

# Estimating Sovereign Credit Rating: Is Kuwait Overrated?

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## Abstract

Despite all the criticism surrounding the reliability of credit rating agencies' rating systems, these agencies' ratings still play an essential role in determining the cost of funding for government bonds. These agencies are also accused of not applying the same standards for all countries resulting in mis-rating causing a disturbance in these countries economic and financial systems. Countries try their best to obtain the highest rating possible to reduce their cost of borrowing and increase the demand for their bonds in the global financial market. This research is set to examine whether or not Kuwait is getting a favorable sovereign credit rating from the three largest credit rating agencies. Using a panel data regression for 40 countries for the year 2017, results revealed that Kuwait enjoyed a favorable treatment from the three major credit rating agencies where it was rated by an average of 3.18 notches higher than what it should be. The results also indicates that Kuwait did not take advantage of its inflated credit rating and the policy makers did not address the factors that would improve their credit rating and as a result Kuwait sovereign credit rating was downgraded by all three credit rating agencies in 2022.

**Keywords:** Kuwait, Sovereign Credit Rating (SCR), Credit Rating Agencies (CRAs), default risk, corruption index

## 1. Introduction

Kuwait is relatively small country that lays on the north-west side of the Arabian Gulf, but despite its small size it produces around 3 million barrel of oil per day which makes it the 10<sup>th</sup> largest crude oil producer in the world. According to an IMF report (2016), oil sales accounts for more than 90% of its income, which makes Kuwait vulnerable to any price shocks in the oil market. In 2021, Kuwait needed an average sale price of \$70 per barrel to avoid budget deficit, but history shows that the \$70 per barrel target is becoming harder to achieve especially with countries converting to green energy resulting in oil prices reaching \$19.33 in April 2020 forcing Kuwait to issue bonds to cover its budget deficit. With Kuwait 2035 vision aiming to diversify its income sources and reduce its dependence on oil, by transforming Kuwait into an international financial and trade hub and becoming more attractive to investors, the Kuwaiti government would have to invest heavily on its infrastructure and new projects and for that they would need to seek funds from the global financial markets. Having a high sovereign credit rating would facilitate their finances with low cost and better access to international financial markets.

Credit risk is defined as the potential losses due to the borrower's failure to meet the contractual obligation to pay his debt (Fahmi et al., 2008). While Clark (1997) and Clark & Zenaidi (1999) saw that sovereign borrower's creditworthiness depends not only on its ability but also on its willingness to pay its debt. Bheenick (2005) stated that, according to the founder of Moody's, John Moody, a credit rating indicates the creditworthiness of a government by assessing two main aspects: "*capability to pay and willingness to pay*".

A country's sovereign credit rating is issued by credit rating agencies (CRAs), which are private companies whose purpose is to assess borrowers' ability, either governments or private enterprises, to repay their debt. To do so, these agencies issue credit ratings based on the borrower's solvency. While there are several credit rating agencies, the three largest global rating agencies, Standard and Poor's (S&P), Fitch Rating Ltd, and Moody's, control 95% of the global credit rating market (Pirdal, 2017). These credit rating agencies (CRAs) have a significant effect on investors' decisions and their portfolios' structure. Many investors give credit rating a lot of

consideration in their investment decisions. This trust has enabled CRAs to play a central role in financial markets.

Governments are concerned about their credit ratings and work hard to improve them since higher credit rating would result in more access to international capital markets and reduce borrowing cost. Sovereign credit ratings (SCRs) are not entirely focused on governments, but for assessing other borrowers of that particular country (Iyengar, 2010). Country sovereign credit rating also affect the credit rating of the corporates bonds in that country since firms cannot be rated above their nation, leading SCRs to become credit rating ceilings. International investors keep track of SCR movements as this provides them with critical information on countries they plan to invest in (Kabadayi and Çelik 2015; Gu et al. 2018). Gogas et al. (2014) claimed that investors, borrowers, issuers and governments use CRAs risk-rating scale obtained on the borrower ability to meet obligations on debt timely, as provided by CRAs, in making investment and financial decisions. Countries with good credit ratings are believed to be financially strong, with stable financial systems and are credit worthy (Gultekin-Karakas et al. 2011). Polito and Wickens (2015) highlighted that some scholars accused CRAs of intensifying the debt crisis, increasing costs of borrowing and instigating or exacerbating instability. This problem raises the need for developing and underdeveloped countries to analyze or forecast sovereign credit ratings to avoid negative impacts of sovereign ratings downgrade. The degradations of sovereign asset ratings also have a large negative effect on the stock markets (Saadaoui et al. 2022). Sovereign ratings are highly important to governments and corporates as good ratings lead to lower borrowing costs and give much needed access to international capital markets.

