

Биланс на состојба на јавниот сектор

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Структура на презентацијата

- Зошто е потребен БС на јавниот сектор?
- Рамка за БС на јавниот сектор
- Мерки за квалитетот на БС
- Преглед на литературата
- База на ММФ
- Како да се воведе?

Зошто е потребен БС?

Анализа на фирмите/домаќинствата наспроти јавниот сектор

Фирми/домаќинства

- Променливи на состојбата и на текот (англ. stock and flow variables).

AMAZON.COM, INC. CONSOLIDATED BALANCE SHEETS (in millions, except per share data)		December 31,	
		2016	2017
ASSETS			
Current assets:			
Cash and cash equivalents	\$	19,334	\$ 20,522
Marketable securities		6,647	10,464
Inventories		11,461	16,047
Accounts receivable, net and other		8,539	13,164
Total current assets		45,781	60,197
Property and equipment, net		29,114	48,866
Goodwill		3,784	13,350
Other assets		4,723	8,897
Total assets		\$ 83,402	\$ 131,310
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Accounts payable	\$	25,309	\$ 34,616
Accrued expenses and other		13,739	18,170
Unearned revenue		4,768	5,097
Total current liabilities		43,816	57,883
Long-term debt		7,694	24,743
Other long-term liabilities		12,607	20,975
Commitments and contingencies (Note 7)			
Stockholders' equity:			
Preferred stock, \$0.01 par value:			
Authorized shares — 500			
Issued and outstanding shares — none		—	—
Common stock, \$0.01 par value:			
Authorized shares — 5,000			
Issued shares — 500 and 507			
Outstanding shares — 477 and 484		5	5
Treasury stock, at cost		(1,837)	(1,837)
Additional paid-in capital		17,186	21,389
Accumulated other comprehensive loss		(985)	(484)
Retained earnings		4,916	8,636
Total stockholders' equity		19,285	27,709
Total liabilities and stockholders' equity		\$ 83,402	\$ 131,310

See accompanying notes to consolidated financial statements.

Јавен сектор

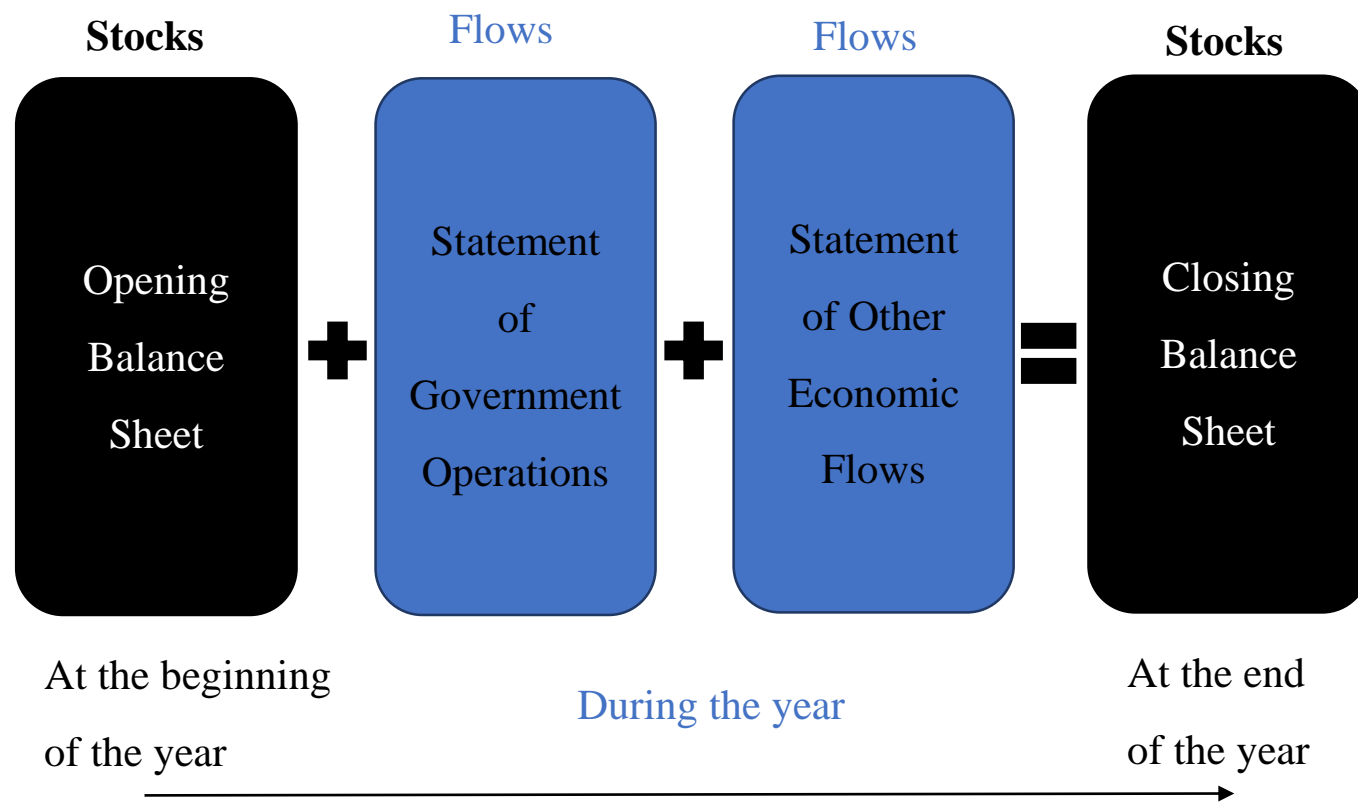
- Фокусот е на променливите на тековите (англ. flow variable).

- Дали ако се знае состојбата на средствата (и обврските) на јавниот сектор тоа би влијаело на намалување на корупцијата и безвреднување на јавен имот?

