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Sovereign Defaults Series

The causes of sovereign defaults

Summary

The increase in sovereign debt levels resulting from the coronavirus pandemic and global economic recession is prompting investor questions about the role of debt levels in driving sovereign default risk. In this report, we update our 2010 study to offer perspective on the drivers of sovereign defaults and the evolution of debt metrics around default.

» **There have been 42 sovereign bond defaults since 1997, 21 of which took place since 2010.** Overall, 17% of defaults were caused by chronic economic stagnation, 36% by political or institutional weaknesses, 33% by high debt burdens and 14% by banking crises. The number of defaults caused by banking crises decreased in the last decade, while those resulting from institutional weaknesses and high debt burdens increased.

» **Sovereign defaults occur during environments of severe stress**. Economic contractions, banking crises, currency crises or major shocks such as natural disasters have accompanied all sovereign defaults. Overall, recessions accompanied 88% of the defaults and systemic banking or currency crises 55% of defaults.

» **ESG risks have contributed to all four default categories and have played a role in 36% of sovereign defaults since 1997.** Hurricane damage played a significant role in rising debt levels in the Caribbean region and has directly triggered several defaults. Governance risks have contributed to a number of defaults. The coronavirus pandemic, a social risk under our ESG framework, has directly triggered two defaults so far and will have substantial implications for public health and safety globally.

» **Default risk rises as debt burdens rise, but a high debt-to-GDP ratio is neither a necessary nor a sufficient condition for sovereign default.** The historical record shows that the ability of countries to manage debt crises depends not only on their debt levels, but on their economic resilience, quality of political institutions and structure of debt. Sovereigns with moderately low debt levels have defaulted when they had poor economic prospects, weak institutions and/or a large share of foreign-currency debt.

» **Debt repayment capacity is better correlated with default risk than debt levels.** Past defaulters have had a high share of foreign-currency debt, an average of around 70% of total debt in the year before default. They also have had high debt servicing costs, with interest payments to revenue averaging 18% in the year before default.

» **There is some correlation between causes of default and recovery rates.** Sovereign defaults resulting from banking crises recovered on average 61%, while defaults caused by chronic economic stagnation recovered on average 41%. But recovery rates vary widely, ranging from 17% to 95%.

Weak institutions and high debt burdens led to most sovereign defaults over the last decade

Twenty-one defaults on sovereign bonds have occurred since 2010 including both Moody's-rated and unrated issuers, in addition to the 21 defaults in the 1997-2010 period. We can broadly group the reasons for past sovereign defaults into four stylized categories:

1. **Chronic economic stagnation**: Some of the largest defaults in history resulted from stagnating economic conditions, weak fiscal position and domestic vulnerabilities combined with large exogenous shocks and loss of investor confidence. These defaults occurred at relatively low debt-to-GDP levels and were triggered by capital outflows. They were characterized by a vicious circle of economic distress, currency crises and banking crises, culminating in sovereign defaults and severe currency devaluations. Overall, 17% of defaults (seven cases) over 1997-2020 have fallen into this category, including the large defaults of Russia 1998, Argentina 2001 and Venezuela 2017.

2. **Institutional and political factors**: More than one-third of sovereign defaults related to institutional weaknesses or political factors. These have included political instability, weak budget management, governance problems and unwillingness to pay. Defaults resulting from institutional and political factors have occurred at various debt levels, including relatively low debt-to-GDP levels. Fifteen cases fall into this category, including Ecuador 2008 and Argentina 2014.

3. **High debt burden**: Another third of sovereign defaults occurred as a result of persistent external and fiscal imbalances, which over time built up to an unsustainably high debt burden. These defaults were characterized by a gradual build-up of debt and, in particular, deterioration in debt affordability over many years, as a result of external terms-of-trade shocks or unsustainable government fiscal policies. The defaults themselves occurred at very high debt-to-GDP and debt burden levels, which countries were ultimately unable to service or reduce. Fourteen defaults over 1997-2020 have fallen into this category, including Greece 2012.

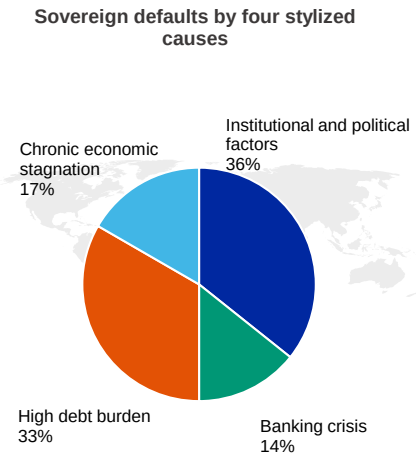
4. **Banking crisis**: Systemic banking crises caused the final 14% of sovereign defaults. Bank recapitalization costs contributed to a large and sudden build-up of public debt over a couple of years in the aftermath of the banking crisis. A doubling of government debt levels also resulted in the doubling of debt servicing costs, which in turn triggered capital outflows and resulted in foreign-exchange crises. Six defaults fall into this category, including Ecuador 1999 and Cyprus 2013.

