

JAPAN

Rating Analysis - 9/5/12
Debt: JPY1.1B

EJR Sen Rating(Curr/Prj) BB+/ N/A
EJR CP Rating: A3
EJR's 1 yr. Default Probability: 2.7%

Japan has been devastated by the 2011 earthquake and tsunami. However, a second tsunami lurks in the country's severely weakened credit quality as can be seen in the ratios below. Many observers believe the clean-up and subsequent rebuilding of infrastructure will boost the nation's GDP. To the contrary, a major portion of costs will be born by the federal government (if not covered by insurers/re-insurers) which will place addl pressure on the budget and further increase national debt. THE issue is when Japan might face financial market discipline; a deteriorating Bal of Trade, rising Dependency Ratio and reduced savings might be catalysts.

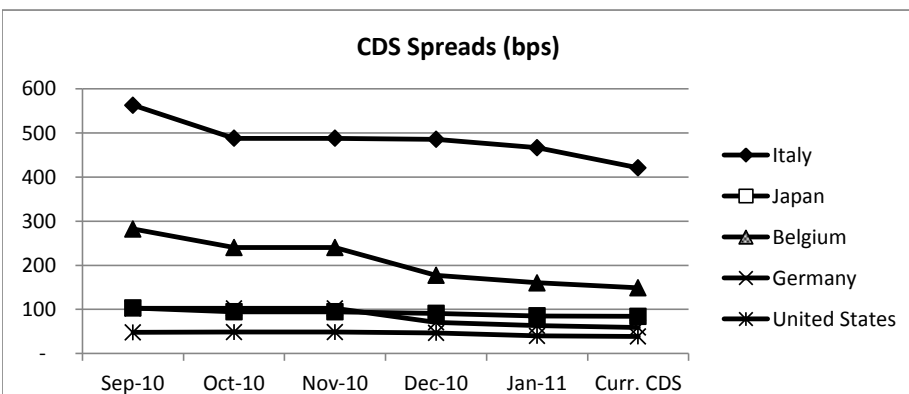
Over the past four years Japan's debt has risen by 3.5% per annum (from JPY997T to JPY1,136T) while GDP shrunk by 2.2% per annum from JPY513T to JPY468T. As a result, the county's debt to GDP rose from 194.5% to 235.9%. With a federal budget deficit of 7.32% of GDP and the slowdown in China, we expect Japan's credit quality will further weaken. During June 2012, Japan's trade balance turned negative. Funding cost have remained low because of the Bank of Japan (BOJ) asset-purchase program and the high level of JGB debt (93%) held by domestic institutions. A major issue is whether Japan will be able to continue to fund itself at relatively low rates. We are affirming.

Annual Ratios (source for past results: IMF)

INDICATIVE CREDIT RATIOS	2008	2009	2010	P2011	P2012	P2013
Debt/ GDP (%)	209.0	232.9	235.9	252.8	269.3	283.8
Govt. Sur/Def to GDP (%)	-8.9	-8.4	-9.5	-7.3	-6.4	-3.8
Adjusted Debt/GDP (%)	209.0	240.7	243.5	260.5	276.9	291.3
Interest Expense/ Taxes (%)	14.1	15.2	14.7	14.2	14.7	14.8
GDP Growth (%)	-0.5	3.2	-0.7	0.1	0.1	0.1
Foreign Reserves/Debt (%)	7.5	7.1	7.1	6.7	6.4	6.1
Implied Sen. Rating	B+	BB-	B+	B+	B+	CCC+

INDICATIVE CREDIT RATIOS	AA	A	BBB	BB	B	CCC
Debt/ GDP (%)	45.0	55.0	75.0	85.0	95.0	145.0
Govt. Sur/Def to GDP (%)	4.0	1.0	-2.0	-5.0	-8.0	-10.0
Adjusted Debt/GDP (%)	40.0	50.0	60.0	80.0	120.0	150.0
Interest Expense/ Taxes (%)	7.0	9.0	12.0	15.0	22.0	26.0
GDP Growth (%)	4.0	3.0	2.0	1.0	-1.0	-5.0
Foreign Reserves/Debt (%)	25.0	20.0	15.0	12.0	9.0	7.0

