current Account Balance", *International Review of Economics and Finance* 20 (2011) pp 82-94.

Appendix 1

Gross savings rate, Aggregated current accounts during 1980-2010 and current account in 2010 as percentage of GDP in 2010

	saving rate 2010	agg current acount	curr2010
Equatorial Guinea	24.322	-907.35	-24.07
Nicaragua	11.428	-627.597	-14.372
Guyana	7.256	-551.104	-9.513
Sudan	20.856	-505.463	0.717
Dominica	7.584	-497.839	-21.138
Lebanon	22.34	-496.546	-10.822
Bhutan	36.122	-473.022	-11.64
St. Kitts and Nevis	27.358	-469.999	-20.642
St. Lucia	20.901	-431.27	-15.203
Antigua and Barbuda	15.945	-419.492	-12.945
St. Vincent and the Grenadines	-6.104	-419.284	-31.571
Lesotho	15.334	-408.95	-15.084
Mozambique	10.258	-393.509	-11.742
Togo	11.688	-384.834	-7.125
Seychelles	16.604	-378.343	-20.08
Chad	38.896	-363.427	-3.51
Mauritania	15.688	-351.676	-8.802
Grenada	-5.209	-318.245	-25.529
Comoros	8.542	-308.475	-6.863
Cape Verde	25.337	-308.34	-12.467
Madagascar	18.928	-269.929	-9.679
Zambia	29.635	-253.099	7.068
Senegal	23.613	-241.555	-6.095
Malawi	24.78	-238.617	-1.246
Guinea-Bissau	1.564	-238.578	-8.253
Benin	9.122	-228.784	-7.192
Sierra Leone	6.288	-227.605	-28.772
Jamaica	14.401	-227.484	-8.097
Niger	17.729	-222.562	-21.103
Solomon Islands	-5.557	-222.301	-30.259

Maldives	-2.356	-212.812	-17.356
Belize	14.923	-197.954	-3.076
Burundi	8.114	-192.969	-9.889
Tanzania	21.638	-191.506	-9.278
Iceland	4.256	-188.22	-8.389
Burkina Faso	15.391	-188.179	-3.567
Guinea	-1.785	-184.451	-12.351
Central African Republic	5.126	-183.915	-9.939
Sri Lanka	24.956	-183.61	-2.196
The Bahamas	10.028	-176.78	-11.689
Cyprus	8.894	-172.788	-9.876
Honduras	16.734	-171.665	-6.222
Rwanda	15.889	-171.223	-5.978
Portugal	9.945	-170.496	-9.981
Costa Rica	16.575	-170.141	-3.518
Greece	4.574	-166.387	-9.982
The Gambia	5.688	-166.319	-15.736
Democratic Republic of Congo	20.163	-163.372	-6.906
Bulgaria	21.568	-157.963	-1.322
New Zealand	16.162	-156.481	-3.432
Poland	16.293	-155.772	-4.66
Mali	5.796	-154.718	-12.628
Guatemala	13.123	-143.746	-1.52
Albania	14.272	-143.393	-11.614
Hungary	19.498	-138.638	1.097
Jordan	17.567	-135.765	-5.574
Tunisia	21.587	-134.708	-4.796
Australia	23.943	-133.037	-2.844
Uganda	14.679	-123.029	-9.569
Vietnam	34.904	-122.189	-4.139
Suriname	20.761	-120.618	2.035
Ghana	17.413	-113.456	-7.302
Peru	23.687	-112.27	-1.707
Romania	20.387	-106.355	-4.452
Dominican Republic	7.91	-98.466	-8.59
Haiti	22.877	-96.179	-2.556