Exhibit 1 shows the four default categories and provides examples of each default type.

Exhibit 1

The causes of sovereign defaults over 1997-2020 can be grouped into four categories

1. Chronic economic stagnation	2. Institutional and political factors
Chronic economic stagnation, a weak fiscal position and domestic vulnerabilities combined with large external shocks and loss of investor confidence and culminated in a sovereign default	Civil conflict or institutional weaknesses, such as unsustainable fiscal policies, mismanagement of contingent liabilities and administrative delays caused sovereign defaults
Russia (98), Ukraine (98-00), Argentina (01), Grenada (04, 13), Venezuela (17), Suriname (20)	**Mongolia (97), Venezuela (98), Turkey (99), Côte d'Ivoire (00, 11), Cameroon (04), St. Kitts and Nevis (13), Argentina (14, 19), Ukraine (15), Mozambique (16, 17), Republic of Congo (17), Ecuador (08, 20)**
3. High debt burden	**4. Banking crisis**
Persistent external and fiscal imbalances built up to an unsustainably high debt burden. Slow buildup of debt and a deterioration in debt affordability eventually resulted in a sovereign default	Systemic banking crises and capital outflows contributed to a large and sudden buildup of public debt and eventually triggered a government default
Pakistan (99), Moldova (02), Dominica (03), Seychelles (08), Jamaica (10, 13), St. Kitts and Nevis (11), Greece (12), Belize (06, 12, 17), Barbados (18), Lebanon (20)	**Ecuador (99), Uruguay (03), Nicaragua (03, 08), Dominican Republic (05), Cyprus (13)**

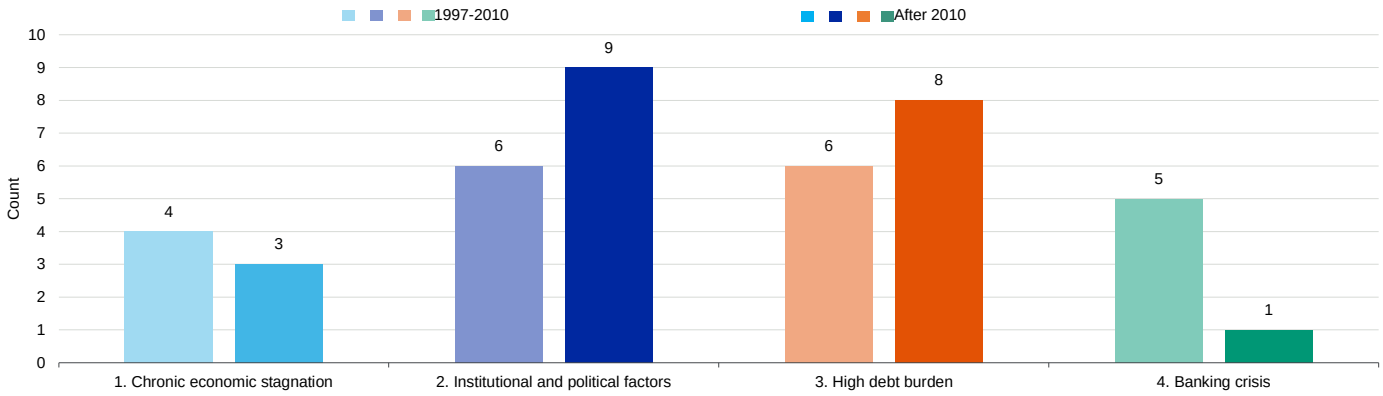


Source: Moody's Investors Service

The share of defaults caused by banking crises has fallen in the last decade (see Exhibit 2). At the same time, the share of defaults resulting from institutional and political factors and high debt burdens has risen. The average debt-to-GDP ratio for sovereign defaulters is 98% since 2010, compared with 71% over the 1997-2010 period.