Рамка за БС на јавниот сектор

Рамка за БС на ММФ

- Government Finance Statistics Analytical Framework (2001):

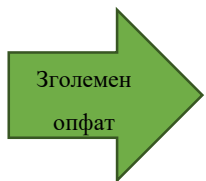


Рамка за БС на јавниот сектор

Двете основни рамки

БС на Општа влада

Средства	Обврски
Финансиски средства	Долгови
Нефинансиски средства	Недолжни инс.



БС на јавниот сектор

Средства	Обврски
Финансиски средства	Долгови
Нефинанс. средства	Недолжн. инст.
Средства на Јавните претпријати	Обврски на ЈП

БС со временска димензија

БС на јавниот сектор

Средства	Обврски
Финан. ср.	Долгови
Нефин. сред.	Недолжн. Инст.
Средства на Јавните претприј.	Обврски ЈП



Меѓувременски БС на јавниот сектор

	Средства	Обврски
Сегашност	Финан. сред.	Долгови
	Нефинан. сред.	Недолж.
	Средства на ЈП	Обврски на ЈП
Иднина	Идни приходи	Идни трошења

Пример: Норвешка (процент од БДП)

Indicator	Central Government	General Government	Nonfinancial Public Corps	Financial Public Corps	Consolidated Public Sector
BALANCE SHEET	...	...	...	...	...
TOTAL ASSETS	407.8	576.4	111.8	22.6	639.0
Nonfinancial Assets	-	152.2	36.8	0.0	189.0
Fixed Assets	-	75.7	33.3	0.0	109.1
Other fixed assets	-	-	1.0	-	1.0
Land	-	10.8	-	-	10.8
Mineral and energy resources	-	65.6	-	-	65.6
Other non-produced assets	-	-	2.5	0.0	2.5
Financial Assets	407.8	424.3	74.9	22.6	450.0
by instrument	...	...	...	...	...
Monetary gold and SDRs	-	-	-	0.6	0.6
Currency and deposits	11.2	14.9	3.9	0.7	10.3
Debt securities	86.1	86.6	2.3	13.1	102.0
Loans	22.6	25.4	11.1	3.1	39.6
Equity and investment fund shares	278.7	282.8	44.3	3.5	270.3
Insurance, pension, and standardized guarantee schemes	0.1	3.4	-	-	3.4
Financial derivatives and employee stock options	0.2	0.2	-	0.0	0.2
Other accounts receivable/payable	8.8	10.8	13.4	1.6	23.5

Example: Norway (percent of GDP)

Indicator	Central Government	General Government	Nonfinancial Public Corps	Financial Public Corps	Consolidated Public Sector
TOTAL LIABILITIES	33.5	146.1	111.8	22.6	208.7
by instrument	...	...	...	...	...
SDRs	-	-	-	0.6	0.6
Currency and deposits	-	-	-	12.9	3.8
Debt securities	14.7	20.2	10.6	-	30.8
Loans	13.4	26.6	36.4	0.0	63.0
Equity and investment fund shares	-	-	52.2	8.1	-
Insurance, pension, and standardized guarantee schemes	-	92.0	-	-	92.0
Pension entitlements	...	92.0	-	...	...
Claims of pension funds on pension managers	...	-	-	...	...
Other	...	-	-	...	...
Financial derivatives and employee stock options	0.3	0.3	-	0.0	0.3
Other accounts receivable/payable	5.0	6.9	12.6	1.0	18.2
NET FINANCIAL WORTH	374.3	278.2	-36.8	0.0	241.3
NET WORTH	374.3	430.3	-	0.0	430.3
STATEMENT OF OPERATIONS	...	...	...	...	...
Revenue	44.8	55.0	31.6	0.4	77.7
Expense	45.8	55.5	28.8	0.2	75.3
Net operating balance	-1.0	-0.6	2.8	0.2	2.5
Net investment in nonfinancial assets	1.2	2.1	...	0.0	...
Net lending/borrowing	-2.1	-2.6	...	0.2	...

Source: Public Sector Balance Sheet Database International Monetary Fund.

Класификации и дефиниции

- International Monetary Fund (2014): [Government Finance Statistics Manual 2014 \(imf.org\)](#)
 - Поглавје: Balance Sheet, стр.170-216.