Panama	15.213	-94.885	-10.763
Spain	18.698	-92.025	-4.604
Mauritius	15.59	-88.585	-8.158
Angola	23.047	-87.913	10.378
Kenya	14.912	-87.707	-6.525
Ethiopia	20.716	-86.093	-4.35
Chile	25.039	-84.378	1.512
United States	12.532	-82.639	-3.242
Swaziland	-4.251	-81.869	-16.483
Barbados	5.637	-78.506	-8.204
Morocco	30.557	-77.107	-4.234
Ecuador	22.87	-75.423	-3.307
Pakistan	13.134	-74.834	-2.231
Nepal	33.413	-69.031	-2.406
Cameroon	13.288	-64.014	-2.835
Paraguay	14.367	-61.397	-3.378
Bolivia	24.987	-60.706	4.89
Ireland	11.528	-60.036	0.488
Turkey	13.581	-59.51	-6.35
Brazil	18.03	-56.479	-2.208
Colombia	19.109	-55.731	-3.083
El Salvador	10.991	-55.354	-2.301
Mexico	23.541	-54.397	-0.299
United Kingdom	12.058	-48.319	-3.318
Uruguay	17.37	-43.536	-1.184
Israel	18.879	-39.812	2.914
Bangladesh	29.157	-38.894	1.664
India	32.144	-38.517	-3.268
Canada	19.072	-32.5	-3.131
Papua New Guinea	6.504	-31.687	-8.442
Thailand	30.067	-28.482	4.132
Philippines	25.012	-27.875	4.471
Cote d'Ivoire	10.067	-24.188	1.101
South Africa	16.61	-24.182	-2.816
Italy	16.725	-21.291	-3.522
Argentina	22.53	-20.781	0.594

Egypt	17.525	-19.635	-1.976
Indonesia	33.373	-14.781	0.797
Nigeria	26.846	-14.689	1.268
Republic of Congo	25.531	-7.312	5.065
Syrian Arab Republic	20.89	-3.422	-3.308
Austria	24.596	1.895	2.954
France	18.556	3.376	-1.743
Denmark	22.683	14.269	5.506
Korea	32.424	33.585	2.896
Finland	20.885	43.757	1.432
Germany	23.427	57.463	6.083
Botswana	24.841	65.341	-5.168
Belgium	21.653	66.554	1.46
Sweden	24.893	73.345	6.277
Japan	23.314	80.073	3.569
Saudi Arabia	37.607	80.372	14.808
Bahrain	33.066	95.892	3.434
Malaysia	32.915	96.168	11.499
Oman	35.715	96.476	8.812
Netherlands	25.246	148.572	6.569
Hong Kong SAR	28.949	149.62	5.525
Trinidad and Tobago	35.112	153.371	19.857
Algeria	48.958	160.714	7.545
Venezuela	26.85	160.804	4.878
Norway	34.867	195.514	12.427
Taiwan Province of China	32.401	208.867	9.269
Gabon	36.37	244.188	9.061
United Arab Emirates	28.487	301.218	3.069
Singapore	46.54	322.865	24.412
Libya	50.103	342.484	20.887
Kuwait	48.703	559.427	29.643
Qatar	56.748	744.938	26.331

Appendix 2

Gross savings rate and foreign assets as percentage of GDP in 2010

Country Name	saving	Net foreign assets
New Zealand	21.45339	-44.6888
Greece	7.315297	-26.0401
Australia	27.69843	-23.4663
Latvia	19.83488	-16.4806
Portugal	12.43516	-10.6807
St. Lucia	20.36088	-10.3872
Estonia	26.65565	-10.0669
Spain	20.82645	-8.4051
Montenegro	-5.26694	-4.70158
Belarus	26.92417	-1.28174
Bahamas, The	12.50006	-0.94068
Sudan	24.18633	-0.86675
Myanmar	22.68732	0.01658
Slovenia	23.18996	0.26605
United States	11.50909	0.704036
Lithuania	15.38073	0.900842
Romania	25.08338	1.9074
Turkey	14.40806	2.533677
Nicaragua	-0.7875	2.595323
Malawi	8.167067	2.679123
Hungary	24.90444	3.375747
Armenia	9.17124	3.612507
Sri Lanka	18.6525	4.216631
Georgia	2.034217	4.323639
Italy	18.48654	5.209486
Pakistan	10.15377	5.626143
United Kingdom	12.91013	5.917982
Dominican Republic	4.729032	6.658624
Poland	19.74442	7.142056
United Arab Emirates	34.44901	7.179034
Chad	12	8.055656

Colombia	21.52231	8.09664
Venezuela, RB	32.33607	8.247541
Zambia	31.48323	8.612394
Azerbaijan	51.89935	8.692297
Bangladesh	17.80368	9.249327
Chile	28.31894	9.468836
Mexico	23.51948	10.19109
Lao PDR	21.49966	10.39628
Kenya	8.953688	10.56037
Brazil	18.25583	10.87784
Vietnam	28.60619	11.33007
Ghana	14.92989	11.7578
Croatia	22.87472	11.77969
Costa Rica	16.8805	12.07682
Cote d'Ivoire	18.44441	12.46657
Jamaica	2.895242	12.60806
South Africa	19.05885	12.67819
Sierra Leone	3.324156	12.71346
Argentina	25.30852	13.50285
Indonesia	34.12176	13.5163
Gabon	52.10808	13.7378
Guatemala	3.777377	14.23893
Tunisia	21.0449	14.56313
Ecuador	20.50739	14.64688
Serbia	6.328413	15.17186
El Salvador	-4.17682	15.30316
Japan	21.37025	15.66604
India	31.52593	15.99798
Senegal	10.77067	16.156
Equatorial Guinea	57.05925	16.67397
Gambia, The	6.5	17.46529
Uganda	13.47804	17.57861
Bosnia and Herzegovina	-1.32507	18.44654
Honduras	2.21775	18.45324
Tanzania	17.16311	18.84833
Nepal	7.390787	20.60817