Exhibit 2

Institutional factors and high debt burdens remain main drivers of sovereign default, while the share of defaults caused by banking crises has fallen in the last decade

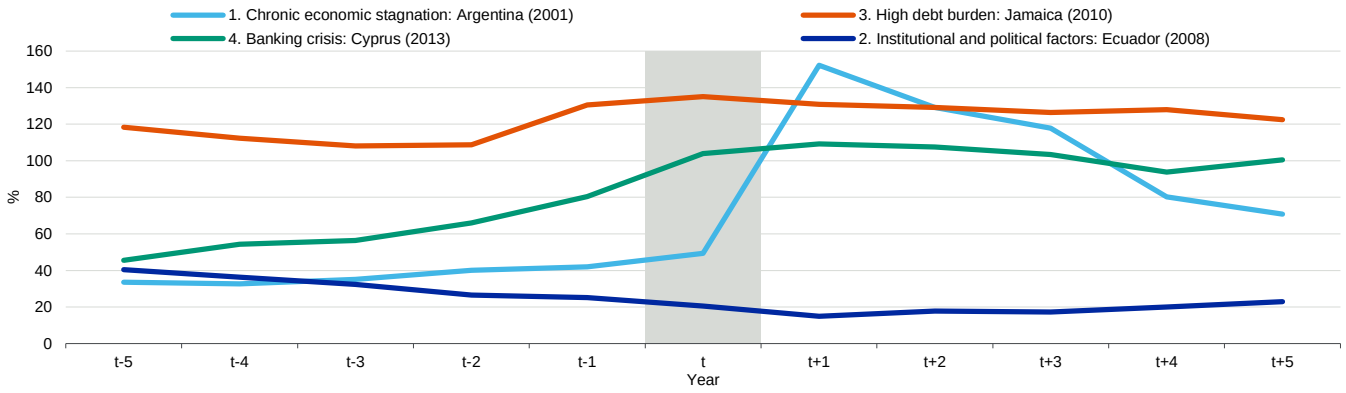


Detailed data sample is in Exhibit 6.
Source: Moody's Investors Service

As Exhibit 3 shows, the debt-to-GDP path has evolved in a very distinct way in each default category. In many cases when default resulted from political and institutional weaknesses, debt to GDP remained relatively low. In Ecuador, for example, the government in 2008 missed part of its global bond payments after the findings of an audit which declared these debts "illegal" and "illegitimate."

Exhibit 3

Evolution of debt ratios around default differs across the four categories of sovereign defaults
Government debt as a share of GDP (t = year of default)



Sources: Moody's Investors Service and IMF

In contrast, sovereigns in the "high debt burden" default category had relatively high debt-to-GDP ratios for many years before the default, as fiscal and external imbalances slowly built up over time. Ultimately, the shock-absorption capacity of the sovereign balance sheet deteriorated to a point where the next external shock, such as a terms-of-trade shock or a natural disaster, triggered a default. Jamaica 2010 is an example of this.

For sovereigns in the "chronic economic stagnation" and "banking crisis" default categories, debt-to-GDP ratios rose dramatically before default. In the case of banking crises, the rise in debt levels typically occurred in the two years before default as the sovereign absorbed the cost of banking system recapitalizations. Cyprus 2013 is an example of this dynamic. In the case of chronic economic

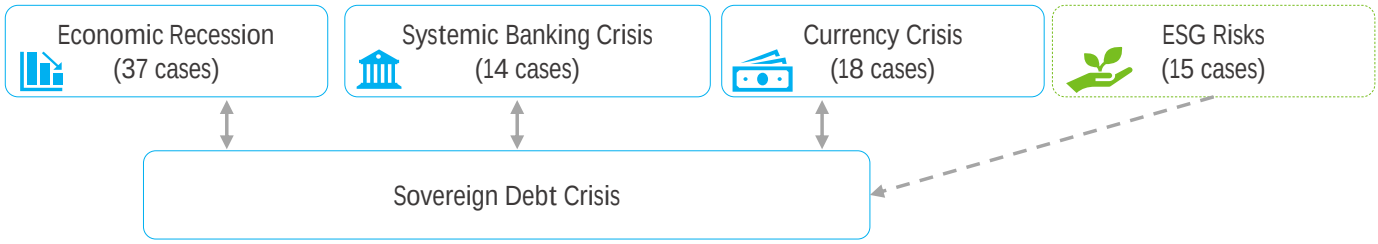
stagnation and simultaneous currency crises, such as in Argentina 2001, the debt-to-GDP ratio rose significantly at the time of the debt crisis. This occurred as currency devaluation increased the burden of foreign-currency debt relative to GDP.

Sovereign defaults occur during periods of severe economic stress

Irrespective of the underlying cause of the default, companies, banks, utilities, sub-sovereign entities and households experienced a severely stressed business environment at the time of sovereign default. Sovereign defaults have typically been triggered when the underlying vulnerabilities in the domestic economy have combined with external shocks and a loss of investor confidence. Hence, capital outflows have typically occurred in the run-up to sovereign defaults. When severe enough, capital outflows have culminated in a foreign-exchange or banking crisis.