CRAs are also criticized of being too late in detecting shortfalls in the financial markets, where Asian financial crisis in 1997 and the 2008 financial crisis are perfect examples. Zheng (2012) believes that CRAs' reliability became questionable after giving a false rating to some countries, such as Thailand and South Korea in 1997/1998 Asian financial crisis. Doruk and Duran (2016) criticized CRAs for their inability to foresee the 2008 financial crisis and failure to capture the deterioration in many countries' credit risk before the crisis. Ozturk et al. (2016) stated that the financial crisis of 2008 was a result of high reliance on CRAs sovereign ratings. CRAs are also accused by Takawira and Mwamba (2021) and Kr äussl (2005) of being biased and having a hidden agendas toward BRICS countries. CRAs are viewed as using the issuer pays model to have a motivation to understate risks in order to cater to issuers' desire for high ratings, leading to the rating inflation phenomenon and also, they have come under the spotlight due to incidents related to mis-rating practices (Vu et al. 2022). Duran and Kucuksarac (2017) concluded from their study that, on an average, emerging countries had 1.4 notches lower credit ratings than developed countries, with similar macroeconomic indicators, indicating biases toward developed countries' scores. AlKulaib and AlAli (2021) examined the sovereign credit rating for the Gulf Cooperation Council (GCC) Countries over the period 2012-2018 and showed that Kuwait was overrated by the three major CRAs by an average of 2.76 notches which was the highest among the GCC countries. For that, many researchers warn investors not to rely only on credit ratings provided by these CRAs and to conduct their due diligence.

CRAs use a number of variables that differ from one agency to another in assessing sovereign credit rating. These variables include economic variables that are quantitative variables and social and political variables that are qualitative. Haque et al. (1998) indicated that the economic variables could explain a large portion of its creditworthiness ratings. Lee (1993) concluded that economic variables have more influence than political variables in determining sovereign ratings. Cantor and Packer (1996) conducted a study on the factors affecting the sovereign credit rating of 49 countries, as of September 1995, using the assigned credit ratings from S&P and Moody's. They concluded that six out of the eight variables they used had a statistically significant effect on these countries' credit ratings. They found that per capita income, GDP growth, inflation, external debt, an indicator of economic development set by the International Monetary Fund (IMF) in classifying the country as developed or not, and default history had the most effect on the sovereign credit rating for the countries under study. They also concluded that macroeconomic variables could explain about 80%, which is more than enough to say that economic factors are the main factor for the sovereign rating. Hamdi et al. (2014) studied the sovereign credit rating created by Moody's and Fitch for 23 emerging countries and found that GDP per capita, government debt per capita, inflation, CPI, and central bank reserves had a significant effect on sovereign rating. Afonso (2003) conducted a study for 81 developed and developing countries using several quantitative and qualitative variables as of June 2001 and compared his results to the ratings assigned by Standard & Poor's and Moody's. He concluded that GDP per capita, external debt, economic development level, default history, real growth rate, and inflation rate were relevant for a country's credit rating. Duran and Kucuksarac (2017) conducted a study on 13 emerging and 16 developed countries from 2008 to 2014 using Fitch's sovereign rating. Their results showed that GDP growth, government debt, GDP volatility, and inflation volatility were the factors

that most affected the credit rating of developed countries. While in terms of emerging countries, inflation, government debt, financial depth, and GDP per capita were the factors that had a statistically significant effect on their ratings.

This study aims to examine nine variables and their effect on Kuwait sovereign credit rating. The first factor is political stability where politically stable countries are more attractive to investors than unstable countries, it would give investors some sort of insurance that their investments in that country are safe from unfortunate events such as invasion or regime overthrow. Haksoo (2010) concluded that there was a statistically direct relation between political stability and foreign direct investment. Kuwait lies between three large countries that have more military ability than Kuwait. In 1990 Kuwait was invaded by Iraq and was occupied for 7 months. This incident illustrates how vulnerable Kuwait is against any foreign aggression. Political stability index is used to measure the stability of the country where it ranges from -2.5 as unstable to 2.5 as very stable. Kuwait had a score of -0.40.