Мерки за квалитетот на БС

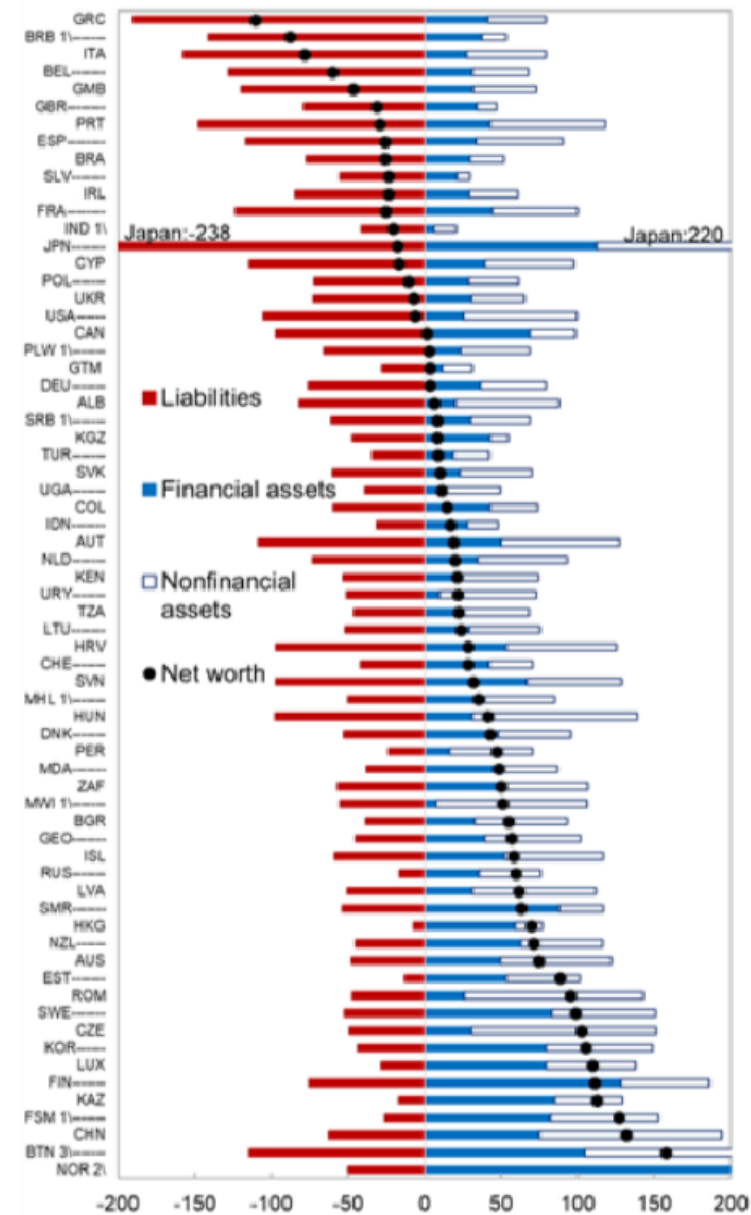
Мерки за квалитетот на БС

- Yousefi, Seyed Reza (2019) Public Sector Balance Sheet Strength and the Macro Economy. IMF Working Paper No. 19/170.
 - 1) Големината на БС
 - 2) Нето-вредноста
 - 3) Прилагодени на ризикот средства и обврски
 - 4) Неусогласеност на ликвидноста
 - 5) Неусогласеност на валутите
 - 6) Природна заштита

1) Големина на БС

- Збир на сите средства и обврски на БС (со исклучок на нето-вредноста).
- БС со поголеми средства или обврски се повеќе изложени на флукуација во вредноста. На пример, поголема изложеност на пазарите на хартии од вредност или пензиски обврски може да има зголемено влијание врз јавните финансии.

1. Total Assets and Liabilities



2) Нето-вредност

- **Што покажува?**
- Тоа е мерка на солвентноста.
- **Дали може сите средства да бидат продадени во еден момент?**
- Нето финансиска вредност = вкупни финансиски средства минус обврски.

Избрани трудови за БС

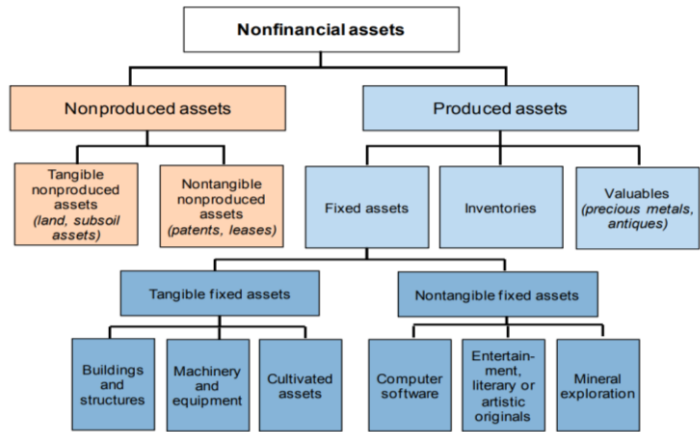
Преглед на литературата

- **Buiter (1983)**: omission of government-owned capital and public sector property rights in land and natural resources from the public sector balance sheet can give a misleading picture of the net worth of the public sector and of its present and future fiscal and financial options.
- **Allen et al. (2002)**: analytical framework for understanding crises in emerging markets based on examination of stock variables in the aggregate balance sheet of a country and the balance sheets of its main sectors.
- **Bova et al. (2013)**: the role of nonfinancial assets.
- **Seiferling and Shamsuddin (2015)**: the role of government financial assets for fiscal transparency and stock-flow residuals.
- **Gruber and Kamin (2012)**, **Hadzi-Vaskov and Ricci (2016)**, and **Henao-Arbelaez and Sobrinho (2017)**: investigate the impact of the debt net of (liquid) financial assets on government bond yields.
- **Yousefi (2019)**: a comprehensive set of measures of balance sheet strength and argues that public sector balance sheet strength is a determinant of macroeconomic resilience.
- **Alves et al. (2020)**: overview and guide for the IMF's Public Sector Balance Sheet Database.
- **Koshima et al. (2021)**: lay out detailed framework for the intertemporal PSBS.

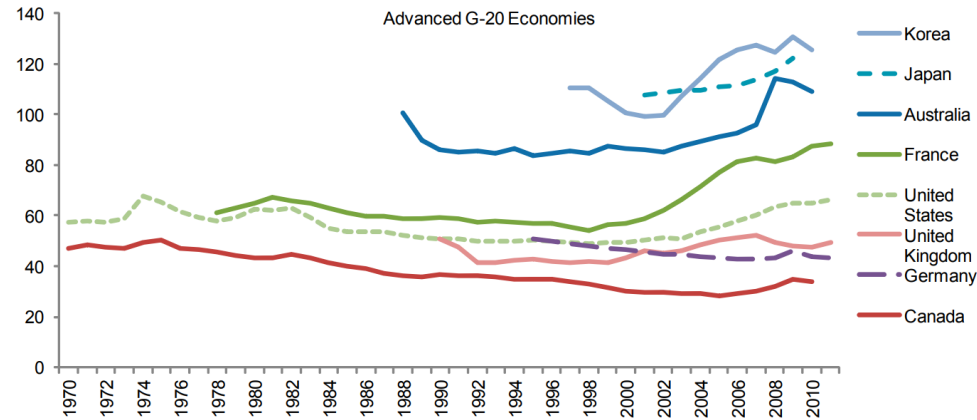
The role of nonfinancial assets

Bova, E., R. Dippelsman, K. Rideout, and A. Schaechter (2013). "Another Look at Government's Balance Sheets: The Role of Nonfinancial Assets." IMF Working Paper 13/95, International Monetary Fund, Washington, DC.

