

MARMORE

MENA INTELLIGENCE

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GCC Risk Premium – H1 2020

A Toolkit for Corporate Financiers



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Chapter 1

Executive Summary

The outbreak of the COVID-19 pandemic in early 2020 in China and its worldwide spread has had a mixed impact on the cost of capital of GCC countries. GCC countries with investment grade ratings have seen a fall in their cost of capital while Bahrain and Oman, the two GCC members with sub-investment grade rating have seen their cost of capital increase in H1 2020 compared to H1 2019. An important factor has been the flight to safety by investors, which has resulted in a fall in 10-year U.S treasury yields as well as that of GCC countries' sovereign yields except Bahrain and Oman. The successive rate cuts by the U.S. Fed in March 2020 have also helped in significant decrease in the sovereign yields for Saudi Arabia, Kuwait, Qatar and UAE. This has resulted in overall reduction in cost of capital for these countries.

In June 2020, Moody's Investors Service downgraded the long-term issuer ratings of Oman to 'Ba3' with negative outlook from 'Ba2' negative outlook. The ratings agency had earlier downgraded Oman from 'Ba1' to 'Ba2'. It cited the low oil-price environment, which is likely to persist in the medium term and erosion in the foreign currency sovereign reserves as reasons for the downgrade. As a result, Equity Risk Premium for Oman increased.

While Bahrain did not see a downgrade from Moody's in 2020, S&P Global ratings downgraded Bahrain from BB to BB- in March 2020. In May 2020, Bahrain received USD 4.57billion in financial aid from Saudi Arabia, Kuwait and UAE as a part of the rescue package agreed in 2018. However, S&P believes Bahrain would need additional support

Cost of capital under the CDS method has decreased for all GCC countries except Oman, Dubai and Bahrain primarily due to the fall in risk-free rates and due to the lower CDS spreads for the respective countries.

For GCC countries other than Bahrain and Oman, the cost of capital decreased due to fall in risk free rates as their credit ratings remained unchanged. The 10-year U.S. treasury yield has fell from 2.00% in Jun-2019 to 0.70% in Jun 2020 on the back of unprecedented support extended by U.S. Fed amid COVID-19 pandemic. The decrease in Cost of Capital remains capped due to lowered growth expectations for 2020 and beyond. According to IMF, the GCC economy as a whole is expected to contract by 7.6% (Real GDP) in 2020.

Cost of capital (under the implied Equity Risk Premium method) decreased for most GCC countries when compared to H1 2019 values, except for Dubai, Oman and Qatar. Cost of Capital, under the implied ERP method could not be computed for Bahrain, as the yield of the sovereign issue is lower than the default spread based on credit rating. This is because of the difference in the perception of the Bahrain's fiscal situation between the market and rating agencies.