PEER RATIOS	S&P Sen.	Debt as a % of GDP	Govt. Surp. Def to GDP (%)	Adjusted Debt/ GDP	Interest Expense/ Taxes %	GDP Growth (%)	Ratio-Implied Rating*
Government Of Canada	AAA	30.9	-4.5	31.2	14.1	1.9	AA-
Federal Republic Of Germany	AAA	81.4	-1.0	92.1	11.4	1.9	BBB+
United States (Govt Of)	AA+	100.9	-8.2	102.5		1.8	BBB-
Kingdom Of Belgium	AA	102.1	-3.7	102.1	11.9	0.9	BB+
Republic Of Italy	BBB+	120.0	-3.9	131.3	16.7	-0.5	BB



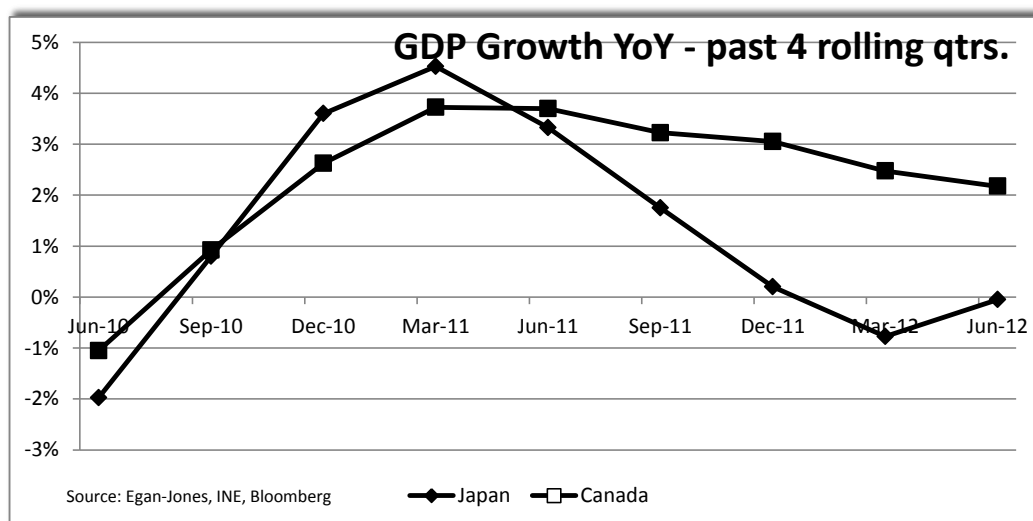
Country (EJR Rtg*)	Current CDS	Targeted CDS
Italy (C+)	421	4,300
Japan (BB+)	85	600
Belgium (BBB-)	149	400
Germany (A-)	59	120
United States (AA-)	39	70

* Projected Rating
* EJR's targeted CDS based on rating

Economic Growth

For nearly three decades, real economic growth in the world's second largest economy was spectacular. Japan's GDP grew at an average of 10% in the 1960's, followed by an average of 5% in the 1970's and 4% in the 1980's. However, following the asset price bubble of the late 1980's, the unprecedented growth of the prior three decades slowed significantly, averaging just 1.7% by the end of the 1990's.

As can be seen from the below chart, Japan's rolling four quarter GDP growth has been less than stellar over the past year; Japan is shrinking while Canada has recorded growth over 2% (Japan's economy is expect to shrink over the next year). A large portion of Japan's economy is geared to trade with China and automobile exports which are troubled. The continued weakness in the EU limit's growth in the economy.



Fiscal Policy

Japan's deficit to GDP of 9.5% is not comforting and is likely to grow over the next couple of years. From FYE 2007 through 2010, total sovereign revenues fell a total of 1.5% while expenses excluding interest rose 11.5%. The major problem are its high Debt to GDP and the support needed for its aging population. As can be seen from the chart to the right, none of the listed countries have a worse Debt to GDP than Japan. Japan's attempts to implement austerity measures are likely to fall short. The rise in the yen has minimized inflation, but watch for a reversal.