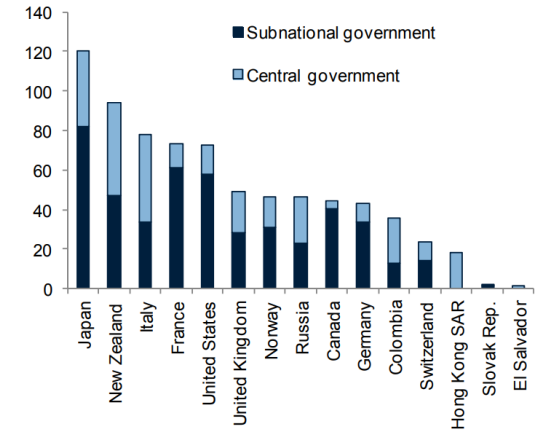
Components



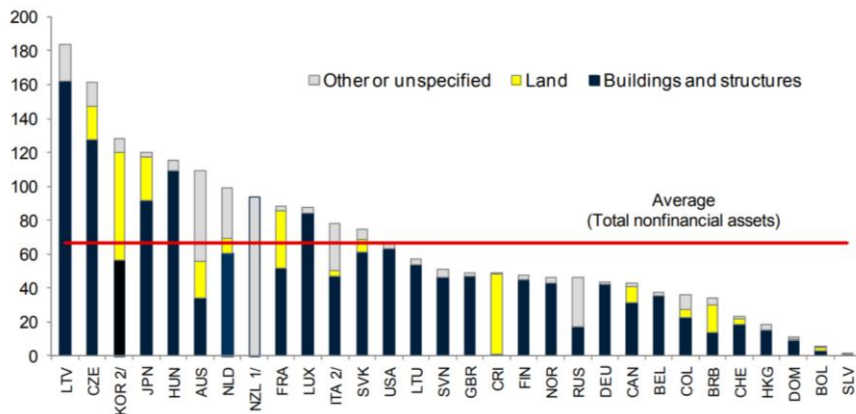
Trends



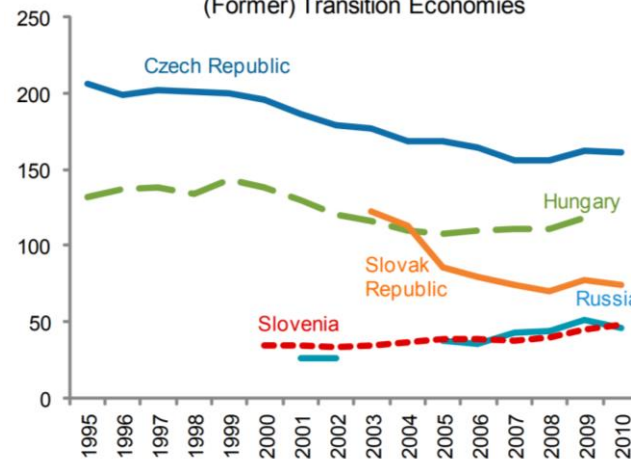
The role of subnational government.