The second factor is the gross domestic product (GDP) indicates the economic size of the country, a higher GDP suggests that a country's existing debt burden will become easier to service over time. Kuwait depends heavily on its oil revenues which makes it dependent on a highly volatile energy market which in turn would result in huge fluctuation on its GDP which might affect the country sovereign rating. The rationale behind it is that countries with stable income would be more capable in honoring its financial obligations. The third factor is inflation where inflation is a major concern to all central banks, it might ignite political instability in the country. Samuelson and Nordhaus (1985) stated that high inflation could distort the economy, causing political instability. Kuwait suffers from imported inflation, even though the Kuwaiti Dinar is pegged to a basket of currencies without revealing the basket's components to reduce the effect of imported inflation (Moosa & Al-Loughani, 2000). AlAli et al. (2017) showed that the U.S. Dollar still accounts for around 65-70% of the basket which still makes the imported inflation risk valid. The fourth factor is corruption where corruption is defined by Hamdi et al. (2014) as "*a misappropriation of trust or authority for the personal interest, may have a negative effect on every person in that authority*". Many researchers such as Mellios and Blanc (2004), Minescu (2010), and Frisch (1995) argued that the level of corruption is an essential factor that affects the credit rating of any country since high corruption level would indicate the failure of the government system which would eventually lead to a higher chance of default. The Corruption Perceptions Index (CPI) is used to measure the corruption level in the country. CPI is an index published annually by Transparency International since 1995 which ranks countries "by their perceived levels of public sector corruption". The CPI generally defines corruption as "*the misuse of public power for private benefit*". CPI has a scoring system ranging from 0 (extremely corrupt) to 100 (very clean) which means that CPI should have a direct relation with the country credit rating.

The fifth factor under study is government debt to GDP where Mankiw (2007) defines government debt as a debt accumulation that happens when the government has more expenses than income forcing the government to either increase taxes on the public or borrow from international markets to cover the deficit. Government debt to GDP ratio basically measures government leverage where a lower ratio would imply a healthier financial position for the country towards its financial obligations and therefore reduces the default probability. When studying the credit rating for GCC countries, AlKulaib and AlAli (2021) showed that government debt to GDP had a statistically significant inverse relation with the credit rating of these countries. Hamdi et al. (2014) concluded in their research that government debt to GDP had a significant negative effect on the credit rating of the country. The sixth factor is GDP per capita, having a high GDP per capita would facilitate the government to impose more taxes on the public which strengthens its financial position which in turn makes it more capable in honoring its financial obligations and thus increases its credit rating. As studies by many such as Afonso, (2003), Hamdi et al. (2014), Duran and Kucuksarac (2017), and others all showed a strong positive relation between GDP per capita and sovereign credit rating. But that is not the case in Kuwait since the government does not impose any kind of taxes on income which would lead to a weaker financial position and therefore lower credit rating.

The seventh factor is the country trade balance where the trade balance would indicate the competitiveness of a country in the global market. Having a surplus shows that the country is exporting more than its imports which implies a stronger economy and thus more ability to fulfill its financial obligations. The use of trade balance to GDP would give a clearer picture regarding the health of the economy since it compares it to the size of the economy. Running a trade deficit would imply that the country has a weak production ability which leads to more unemployment and poverty and thus a higher chance of political instability. The eighth factor is unemployment, Kuwait has an unemployment rate of 3.1% as of 2020 compared to a world average of 6.18%. Studies by Abdul-Khaliq et al. (2014) and Tenzin (2019) showed that there is a strong inverse relation between unemployment and economic growth. Obtaining a low unemployment rate would indicate a healthier economy and

thus better credit rating for the country. High unemployment would have harmful effect not only to the economy but also on the political stability of the country (Adelaja and George, 2020). The ninth and final factor is foreign debt to GDP, having a high foreign debt to GDP especially if the debt is in a foreign currency leads to selling pressure on the local currency during the repayment time of the debt leading to lower exchange rate for the local currency and thus more inflationary pressure. Reusens and Cronx (2017) examined that relation and found that higher foreign debt to GDP had an inverse relation with the sovereign credit rating of that country.

## 2. Methodology

This study uses the ordinary least squared regression method (OLS) to examine the relationship between sovereign credit rating score as the dependent variable and nine independent variables. The equation of panel regression used in this research is as follow:

$$\ln R_t = c + X1 + X2 + X3 + X4 + X5 + X6 + X7 + X8 + X9 + \varepsilon_t \quad \text{Equation (1)}$$

Where  $\ln R_t$  is the natural logarithm of the numerical score of the rating, X1 is the political stability index, X2 is the natural logarithm of gross domestic product (GDP), X3 is the inflation rate, X4 is the natural logarithm of corruption index, X5 is the government debt to GDP rate, X6 is the natural logarithm of GDP per Capita (PPP), X7 is trade balance to GDP ratio, X8 is the unemployment rate, X9 is the foreign debt to GDP ratio, while  $\varepsilon_t$  is the error term.