As Exhibits 4 and 5 illustrate, all 42 sovereign defaults since 1997 have occurred in the context of negative economic growth, banking crises, currency crises or natural disasters. Overall, economic recessions accompanied 88% of the defaults. Additionally, systemic banking crises and/or currency crises accompanied 55% of the defaults (43% currency crises and 33% banking crises). In fact, even though a banking crisis was the underlying cause for six of the defaults, another eight defaults also eventually culminated into banking crises.

Exhibit 4
Sovereign defaults occur alongside recessions, banking crises, currency crises and other shocks



Sample includes the 42 sovereign bond defaults from 1997 to July 2020. Detailed data is in Exhibit 5.
Source: Moody's Investors Service

Further, environmental, social and governance (ESG) factors have also played a role in a large number of sovereign defaults. Governance risks have contributed to a number of defaults, including defaults that resulted from administrative delays as in Venezuela in 1998 or the recent materialization of public sector contingent liabilities in Mozambique in 2016.

Natural disasters, in particular, have contributed to 21% of sovereign defaults since 1997, including a wave of defaults in the Caribbean region. Hurricane Ivan in 2004, which resulted in damages totaling more than 200% of GDP, was the direct cause of Grenada's subsequent debt restructuring. Further, hurricanes in 2003 and 2004, which damaged the agricultural sector, were contributing factors in the Dominican Republic's debt restructuring in 2005. While natural disasters in Belize and Jamaica in the early 2010s did not directly trigger those countries' sovereign defaults, they significantly impaired debt repayment capacity. This capacity weakened as a result of the effects of the disasters on economic performance and as the sovereigns' debt and fiscal positions worsened.

The ongoing coronavirus pandemic has materially worsened fiscal and external balances across the globe. Sovereigns are not only experiencing external shocks in the form of a collapse in export demand, commodity prices, tourism, remittances and capital flows, but also domestic shocks driven by lockdown measures. Many countries, especially those in emerging and frontier markets, have limited fiscal space, underlying economic vulnerabilities and weak debt sustainability. As a result, the coronavirus outbreak is prompting several sovereigns to seek liquidity relief through debt restructuring.

Ecuador 2020 and Suriname 2020 are the two sovereign defaults that the coronavirus shock has triggered most directly so far. Most recently, Suriname's distressed liquidity position led the administration to launch a consent solicitation to defer principal payment due 30 June on its sovereign bond maturing in 2023. Further, we expect the newly elected government to seek a comprehensive debt restructuring to reduce the country's debt burden, ease liquidity pressure and stabilize the economy. As the coronavirus shock persists this year and next year, we expect sovereign debt burdens and the pressure on sovereign creditworthiness to rise further.

Exhibit 5

Sovereign bond defaults and accompanying economic recessions, systemic banking crises, currency crises and other risks, 1997-July 2020
(Color shade reflects the cause of default: light blue = chronic economic stagnation, dark blue = institutional and political factors, orange = high debt burden, green = banking crisis)