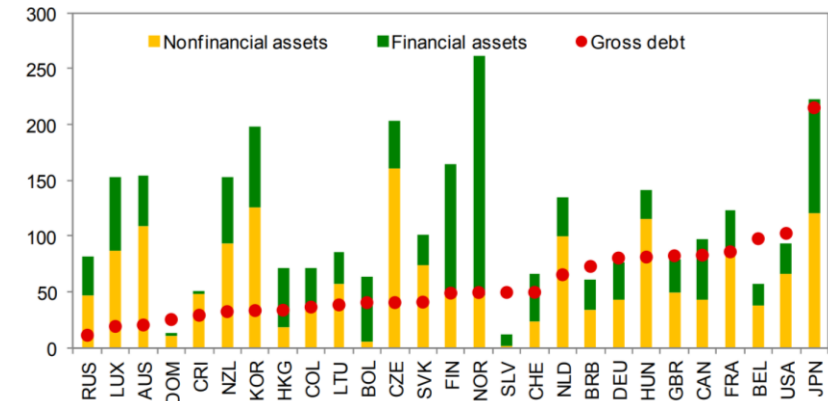
2011



(Former) Transition Economies



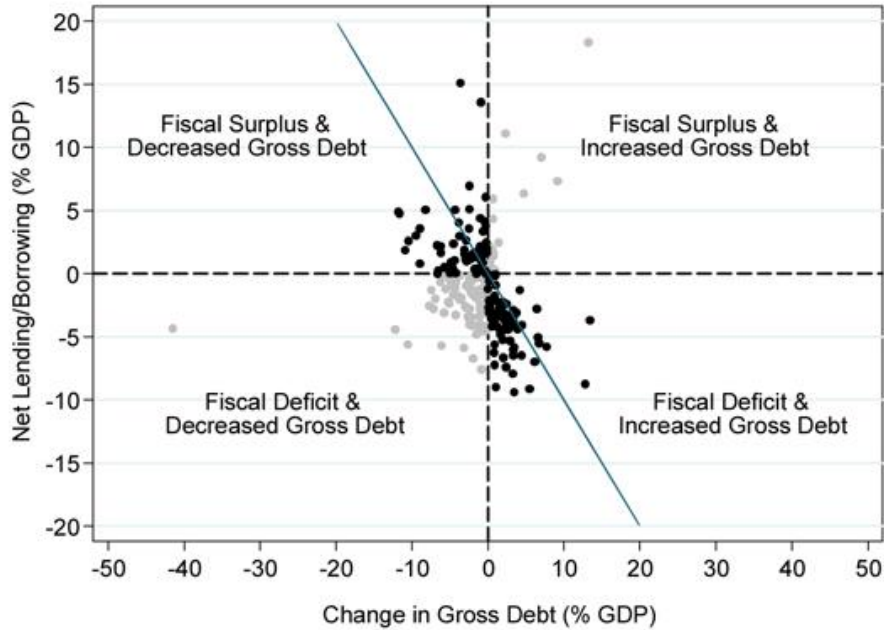
GG Assets and Liabilities



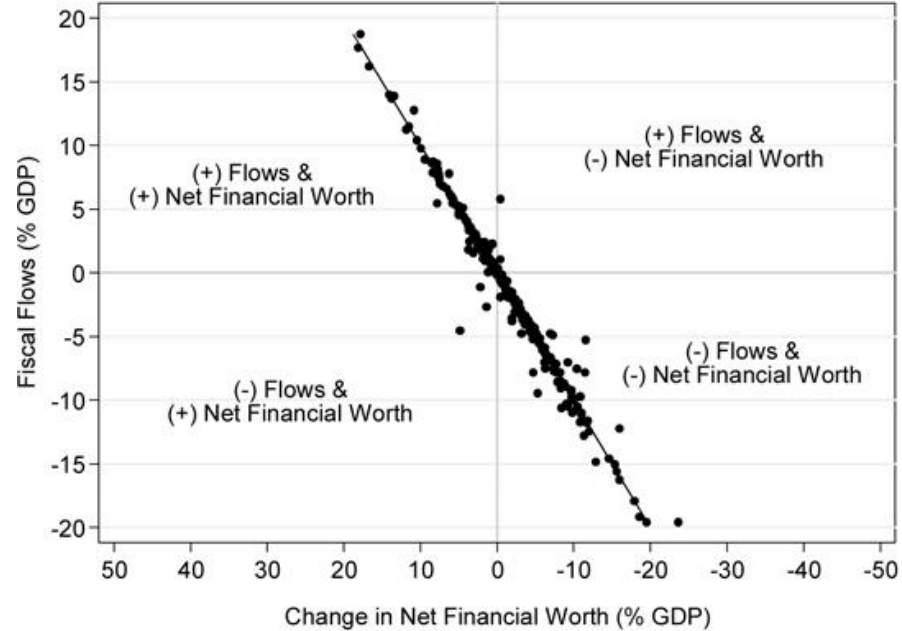
The role of financial assets

Seiferling, M. and T. Shamsuddin (2015). "Fiscal Transparency and the Performance of Government Financial Assets." IMF Working Paper 15/9, International Monetary Fund, Washington, DC.

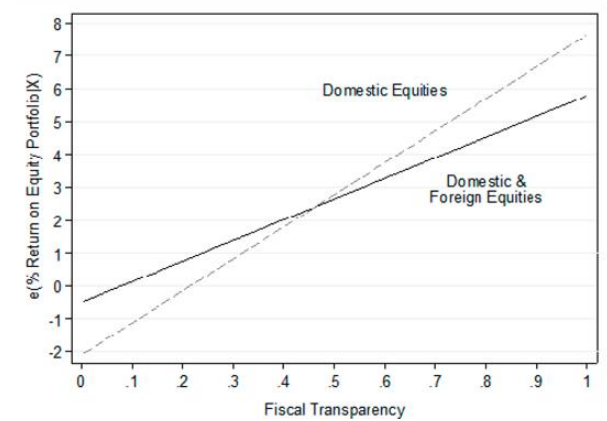
General Government Fiscal Balances and Changes in Gross Debt



Incorporating information on **government transaction in financial assets** and **other economic flows**



Panel regression results



More transparent governments tend to hold significantly more profitable equity portfolios relative to less transparent governments

... on borrowing costs and probability of debt distress

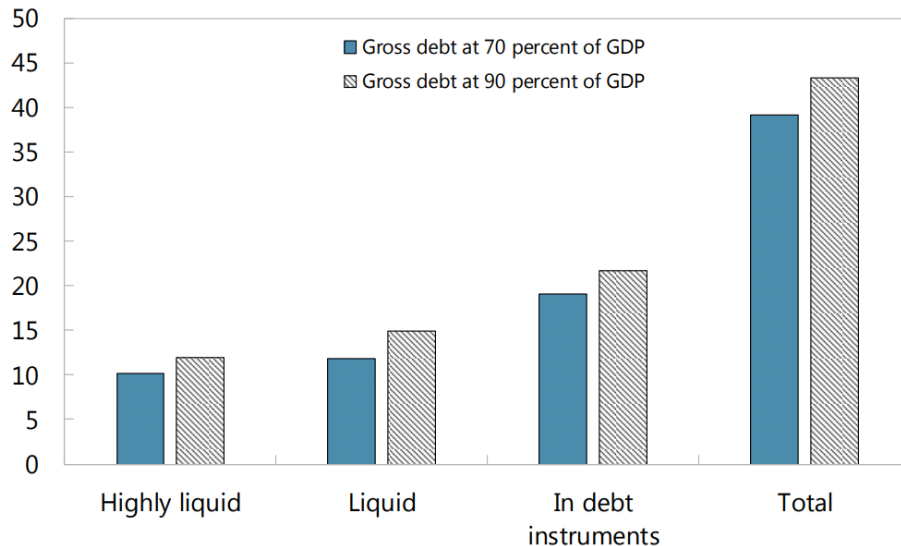
Henao-Arbelaes, C., and N. Sobrinho (2017). "Government Financial Assets and Debt Sustainability." IMF Working Paper 17/173, International Monetary Fund, Washington, DC.

1) Quantile regressions to investigate the impact of government assets on the conditional distribution of sovereign bond spreads: **Assets are particularly relevant for reducing borrowing costs in the riskiest EMs but less so in AMs.**

How much assets would be required to reduce spreads to the sample mean?