CRAs use alphabetical symbols to assign credit ratings. To quantify such a scale, an equivalent numerical rating system is set as in Table 1.

Table 1. Credit Rating Agencies Comparison and Numerical Rating

Grade	Numerical Rating	Moody's	S&P	Fitch	Meaning
Investment Grade	23	Aaa	AAA	AAA	Prime
	22	Aa1	AA+	AA+	
	21	Aa2	AA	AA	
	20	Aa3	AA-	AA-	High Grade
	19	A1	A+	A+	
	18	A2	A	A	Upper Medium Grade
	17	A3	A-	A-	
	16	Baa1	BBB+	BBB+	
	15	Baa2	BBB	BBB	Lower Medium Grade
	14	Baa3	BBB-	BBB-	
13	Ba1	BB+	BB+		
Speculative Grade	12	Ba2	BB	BB	Non-Investment Grade Speculative
	11	Ba3	BB-	BB-	
	10	B1	B+	B+	
	9	B2	B	B	Highly Speculative
	8	B3	B-	B-	
	7	Caa1	CCC+	CCC+	
	6	Caa2	CCC	CCC	Substantial Risks
	5	Caa3	CCC-	CCC-	
	4	Ca	CC	CC+	Extremely Speculative
	3		C	CC	
2			CC-	In Default with Little Prospect for Recovery	
1	D	D	DDD		
				CC-	In Default
				CC-	

Source: Destraz and Lahaye (2012). The numerical rating is set by the author for calculation purposes. In any calculation onward, the number produced is rounded.

### 3. Data and Empirical Results

The aim of this research is to estimate the sovereign credit rating for the state of Kuwait for the year 2017 and compare it to its assigned rating by the largest three CRAs to find out if there are any divergences between them. The research is based on the data of 40 countries that are listed in Table 2. The data for this research were obtained from the IMF and World Bank websites.

Table 2. Sample Countries

Sweden	Egypt	S. Africa	Germany	Saudi Arabia
Denmark	S. Korea	India	France	UAE
Norway	Chile	Pakistan	Italy	Singapore
Finland	Argentina	Japan	Mexico	Malaysia
Greece	Canada	China	Kuwait	New Zealand
Poland	UK	Brazil	Qatar	Netherland
Turkey	Russia	Australia	Bahrain	Austria
Jordan	Israel	Indonesia	Oman	USA

The correlation matrix is set to examine the relation between the variables under study. The matrix takes a value between -1 and +1, where -1 shows a perfect inverse relation and vice versa. The matrix is also used to detect any multicollinearity in the data. Multicollinearity can cause unrealistically high standard error estimates of regression coefficients and can cause false conclusions about the significance of independent variables in the model evaluated. Following Kramaric et al. (2017) and AlAli (2020) a threshold of 0.70 is used in this research to identify multicollinearity. Using the Pearson correlation matrix in table 3, it can be seen that such a problem does not exist.

Table 3. Pearson Correlation Matrix

	X1	X2	X3	X4	X5	X6	X7	X8	X9
X1	1.000								
X2	0.014	1.000							
X3	-0.273	-0.068	1.000						
X4	0.675	0.075	-0.326	1.000					
X5	0.103	0.221	-0.067	0.084	1.000				
X6	0.557	-0.007	-0.319	0.549	-0.021	1.000			
X7	0.452	-0.060	-0.310	0.340	-0.176	0.578	1.000		
X8	-0.235	-0.167	0.138	-0.322	0.181	-0.471	-0.414	1.000	
X9	0.517	-0.079	-0.167	0.615	0.220	0.427	0.379	-0.135	1.000

The data processing results for the variable that most affect the sovereign credit rating of the big three CRAs are presented in table 4. As shown in the table, the model achieved a significant  $F$  of 0, which means that it is safe to label it as a good fit. The models had an explanatory powers of 0.878 for S&P and Moody's while Fitch had an adjusted R square of 0.885.