	Deficit-to-GDP (%)	Debt-to-GDP (%)	5 Yr. CDS Spreads
Japan	9.5	235.9	85
Canada	4.5	31.0	N/A
United Stat	5.2	100.9	40
Germany	1.0	81.4	63
Belgium	3.7	102.1	160
Italy	3.9	120.0	466

Sources: Bloomberg and IFS

Unemployment

Japan's unemployment rate of 4.9% is lower than any other peer country as indicated in the chart at right. The country has achieved a high level of employment at the cost of economic growth and a balanced federal budget. We expect unemployment will remain low over the next couple of years.

	Unemployment (%)	
	2010	2011
Japan	4.9	4.5
Canada	7.6	7.5
United Stat	9.6	9.0
Germany	7.4	6.8
Belgium	7.6	7.1
Italy	8.3	9.2

Source: Intl. Finance Statistics

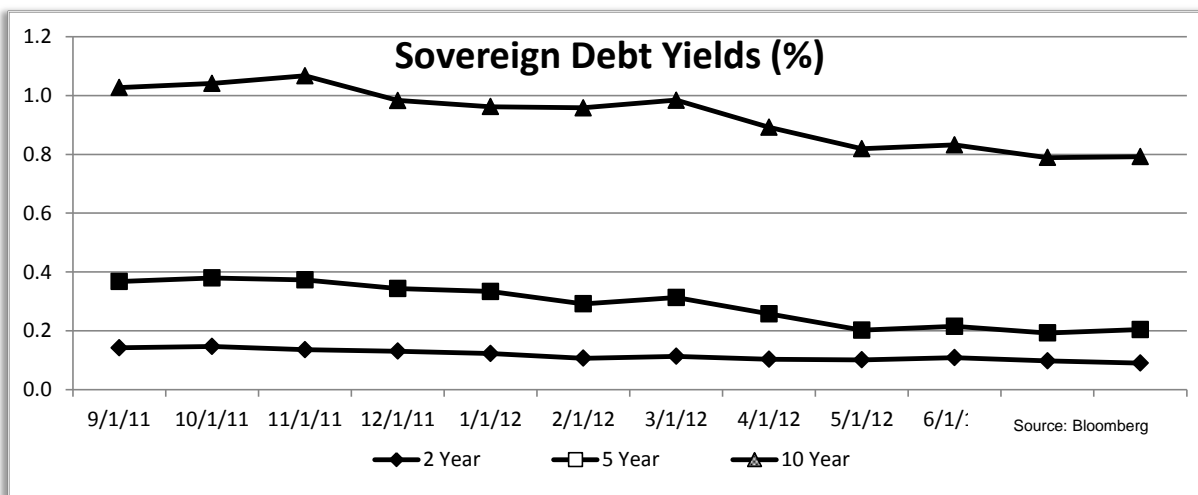
Banking Sector

History has shown that country and bank obligations are linked during times of economic distress. Japan has significantly exposure to its banking because the bank's large aggregate size measured in assets. The top five banks have assets equal to 86% of GDP versus 125% for Germany. Although the country's banks could use more capital, under current conditions, the problem is manageable. A greater problem will probably arise when funding costs increase particularly if the yen weakens.

Bank Assets (billions of local currency)		
	Assets	Cap/ Assets %
MIZUHO FINANCIAL	165,361	4.2
SUMITOMO MITSUI	143,041	5.1
RESONA HOLDINGS	43,200	4.3
SHINKIN CENTRAL	30,248	3.6
CHUO MITSUI TRUS	34,376	6.8
Total	416,226	
EJR's est. of cap shortfall at 10% of assets less market cap		36,550
Japan's GDP		481,785

Funding Costs

As a result of the excess liquidity provided by the BoJ and the global economic slowdown, Japan's has seen a slight decline in its funding costs over the past couple of months. As can be seen in the below graph, the bond yields have declined over the past year. The over-riding question is how Japan is going to reduce its massive debt.