Assets consistent with mean spreads in EMs

(in percent of GDP)

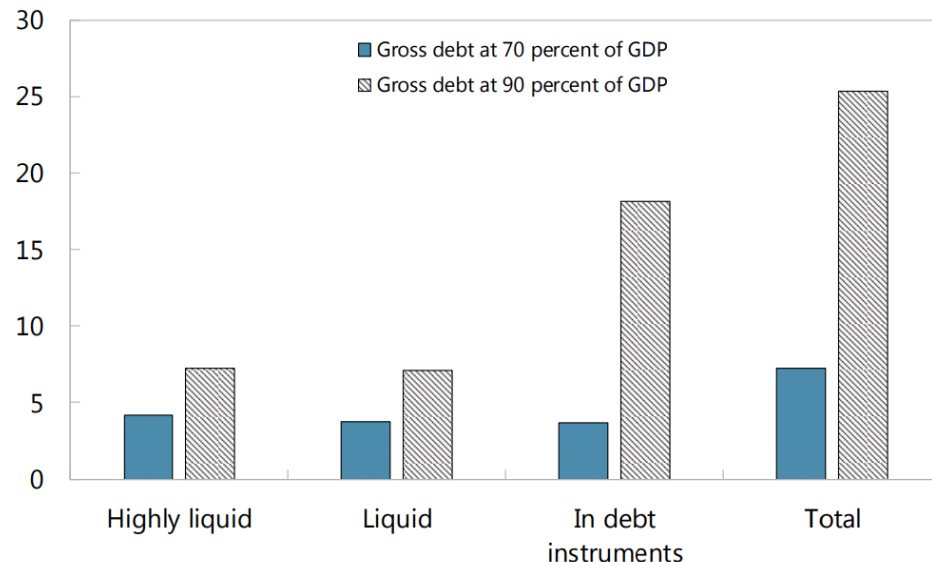


2) Binary response models to measure the impact of government assets on the conditional probability of debt distress: **Asset liquidity is key for reducing probability of debt distress in EMs.**

How much assets would be required to reduce the likelihood of debt distress to the sample mean?

Assets consistent with mean default probability in EMs

(in percent of GDP)



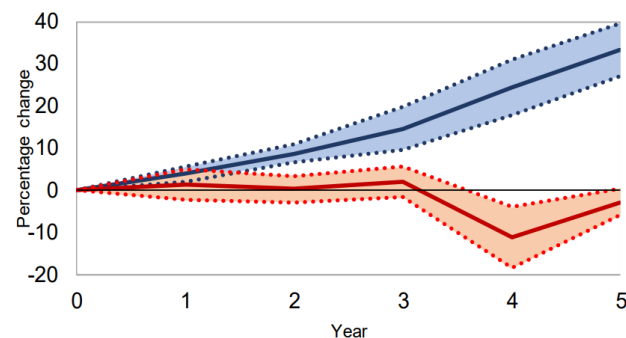
... on borrowing costs, and recovery.

Yousefi, Seyed Reza (2019) **Public Sector Balance Sheet Strength and the Macro Economy**. IMF Working Paper No. 19/170.

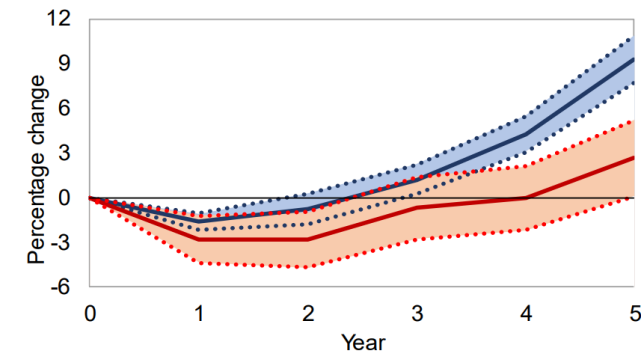
Whether public sector assets influence governments' borrowing costs?

- Panel model. AE and EM. Period is 2001-2016.
- The control variables include the growth rate of real per capita GDP, the US 10-year bond yield, the average inflation rate in country i , the short-term interest rate, and the general government primary balance.

1. Real Government Expenditure per Capita



2. Real GDP per Capita



— Strong balance sheets — Weak balance sheets

Dependent variable: Long term government bond yields

Full Sample

Lagged NW						-0.0154**	
						[0.006]	
Lagged NFW						-0.0056	
						[0.006]	
Lagged Gross Debt	0.0157**	0.0141**				0.0069*	
	[0.007]	[0.007]				[0.004]	
Lagged Total Asset	-0.0267***					-0.0250***	
	[0.007]					[0.007]	
Lagged Financial Assets		-0.0290**				-0.0269**	
		[0.012]				[0.011]	
Observations	343	343	378	378	601	377	377
R Squared	0.511	0.502	0.487	0.472	0.855	0.495	0.485
Number of countries	31	31	33	33	33	33	33

Whether countries with healthier public finances have more room to engage in countercyclical fiscal policy in the aftermath of recessions, and if they experience shallower recessions and a faster return to growth as a result?

- Local projection method. 17 AE. Period is 1970-2015.
- Strong (weak) balance sheets are defined as those with net financial worth above (below) the sample median.

Association with the corruption

Tevdovski, D., Stojkoski, V. (2023) **Do the economies of South-Eastern Europe know the stock of their assets (and liabilities)? The nexus between public sector balance sheet and corruption.** Presented at the LSEE 2nd Workshop on the comparative economics of Sout- Eastern Europe “Investment in Economic and Social Infrastructure”.

Whether absence of public sector balance sheets contributes to corrupt behavior and a lack of regard for public property?

- Panel model. AE and EM. Period is 2000-2016.