Table 4. Regression output

	S&P			Moody's			Fitch		
<b>R Square</b>	0.952			0.952			0.955		
<b>Adj R Square</b>	0.878			0.878			0.885		
<b>Observations</b>	40			40			40		
<b>Significance F</b>	0.000			0.000			0.000		
	<i>Coefficients</i>	<i>t Stat</i>	<i>P-value</i>	<i>Coefficients</i>	<i>t Stat</i>	<i>P-value</i>	<i>Coefficients</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	13.584	7.186	<b>0.000</b>	14.354	7.340	<b>0.000</b>	13.021	7.477	<b>0.000</b>
X1	1.290	2.212	<b>0.035**</b>	1.592	2.668	<b>0.012**</b>	0.796	1.498	0.145
X2	0.000	2.339	<b>0.026**</b>	0.001	2.830	<b>0.008***</b>	0.000	3.011	<b>0.005***</b>
X3	-14.819	-3.771	<b>0.001***</b>	-17.420	-4.313	<b>0.000***</b>	-14.477	-4.025	<b>0.000***</b>
X4	0.113	3.957	<b>0.000***</b>	0.111	3.760	<b>0.000***</b>	0.108	4.090	<b>0.000***</b>
X5	-2.191	-3.172	<b>0.003***</b>	-2.848	-4.014	<b>0.000***</b>	-2.510	-3.973	<b>0.000***</b>
X6	0.000	0.576	0.569	0.001	0.192	0.849	0.001	1.825	<b>0.078*</b>
X7	-2.044	-0.414	0.682	-2.115	-0.412	0.683	0.195	0.043	0.966
X8	-24.262	-3.904	<b>0.000***</b>	-20.222	-3.153	<b>0.003***</b>	-15.655	-2.741	<b>0.011**</b>
X9	0.198	0.560	0.579	0.123	0.338	0.737	0.197	0.605	0.549

Confidence levels are given in brackets. \*, \*\*, and \*\*\* denote significance at 90%, 95%, and 99% levels respectively.

When looking at the variables effect of the credit rating, it can be seen that political stability has a significant direct effect on the S&P and Moody's ratings which was in line with Haksoo (2010) findings, while it did not have any effect on Fitch's rating. The results also shows that the size of the country economy measured by its GDP has a statistically significant direct relation with the credit rating. When it comes to inflation effect, the results showed that it has a significant inverse effect on the credit rating for all three major CRAs confirming Samuelson and Nordhaus (1985) findings. Since the Corruption Perceptions Index (CPI) gives a lower score for highly corrupted countries, the results showed a statistically significant direct effect of the corruption score on the credit rating of any country which supports Mellios and Blanc (2004), Minescu (2010), and Frisch (1995) findings. Government debt to GDP ratio showed a significant inverse relation with the credit rating for all CRAs confirming AlKulaib and AlAli (2021) findings. In terms of the effect of GDP per capita, results showed that this factor did not have any significant effect the S&P and Moody's ratings contradicting Afonso (2003) and Hamdi et al. (2014) findings but it had a very weak but statistically significant direct effect on Fitch rating. Unemployment level also showed a strong significant inverse relation with the credit rating assigned by all three CRAs. Finally, both trade balance to GDP and foreign debt to GDP did not have any statistical effect on the credit rating.

By plotting the date of Kuwait into the equation generated by the OLS models, it can be seen from table 5 that S&P overrated Kuwait by 3.45 notches while Moody's and Fitch overrated Kuwait by 3.33 and 2.76 notches respectively. On an average the three rating agencies overrated Kuwait by 3.18 notches. These results should setup an alarming signal to the Kuwaiti government that Kuwait may be faced with downgrade at any time. In examining the robustness of the model, it can be seen that in 2022 Kuwait was downgraded by all three credit rating agencies where S&P downgraded Kuwait by 2 notches to A+ (19), Moody's by 2 notches to A1 (19), and Fitch by 1 notch to AA- (20) despite the increase in oil prices from an average of \$53 in 2017 to \$92 in 2022. These downgrades would have a negative effect on the reputation on Kuwait in the global financial markets making it less attractive to investors.

Table 5. Credit Rating Divergence

	S&P	Moody's	Fitch
Actual	21	21	21
Estimated	17.55	17.67	18.24
Difference	3.45	3.33	2.76

#### 4. Conclusion

This study was set to estimate the sovereign credit rating of Kuwait. Using a panel data of 40 countries for the year 2017 an OLS regression was performed. The results from this research revealed that all three CRAs overrated Kuwait by an average of 3.18 notches above the estimated rating. Having an inflated credit rating helped the Kuwaiti government in gaining a better access to the international financial markets and obtaining more funds at a lower cost. Never the less, the Kuwaiti government did not used these funds wisely and as a result Kuwait credit rating was downgraded in the following years. This paper should be helpful for Kuwaiti policy makers to better manage and improve the factors that mostly affects its credit rating. Failing to do so would lead to further downgrades which in turn reducing its accessibility to foreign funds from the international financial markets and increase their cost of funding.

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