Ease of Doing Business

Major factors for growing the economy are the ease of doing business and the economic freedom; although not the sole factor for determining economic growth, a country which makes it easy for businesses to operate and provides a reasonably free environment to conduct business has a good chance for growth. The chart on the right indicates that with an overall rank of 20 (1 is best) is strong.

The World Bank's Doing Business Survey*			
	2012 Rank	2011 Rank	Change in Rank
Overall Country Rank:	20	20	0
Scores:			
Starting a Business	107	99	-8
Construction Permits	63	58	-5
Getting Electricity	26	26	0
Registering Property	58	57	-1
Getting Credit	24	21	-3
Protecting Investors	17	16	-1
Paying Taxes	120	115	-5
Trading Across Borders	16	17	1
Enforcing Contracts	34	32	-2
Resolving Insolvency	1	1	0

* Based on a scale of 1 to 183 with 1 being the highest ranking.

Assumptions for Projections

Income Statement	Peer	Issuer	Base Case	
	Median	Average	Yr 1&2	Yr 3,4,5
Taxes Growth%	1.7	3.8	3.8	3.8
Social Contributions Growth %	1.4	3.3	3.3	3.3
Grant Revenue Growth %	0.0	(1.2)	0.5	0.5
Other Revenue Growth %	6.8	(15.7)	3.4	3.4
Other Operating Income Growth%	0.0	0.0		
Total Revenue Growth%	2.0	0.1	0	0.1
Compensation of Employees Growth%	2.7	(1.7)	(1.7)	(1.7)
Use of Goods & Services Growth%	1.8	3.2	3.2	3.2
Social Benefits Growth%	1.6	3.4	3.4	3.4
Subsidies Growth%	0.0	(11.0)		
Other Expenses Growth%	(16.9)	(16.9)	(16.9)	(16.9)
Interest Expense	0.0	1.0	1	
Balance Sheet				
Currency and Deposits (asset) Growth%	(20.7)	0.0		
Securities other than Shares LT (asset) Growth%	5.0	1.2	1.2	1.2
Loans (asset) Growth%	0.0	12.7	3.8	3.8
Shares and Other Equity (asset) Growth%	(1.7)	6.1	6.1	6.1
Insurance Technical Reserves (asset) Growth%	3.6	0.0		
Financial Derivatives (asset) Growth%	0.0	0.0		
Other Accounts Receivable LT Growth%	1.8	(4.8)	(4.8)	(4.8)
Monetary Gold and SDR's Growth %	0.0	0.0	5.0	5.0
Other Assets Growth%	0.0	0.0		
Other Accounts Payable Growth%	0.2			
Currency & Deposits (liability) Growth%	2.5	0.0		
Securities Other than Shares (liability) Growth%	4.2	7.7	5.4	5.4
Loans (liability) Growth%	0.0	(2.1)	0.5	0.5
Insurance Technical Reserves (liability) Growth%	0.0	0.0		
Financial Derivatives (liability) Growth%	0.0	22.0	4.9	4.9
Addl debt. (1st Year) billion JPY	0.0	0.0		

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Base Case**ANNUAL REVENUE AND EXPENSE STATEMENT (TRILLIONS JPY)**

	<u>Dec-08</u>	<u>Dec-09</u>	<u>Dec-10</u>	<u>PDec-11</u>	<u>PDec-12</u>	<u>PDec-13</u>
Taxes	86	76	79	82	85	88
Social Contributions	58	56	58	59	61	63
Grant Revenue	55	66	65	65	66	66
Other Revenue	28	23	19	20	21	21
Other Operating Income	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Revenue	227	220	220	226	232	239
Compensation of Employees	31	30	30	29	29	28
Use of Goods & Services	16	17	18	18	19	20
Social Benefits	96	101	104	108	112	115
Subsidies	3	3	3	3	3	3
Other Expenses	14	15	13	13	10	10
Grant Expense	55	66	65	64	63	53
Depreciation	<u>15</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>14</u>
Total Expenses excluding interest	229	247	247	250	251	244
Operating Surplus/Shortfall	-2	-27	-27	-24	-18	-5
Interest Expense	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>13</u>
Net Operating Balance	-14	-39	-38	-35	-31	-18