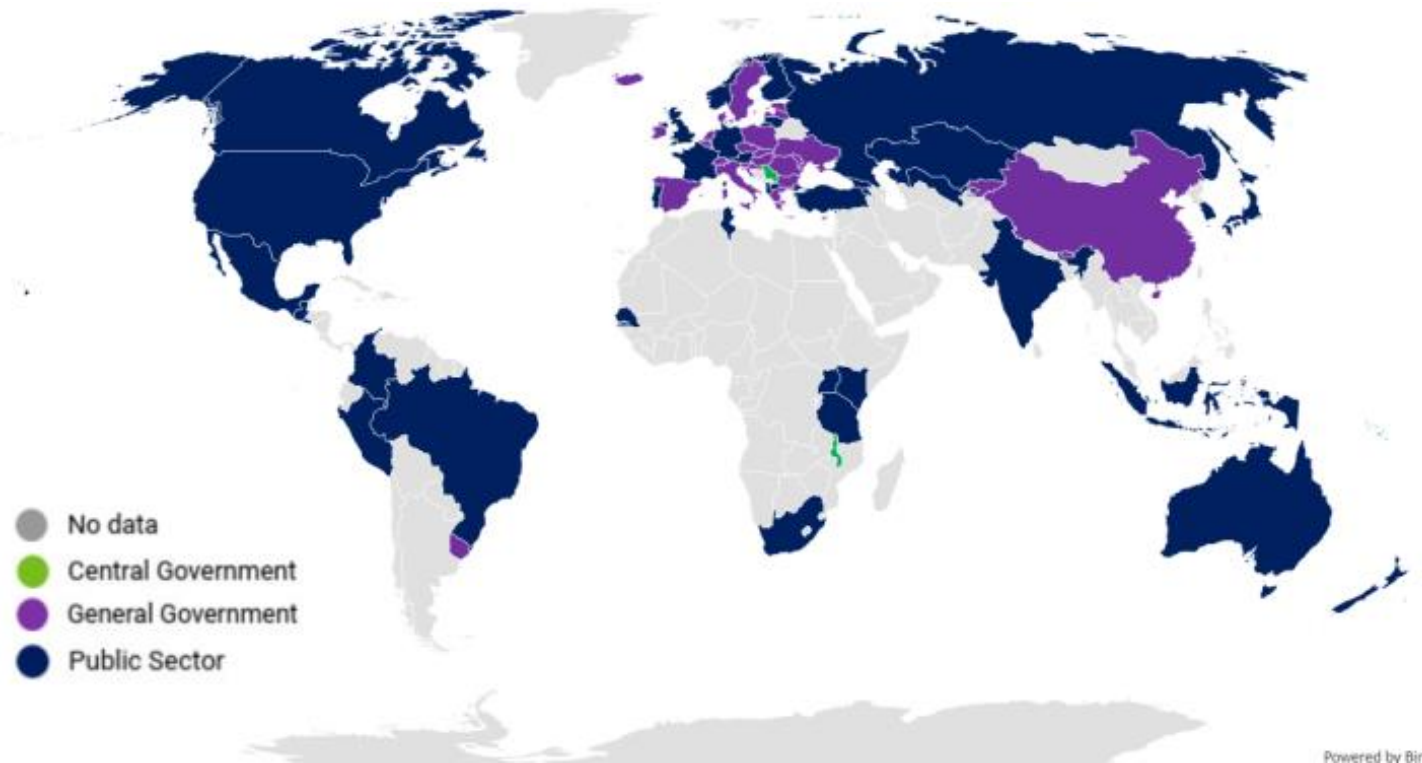
	Dependent variable: Corruption Perception		
	(1)	(2)	(3)
Log (GDP per capita)	16.829*** (2.252)	13.692*** (2.337)	15.825*** (4.636)
PSBS dummy		13.052*** (4.597)	12.996*** (4.646)
Log (human capital)			-9.958 (18.633)
Constant	-113.362*** (22.022)	-88.681*** (21.932)	-114.135** (52.529)
Observations	38	38	38
R ²	0.608	0.681	0.684
Adjusted R ²	0.597	0.663	0.656

Note: * p<0.1 ** p<0.05 *** p<0.01.

База на ММФ за БС на јавниот
сектор

Data: The IMF's public sector balance sheet database

[Public Sector Balance Sheet \(PSBS\) - PSBS Home - IMF Data](#)



Source: Alves et al. (2020).

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Достапност на податоците во базата на ММФ

Достапност на БС за јавниот сектор	Земји
Во сите години во периодот 2000-2016	Australia, Canada, Finland, Japan, Norway and United Kingdom
Најмалку во две години во периодот 2000-2016	El Salvador, France, Georgia, Germany, India, Indonesia, Kazakhstan, Korea, New Zealand, South Africa, United States.
Само во една година во периодот 2000-2016	Albania, Armenia, Austria, Brazil, Colombia, Gambia, Guatemala, Kenya, Lithuania, Malta, Mexico, North Macedonia, Peru, Portugal, Russia, Senegal, Tanzania, Tunisia, Turkey, Uganda, Uzbekistan.

Data Tables



INTERNATIONAL
MONETARY FUND

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IMF DATA ACCESS TO MACROECONOMIC & FINANCIAL DATA

Public Sector Balance Sheet (PSBS)



PSBS Home Data Tables Query Documents Metadata

Public Sector Country Snapshot

1. Albania
2. Armenia
3. Australia
4. Austria
5. Brazil
6. Canada
7. Colombia
8. Denmark
9. El Salvador
10. Estonia
11. Finland
12. France
13. Gambia, The
14. Georgia
15. Germany
16. Guatemala

Time Series by Country

1. Central Government
2. General Government
3. Public Sector
 - 3.1 Financial Public Corporations
Of which: Central Bank
 - 3.2 Nonfinancial Public Corporations