Kazakhstan	39.84637	20.62265
Cape Verde	19.11957	20.75705
Korea, Rep.	31.94211	20.81003
Swaziland	-2.29515	21.21813
Paraguay	21.63303	21.90969
Syrian Arab Republic	18.3888	22.01972
Angola	28.03244	22.06535
Benin	12.17729	22.3786
Namibia	24.57689	23.12908
Moldova	-14.9786	23.13958
Macedonia, FYR	6.777835	23.38326
Yemen, Rep.	7.540357	23.54381
Tonga	-17.1733	23.89822
Denmark	22.42872	24.05111
Peru	27.28734	24.1997
Bulgaria	23.0204	24.21588
Mozambique	5.724723	24.53575
Morocco	25.20587	25.20213
Egypt, Arab Rep.	14.10575	25.29498
Czech Republic	27.36069	27.09992
Albania	3.947689	27.70447
Panama	22.73904	29.84582
Iceland	22.81976	30.65778
Afghanistan	-21.7924	30.97363
Haiti	-20.2011	31.11457
Guyana	-2.03899	31.61172
Philippines	18.72782	31.82192
Uruguay	19.81789	32.23292
Mongolia	33.14273	32.54097
Russian Federation	31.18261	33.47037
Sweden	24.49533	34.08973
Netherlands	26.14214	34.7108
Papua New Guinea	20.58571	34.79103
Finland	19.94647	35.33438
Cambodia	11.9295	35.8889
Cyprus	11.99943	36.80134

Malaysia	39.22648	37.10227
Dominica	-0.40561	37.40393
Kosovo	-12.3424	38.5274
Congo, Rep.	50.94492	39.09943
Switzerland	30.58454	39.53693
Belgium	22.89499	40.34596
France	17.00667	43.17924
Thailand	33.29735	48.29601
Jordan	-6.05141	50.12153
Botswana	21.23956	52.05881
Bolivia	23.8703	55.0676
China	51.69536	56.16424
Germany	22.8121	56.68331
Lesotho	-42.0569	63.32774
Ireland	30.12621	64.16727
Austria	25.95028	75.69826
Algeria	50.73373	98.52624
Singapore	51.89371	99.96196
Lebanon	9.843946	103.6549
Saudi Arabia	43.3622	108.0656

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EFEKAT STRANIH NETO SREDSTAVA
U ODNOSU NA STOPU ŠTEDNJE

S a ž e t a k

Posmatranjem empirijskih podatka dolazimo do zaključka da mnoge zemlje pokušavaju da odlože donošenje odluke o povećanju stope štednje kako bi izbegle smanjenje životnog standarda. Međutim odlaganje dovodi do pogoršanja finansijske stabilnosti zemlje.

Predstavljamo jednostavan teoretski model koji je veza između stopa štednje i strane neto imovine u zemlji. Koristeći presek podataka iz 135 zemalja u 2010. godini, uradili smo procenu matematičke statistike između, stopa štednje u 2010. godini, kao promenljivu variablu i dva pokazatelja variable: tekući račun u 2010. godine i grupisani tekući račun tokom 1980-2010. Nalazi pokazuju da industrijske zemlje lošeg finansijskog stanja imaju tendenciju da smanje iznos svojih stopa štednje kao spoljni dug, uzrokujući pogoršanje spoljnog duga, dok zemlje dobrog finansijskog stanja imaju tendenciju da povećavaju svoje stope štednje tako da finansijsko stanje postaje bolje. Samo u zemljama sa velikim spoljnim dugom, štedna stopa ima tendenciju rasta. Rezultati ukazuju da će bruto spoljni dugovi biti sve veći, što pogoršava svetsko finansijsko stanje i povećava rizik od globalne finansijske krize.

Ključne reči: strana sredstva, stope štednje, životni standard