Default Date	Country	FC or LC Default	Default Amount ($ millions)	Economic Recession 1/	Systemic Banking Crisis 2/	Currency Crisis 3/	Others
1997	Mongolia (NR)	LC	…	No	No	√ (1997)	Transition from central planning
1998	Venezuela	LC	$270	√ (1996, 1998-99)	√ (1994-98)	No	Administrative delays
1998	Russia	FC and LC	$72,709	√ (1993-96, 1998)	√ (1998)	√ (1998)	
1998-20	Ukraine	FC and LC	$2,335	√ (1993-99)	√ (1998-99)	√ (1998)	
1999	Pakistan	FC	$1,627	√ (1997)	No	No	Sanctions
1999	Ecuador	FC and LC	$6,604	√ (1998-99)	√ (1998-2002)	√ (1999)	El Nino effects
1999	Turkey (NR)	LC	…	√ (1999, 2001)	√ (2000-01)	√ (2001)	Earthquake
2000	Côte d'Ivoire (NR)	FC	…	√ (1999-2008)	No	No	Civil conflict
2001	Argentina	FC and LC	$82,268	√ (1999-2002)	√ (2001-03)	√ (2002)	
2002	Moldova	FC	$145	√ (1993-96, 1998-99)	No	√ (1999)	Drought
2003	Dominica (NR)	LC	…	√ (2001-03)	No	No	
2003	Uruguay	FC and LC	$5,744	√ (1999-2002)	√ (2002-05)	√ (2002)	
2003	Nicaragua	LC	$320	No	√ (2000)	No	
2004	Cameroon (NR)	LC	…	√ (2002, 2005)	No	No	
2004	Grenada (NR)	FC and LC	…	√ (2001, 2004, 2006)	No	No	Hurricane
2005	Dominican Republic	FC	$1,622	√ (2003-04)	√ (2003-04)	√ (2003)	Hurricanes
2006	Belize	FC	$242	√ (2005, 2007)	No	No	
2008	Nicaragua	LC	$296	No	No	No	
2008	Ecuador	FC	$3,210	√ (2009)	No	No	
2008	Seychelles (NR)	FC	…	√ (2008-09)	No	√ (2007-08)	
2010	Jamaica	LC	$8,230	√ (2008-10)	No	No	
2011	Côte d'Ivoire (NR)	LC and FC	…	√ (2011)	No	No	Flood (2010)
2011	St. Kitts and Nevis (NR)	LC and FC	…	√ (2009-12)	No	No	
2012- Mar	Greece	LC and FC	$261,478	√ (2008-2013, 2015-16)	√ (2008-2015)	No	
2012	Belize	FC	$547	√ (2013, 2016)	No	No	Natural disaster (2008, 2010)
2012- Dec	Greece	LC and FC	$42,076	√ (2008-2013, 2015-16)	√ (2008-2015)	No	
2013	Jamaica	LC and FC	$9,100	√ (2008-10, 2012)	No	No	Natural disaster (2012)
2013	Cyprus	LC and FC	$1,311	√ (2009, 2012-14)	√ (2011-2015)	No	
2013	Grenada (NR)	LC and FC	…	√ (2009-10, 2012)	No	No	
2013	St. Kitts and Nevis (NR)	LC: NIA's 365-day Treasury Bills	…	√ (2009-10, 2012)	No	No	
2014	Argentina	FC: Foreign law bonds (previously restructured)	$29,439	√ (2012, 2014, 2016)	No	√ (2013)	Natural disaster, legal ruling
2015	Ukraine	FC: Eurobond	$13,280	√ (2013-15)	√ (2014-2018)	√ (2014)	Domestic and geopolitical crisis
2016	Mozambique	FC: EMATUM notes	$698	No	No	√ (2015)	Contingent liabilities
2017	Mozambique	FC: 2023 bond	$727	No	No	√ (2015)	
2017	Belize	FC: Superbond	$529	√ (2016)	No	No	
2017	Republic of Congo	FC: Eurobond	$363	√ (2016)	No	No	Legal dispute
2017	Venezuela	FC, ongoing	$31,095	√ (2014 onward)	No, the banking sector has shrunk	√ (2016 - ongoing)	Sanctions
2018	Barbados	LC and FC	$3,429	√ (2017 - 2019)	No	No	
2019	Argentina	FC, ongoing	$1,470	√ (2016, 2018 onward)	No	√ (2018-19)	
2020	Lebanon	FC, ongoing	$6,600	√ (2018 onward)	√ (2019, ongoing)	√ (2020)	
2020	Ecuador	FC, ongoing	$17,283	√ (2020)	No	No	COVID-19
2020	Suriname	FC, ongoing	$125	√ (2020)	No	√ (2015-16)	COVID-19

1/ Economic recession is defined as negative annual real GDP growth. 2/ Systemic banking crisis is defined as an event that meets two conditions: (1) significant signs of financial distress in the banking system (as indicated by significant bank runs, losses in the banking system or bank liquidations); and (2) significant banking policy intervention measures in response to significant losses in the banking system. The duration of banking crises is truncated at five years, starting with the first crisis year. 3/ Currency crisis is defined as a nominal depreciation of the local currency against the US dollar of at least 30% within a year, that is also a 10% increase in the rate of depreciation compared with the previous year. Argentina defaulted on short-term debt in 2019 and long-term debt in 2020. NR is not rated by Moody's at the time of default.

Sources: Moody's Investors Service, IMF and Laeven, L. and Valencia, F., Systemic Banking Crises Revisited, IMF Working Paper WP/18/206, September 2018.

Debt levels are not the only factor that determines ability to manage sovereign debt crises

The ability of countries to manage crises depends not only on their debt levels, but on a combination of factors including economic resilience, the quality of political institutions and the structure of debt.

Debt affordability is better correlated with past default experience than debt to GDP

While sovereign default risk is correlated with rising debt levels, a high debt-to-GDP ratio is neither a necessary nor sufficient condition leading to sovereign default. Some countries have defaulted at debt-to-GDP ratios of less than 40%, while others have managed debt stocks above 100% of GDP for decades without running into distress. About a quarter of the modern-era sovereign defaults occurred at relatively low debt-to-GDP ratios, including several defaults caused by banking crises, economic stagnation and institutional weaknesses.