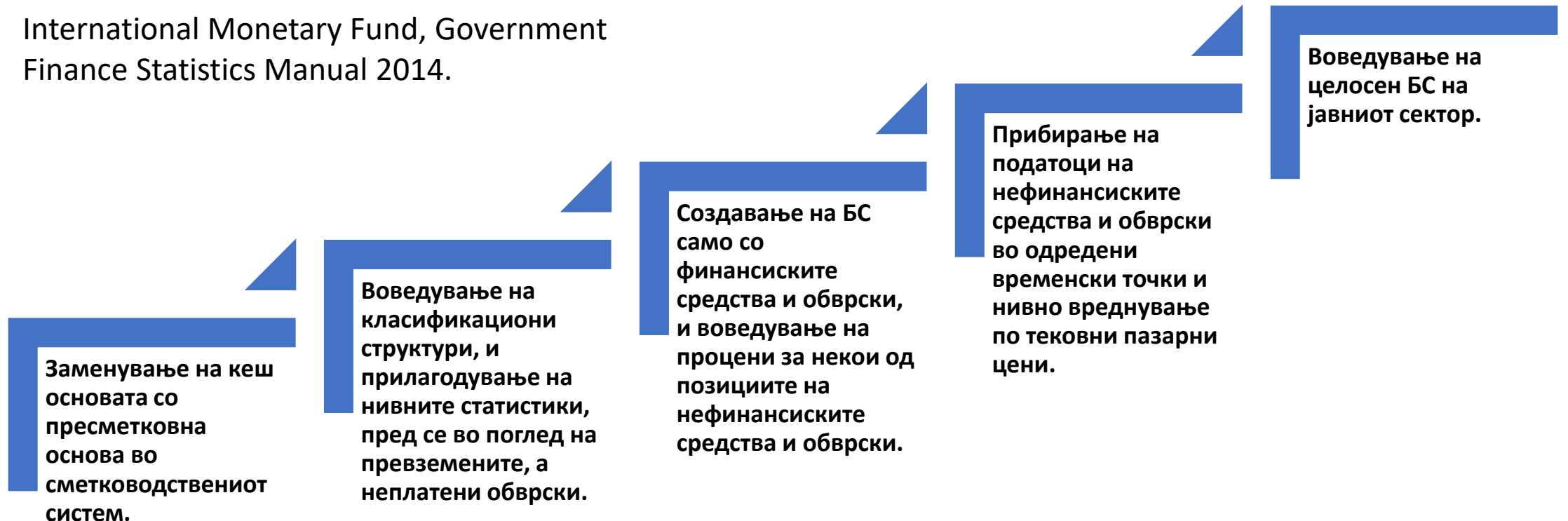
Time Series by Indicator

1. Central Government
2. General Government
3. Public Sector
 - 3.1 Financial Public Corporations
Of which: Central Bank
 - 3.2 Nonfinancial Public Corporations

Како да се вовведе БС?

Имплементација на БС

International Monetary Fund, Government Finance Statistics Manual 2014.



БС на јавниот сектор може да испушти некои од клучните податоци за квалитетот на јавните финансии, како ЈПП. Затоа тие треба да се водат во дополнителен регистар.

Референци

- Allen, M., C. Rosenberg, C. Keller, B. Setser, and N. Roubini (2002). “A Balance Sheet Approach to Financial Crises.” IMF Working Paper 02/210, International Monetary Fund, Washington, DC. Link: [A Balance Sheet Approach to Financial Crisis \(imf.org\)](#)
- Alves, Miguel, De Clerck, Sage and Gamboa-Arbelaez, Juliana (2020) Public Sector Balance Sheet Database: Overview and Guide for Compilers and Users. IMF Working Paper No. 20/130. Link: [Public Sector Balance Sheet Database: Overview and Guide for Compilers and Users \(imf.org\)](#)
- Bova, E., R. Dippelsman, K. Rideout, and A. Schaechter (2013). “Another Look at Government’s Balance Sheets: The Role of Nonfinancial Assets.” IMF Working Paper 13/95, International Monetary Fund, Washington, DC. Link: [Another Look at Governments’ Balance Sheets: The Role of Nonfinancial Assets \(imf.org\)](#)
- Buiters, W.H. (1983). “Measurement of the Public-sector Deficit and its Implications for Policy Evaluation and Design.” IMF Staff Papers 30(2): 306-349, International Monetary Fund, Washington, DC. Link: [Measurement of the Public Sector Deficit and Its Implications for Policy Evaluation and Design in: IMF Staff Papers Volume 1983 Issue 002 \(1983\)](#)
- Gruber, J.W., and S.B. Kamin (2012). “Fiscal Positions and Government Bond Yields in OECD Countries.” *Journal of Money, Credit, and Banking*, 44(8): 1563-1587. Link: [Fiscal Positions and Government Bond Yields in OECD Countries \(federalreserve.gov\)](#)

Референци

- Hadzi-Vaskov, M, and L.A. Ricci (2016). “Does Gross or Net Debt Matter More for Emerging Market Spreads?” IMF Working Paper 16/246, International Monetary Fund, Washington, DC. Link: [Does Gross or Net Debt Matter More for Emerging Market Spreads? \(imf.org\)](#)
- Henaó-Arbelaéz, C., and N. Sobrinho (2017). “Government Financial Assets and Debt Sustainability.” IMF Working Paper 17/173, International Monetary Fund, Washington, DC. Link: [Government Financial Assets and Debt Sustainability \(imf.org\)](#)
- International Monetary Fund (2014) Government Finance Statistics Manual 2014. Link: [IMF's Government Finance Statistics Manual 2014](#)
- International Monetary Fund (2019) Public Sector Balance Sheet Database. Link: [Public Sector Balance Sheet \(PSBS\) - PSBS Home - IMF Data](#)
- Koshima, Yugo, Jason Harris, Alexander F. Tieman, and Alessandro De Sanctis (2021) The Cost of Future Policy: Intertemporal Public Sector Balance Sheets in the G7. IMF Working Paper No. 21/128. Link: [The Cost of Future Policy: Intertemporal Public Sector Balance Sheets in the G7 \(imf.org\)](#)

Референци

- Seiferling, M. and T. Shamsuddin (2015). “Fiscal Transparency and the Performance of Government Financial Assets.” IMF Working Paper 15/9, International Monetary Fund, Washington, DC. Link: [Fiscal Transparency and the Performance of Government Financial Assets \(imf.org\)](#)
- Yousefi, Seyed Reza (2019) Public Sector Balance Sheet Strength and the Macro Economy. IMF Working Paper No. 19/170. Link: [Public Sector Balance Sheet Strength and the Macro Economy \(imf.org\)](#)