Base Case**ANNUAL BALANCE SHEETS (TRILLIONS JPY)**

	<u>Dec-08</u>	<u>Dec-09</u>	<u>Dec-10</u>	<u>PDec-11</u>	<u>PDec-12</u>	<u>PDec-13</u>
ASSETS						
Currency and Deposits (asset)	85					
Securities other than Shares LT (asset)	141	126	128	129	131	133
Loans (asset)	21	28	32	33	34	36
Shares and Other Equity (asset)	100	108	114	121	128	136
Insurance Technical Reserves (asset)				0	0	0
Other Accounts Receivable LT	132	146	139	132	126	120
Monetary Gold and SDR's	0					
Additional Assets	4	82	81			
Total Financial Assets	484	490	494	497	501	506
LIABILITIES						
Other Accounts Payable						
Currency & Deposits (liability)				0	0	0
Securities Other than Shares (liability)	733	761	820	864	910	960
Loans (liability)	172	169	166	201	232	250
Insurance Technical Reserves (liability)						
Financial Derivatives (liability)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Other Liabilities	<u>57</u>	<u>62</u>	<u>53</u>	<u>12</u>	<u>12</u>	<u>12</u>
Liabilities	<u>962</u>	<u>992</u>	<u>1,039</u>	<u>1,077</u>	<u>1,112</u>	<u>1,135</u>
Net Financial Worth	<u>(478)</u>	<u>(502)</u>	<u>(545)</u>	<u>(580)</u>	<u>(611)</u>	<u>(630)</u>
Total Liabilities & Equity	<u>484</u>	<u>490</u>	<u>494</u>	<u>497</u>	<u>501</u>	<u>506</u>

Sovereign Rating Methodology

Egan-Jones takes the perspective of the investor as its primary point of view when developing the ratings it issues for sovereigns. Therefore, in the case of sovereign ratings, we attempt to take a more holistic view of credit quality to include not only analytic comparisons of various sovereign issuers but also the impact on our quantitative and qualitative analyses by current global, sovereign, governmental and market events, including the effects of government investments in speculative, volatile or other high risk investment products. For example, many sovereign issuers have taken on significant exposures of major financial institutions over the past several years. Hence, we calculate the under-funding of financial institutions and include this amount in the total indebtedness of sovereigns. (We use a base assumption that no country can afford to allow its major banks to fail and therefore we believe that there will almost always be an intervention by either a host or allied nation should financial institutions or markets require support at some measurable level.)

Generally we devise modeling calculators and do an analysis that examines the debt load of a country with respect to its GDP and other economic indicators. The analysis is then adjusted to reflect the outlook on a myriad of factors that reflect the firm's overall view of the sovereign debt and the quality of the country's ability to meet and thrive under such load. Some of the qualitative factors that impact our ultimate assessment of credit quality such as the flexibility, stability and overall strength of the economy, ease of tax collection, acceptance of contract law, ease of doing business, and prospects for future growth and health. The non quant issues are generally subjective and a moving target, so each rating of a sovereign may differ because of the non-quantitative nuances being addressed. Note, debt levels for many sovereign issuers have increased over the past decade and has accelerated recently, effecting the implied ratings.

Nota Bene

History has proven that defaults on domestic public debt do occur. In fact, seventy out of three hundred twenty defaults since 1800 have been on domestic public debt (1). Egan-Jones does not view a country's ability to print its own currency as a guarantee against default. Additionally, Egan-Jones generally views cases of excessive currency devaluation as a de facto default.

1. "This Time Is Different: Eight Centuries of Financial Folly", Reinhart & Rogoff, p.111, 126