Sovereigns with moderately low debt levels have defaulted when their economic prospects were poor, their net foreign-currency exposures were large and/or their political institutions were fragile. Conversely, countries with high economic resilience, predominantly domestic currency-denominated debts, and strong political institutions have historically been successful in managing relatively large debt burdens and eventually reversing increases in debt-to-GDP ratios caused by macroeconomic shocks and systemic banking crises. Debt affordability ratios are better correlated with past default experience than are debt-to-GDP ratios. For example, the ratio of interest payments to revenue was relatively high at an average of 18% in the year before default.

Foreign-currency exposure presents a significant vulnerability

As Exhibit 6 shows, the existence of significant amounts of foreign-currency debt has been a critical vulnerability of past defaulters. Previous sovereign defaults have occurred at varied debt-to-GDP levels; however, one common characteristic was the high level of foreign-currency debt: in the year before default, the share of foreign-currency debt averaged around 70% of total debt.

Public enterprises' contingent liabilities can also trigger sovereign defaults

While the materialization of banking sector contingent liabilities has contributed to sovereign defaults throughout history, the more recent experience has highlighted the role of contingent liabilities materializing from public sector enterprises. The recent defaults of Venezuela, Mozambique and Belize show that contingent liabilities from public enterprises represent a material source of fiscal risks to some sovereigns.

Contingent liabilities stemming from nonfinancial public sector companies can materialize into high fiscal costs to sovereigns. On occasion, they can even trigger a sovereign default. In the case of Venezuela, the creditworthiness of the government is interlinked with the creditworthiness of state-owned oil producer Petroleos de Venezuela SA (PDVSA). PDVSA, a key source of government revenue, had seen its debt levels increase and credit quality deteriorate markedly with the decline in oil prices. The sovereign default followed the default of PDVSA in November 2017, when it failed to make the principal payment on a bond without a grace period. At that time, the Venezuelan government had around $36.7 billion in outstanding international bond debt, while PDVSA had $28.5 billion outstanding in bond debt as of the end of 2016.

Sovereign liabilities can also materialize from explicit guarantees of public-enterprise debt by the government. A recent example is Mozambique, where the government defaulted on a government-guaranteed note issued by the public enterprise Empresa Mocambicana de Atum (EMATUM) in 2016. Additional debts in the form of loans were also taken out by two other public enterprises, Proindicus and Mozambique Asset Management (MAM), with government guarantees for approximately $1.4 billion. Similarly to EMATUM, both companies encountered liquidity problems, preventing them from servicing the loans on their own.

Exhibit 6

Selected debt metrics in the year preceding and in the year of sovereign default, 1997-July 2020

Year-end

Year	Country	Debt/GDP		Debt/Revenue		Interest Payments/Revenue		FC Debt/Total Debt		External Vulnerability Indicator (EVI)		Recovery Rates (% of PAR)
		Year before	Year of default	Year before	Year of default	Year before	Year of default	Year before	Year of default	Year before	Year of default	
1) Chronic economic stagnation: A combination of stagnating economy, weak fiscal position, large exogenous shocks, and shifting investor confidence												
1998	Russia	44.6	115.3	114.6	340.5	12.9	12.0	56.8	83.7	283.5	559.0	18
1998-2000	Ukraine	34.7	73.3	89.4	203.6	4.5	6.5	68.8	52.5	243.0	1150.5	69
2001	Argentina	45.6	53.7	307.7	370.9	22.9	26.2	94.3	96.9	207.6	308.4	27
2004	Grenada (NR)	110.0	129.5	399.0	504.9	18.9	25.1	72.9	73.4	--	--	65
2013	Grenada (NR)	103.3	108.1	496.7	517.9	16.5	15.1	--	--	--	--	36
2017	Venezuela	44.6	151.8	262.6	867.3	21.8	21.1	92.1	98.5	1331.3	1337.1	28
2020	Suriname	75.3	82.9	324.3	323.0	15.6	16.1	66.8	72.0	82.2	92.9	45
Average 1)	*7*	*65.5*	*102.1*	*284.9*	*446.9*	*16.2*	*17.4*	*75.3*	*79.5*	*429.5*	*689.6*	*41*
2) Institutional and political factors												
1997	Mongolia (NR)	--	82.9	--	353.6	--	10.0	--	92.7	--	35.7	--
1998	Venezuela	31.8	30.4	137.2	174.0	10.3	14.7	88.8	88.1	120.9	124.7	--
1999	Turkey (NR)	32.4	41.3	191.5	228.0	52.0	56.6	52.4	49.5	175.3	162.5	--
2000	Côte d'Ivoire (NR)	124.0	104.8	673.0	639.3	23.0	24.9	78.0	85.4	--	--	18
2004	Cameroon (NR)	67.5	62.0	384.0	380.6	12.1	11.1	79.0	80.0	--	--	--
2008	Ecuador	28.1	23.2	151.4	92.1	10.8	5.8	100.0	100.0	354.2	202.0	28
2011	Côte d'Ivoire (NR)	63.0	69.2	347.4	485.4	8.7	12.7	69.4	70.1	18.2	18.1	95
2013	St. Kitts and Nevis (NR)	137.9	101.1	381.7	223.8	8.9	9.8	--	--	--	--	--
2014	Argentina	36.4	42.2	202.3	199.0	5.9	7.0	56.2	60.1	153.3	206.7	68
2015	Ukraine	70.3	79.3	173.8	187.3	8.2	10.5	60.9	70.0	243.9	671.3	80
2016	Mozambique	73.0	101.8	247.6	388.9	4.4	9.0	84.0	87.5	35.9	45.1	88
2017	Mozambique	101.8	92.5	388.9	383.8	9.0	14.1	87.5	87.5	45.1	63.0	61
2017	Republic of Congo	64.2	64.5	265.5	256.0	2.6	3.9	74.3	66.3	44.7	131.8	81
2019	Argentina	85.5	89.2	480.3	490.6	15.0	18.4	76.2	77.7	240.6	231.1	43
2020	Ecuador	48.0	58.1	208.8	374.1	13.3	11.9	100.0	100.0	590.8	645.8	27
Average 2)	*15*	*68.9*	*69.5*	*302.4*	*323.8*	*13.1*	*14.7*	*77.4*	*79.6*	*183.9*	*211.5*	*59*
3) High debt burden: Persistent external and fiscal imbalances over time building up an unsustainably high debt burden												
1999	Pakistan	75.3	82.6	566.2	606.8	47.1	45.6	49.0	48.5	902.0	421.7	52
2002	Moldova	72.4	65.8	253.4	205.9	14.4	6.6	87.7	89.6	231.9	220.2	60
2003	Dominica (NR)	108.7	108.7	386.8	371.0	14.9	15.7	79.9	84.4	--	--	47
2006	Belize	92.0	87.4	363.4	334.3	27.2	30.8	86.4	85.9	318.6	120.2	76
2008	Seychelles (NR)	129.8	135.6	412.2	372.5	20.8	20.9	49.2	61.4	--	--	30
2010	Jamaica	111.0	110.0	410.3	421.5	62.9	51.4	52.5	53.1	72.8	67.2	90
2011	St. Kitts and Nevis (NR)	156.5	146.6	524.0	414.4	10.5	9.2	--	--	--	--	--
2012- Mar	Greece	172.1	159.6	392.9	343.1	16.6	11.0	--	3.3	--	--	24
2012- Dec	Greece	172.1	159.6	392.9	343.1	16.6	11.0	--	3.3	--	--	37
2012	Belize	77.1	73.3	270.8	274.5	11.8	7.1	83.4	83.1	38.2	44.7	40
2013	Jamaica	131.5	131.9	501.3	475.4	36.8	27.7	42.4	44.1	105.3	125.7	89
2017	Belize	88.5	85.8	291.6	269.0	9.9	9.0	75.6	74.9	12.8	16.4	65
2018	Barbados	101.9	91.1	356.6	309.6	26.9	12.9	27.8	30.3	114.5	194.6	55
2020	Lebanon	178.4	211.3	828.2	1180.4	48.4	21.2	36.8	52.4	124.1	132.0	17
Average 3)	*14*	*119.1*	*117.8*	*425.0*	*423.0*	*26.1*	*20.0*	*61.0*	*54.9*	*213.4*	*149.2*	*52*
4) Banking crisis												
1999	Ecuador	56.4	84.9	406.1	526.6	29.2	41.7	81.4	78.6	484.0	341.9	44
2003	Uruguay	69.6	84.3	465.1	439.8	19.1	26.3	96.0	94.4	793.0	219.1	66
2003	Nicaragua	130.4	133.8	576.8	535.0	11.2	14.3	--	--	44.4	6.5	--
2005	Dominican Republic	30.5	20.3	219.7	131.6	9.5	6.4	84.2	88.1	190.3	128.0	95
2008	Nicaragua	32.5	28.6	162.6	148.0	5.8	4.5	98.4	97.2	53.2	72.4	49
2013	Cyprus	79.7	102.6	220.9	281.6	8.7	9.2	0.0	1.0	--	--	53
Average 4)	*6*	*66.5*	*75.8*	*341.9*	*343.8*	*13.9*	*17.1*	*72.0*	*71.9*	*313.0*	*153.6*	*61*
Average	**42**	**85.1**	**91.9**	**347.1**	**380.2**	**18.2**	**17.3**	**71.1**	**70.1**	**255.2**	**261.2**	**53**

Sample refers to sovereign bond defaults. NR is not rated by Moody's at the time of default. Recovery rates are measured as the average trading price in % of the par value of the bond at the time of the initial default event, 30-day post-default for missed payments or around the close of an exchange for distressed debt exchanges. When the trading price is not available, we calculate an equivalent measure estimating the recovery as the ratio of the present value of the cash flow of the new debt instruments received as a result of the distressed exchange versus the outstanding face value of those initially promised, discounted by an approximated market yield at the time of default.

Source: Moody's Investors Service

Recovery rates are somewhat correlated with the causes of default

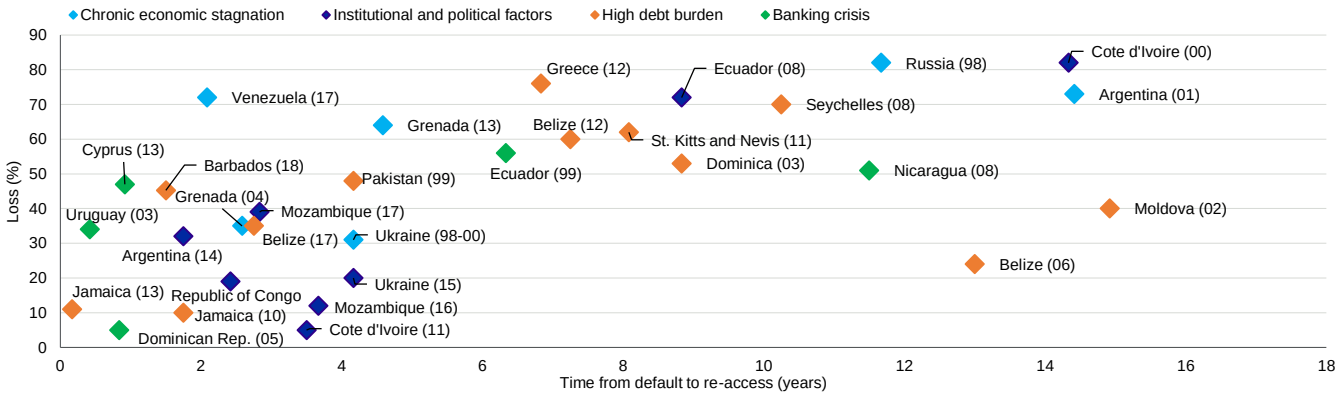
There is some correlation between recovery rates and the causes of default (although the sample size is small). Measured by post-default trading prices or an equivalent present value of cash flow measure if trading price is not available, defaults stemming from banking crises have the highest average recovery rate, at 61%. Next are defaults resulting from institutional and political factors, with an average recovery of 59%. Sovereign defaults triggered by high debt burdens have a slightly lower recovery rate, at 52%. In contrast, the average recovery rate for defaults resulting from chronic economic stagnation is the lowest, at 41%.

Overall, sovereign recovery rates have varied considerably, ranging from 17% to 95%. Some of the largest defaults garnered low recovery rates, including Russia in 1998, Argentina in 2001, Greece in 2012 and Venezuela in 2017.

There does not seem to be much correlation between the cause of default and the period of market exclusion post-default. The length of market exclusion is highly correlated with the losses that investors incur in the restructuring, as Exhibit 7 shows. On average, between 1997 and 2019, sovereign governments remained out of international capital markets for 6.1 years after default and 4.9 years after the final default resolution. Default resolution itself was relatively quick, taking slightly more than one year on average. Thus, overall, an inability to resolve the default has not driven the length of market exclusion. Instead, the main driver was how much time countries took to rebuild their ability and reputation to service debt.

Exhibit 7

Market exclusion is highly correlated with the losses experienced by investors



Market re-access is defined as the date of first issue of an international bond or first issue on the regional exchange by the sovereign following the debt exchange. Calculations are as of December 2019. Many of the countries that defaulted recently have not yet issued new bonds post default.

Source: Moody's Investors Service, Sovereign Defaults Series: Market re-access and credit standing after sovereign default, October 2013

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