GCC Cost of Capital, H1 2020

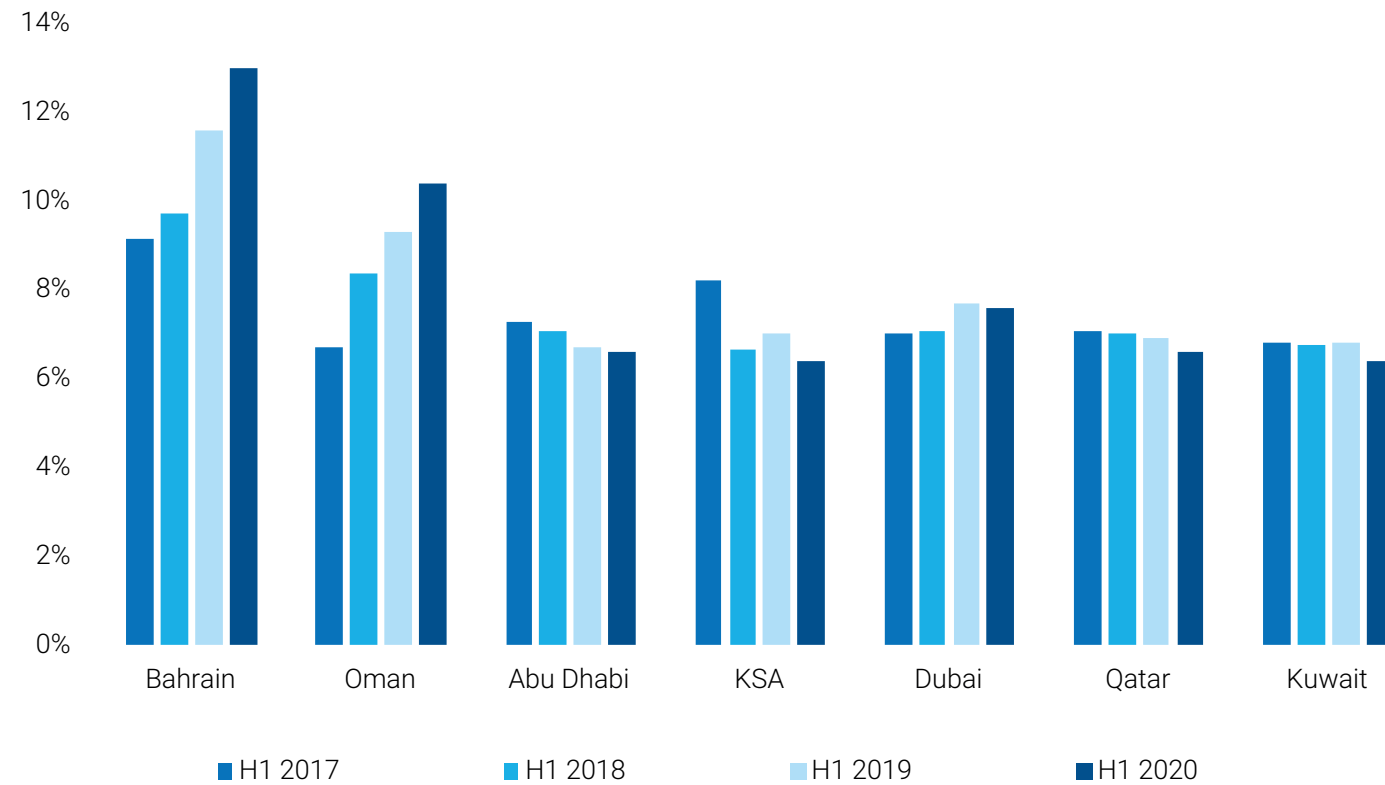
	Cost of Capital, WACC							
	Implied ERP Method		CDS Spreads Method		Ratings Method		Average	
	H1 2020	H1 2019	H1 2020	H1 2019	H1 2020	H1 2019	H1 2020	H1 2019
Bahrain	N.A	N.A	11.9%	10.7%	14.0%	12.4%	13.0%	11.6%
Oman	8.7%	6.7%	10.3%	9.6%	11.2%	9.0%	10.4%	9.3%
Abu Dhabi	6.7%	6.9%	6.6%	6.8%	6.6%	6.7%	6.6%	6.7%
KSA	5.5%	5.5%	6.9%	7.1%	6.9%	6.9%	6.4%	7.0%
Dubai	7.0%	6.9%	8.3%	8.0%	7.6%	7.5%	7.6%	7.7%
Qatar	6.3%	6.1%	6.7%	6.9%	6.7%	6.8%	6.6%	6.9%
Kuwait	5.8%	6.5%	6.7%	6.9%	6.6%	6.7%	6.4%	6.8%

Source: Marmore Research;

Other Assumptions: D/E ratio of 0.5, Beta of 1.0, Cost of Debt: 5%

Since H1 2017, the average WACC from the three methods has witnessed a decline for Saudi Arabia, Abu Dhabi, Qatar and Kuwait with the WACC for H1 2020 being the lowest. The opposite trend is observed for Bahrain and Oman with WACC continuously increasing each year. The WACC for Dubai while seeing a mild decline in H1 2020 has been within a tight range for the past four years.

GCC WACC, H1 2017 to H1 2020



Source: Marmore Research; WACC mentioned in the chart is the average of all three methods

Chapter 2

Why worry about WACC (Weighted Average Cost of Capital)?

Cost of capital represents the opportunity cost of all financial capital, primarily debt and equity, invested in an enterprise. Opportunity cost is what is given up as a consequence of your decision to use a scarce resource, such as financial capital, in a particular way¹. 'Opportunity cost' also referred to as 'hurdle cost' or 'discount rate', is of primary importance in valuation and helps the management in identifying projects, which add value to the enterprise.

Given the importance of this metric in creating value for shareholders, it is essential to understand how it is computed. Though in reality it is surprising to note that not much effort is invested in calculating cost of capital; while a significant amount of time is focused on forecasting uncertain future cash flows. Improper capital cost assumptions could lead to type-I error (accepting projects that do not add shareholder value) or type-II error (rejecting projects that add shareholder value).

In order to compute the cost of capital, we start by finding the cost of each capital component that the firm utilizes. Cost of capital primarily consists of equity and debt costs, weighed according to the proportions of debt and equity capital in the capital structure. The cost of debt can be inferred easily as it entails specific cost in the form of interest payments made in cash. The entire debt mix including money market debt in the form of commercial papers/notes, bank debt in the form of loans/overdraft, financial leases and bonds raised is aggregated. The interest payments made as a proportion of interest bearing debt instruments provides us with the debt cost.

Unlike debt holders, equity holders do not demand an explicit return on their capital. However, equity holders incur an implicit opportunity cost for investing in a specific company, because they could invest in an alternative company with similar risk profile². Equity cost involves various factors such as risk free asset, beta, market risk



¹ Prof. Aswath Damodaran

² ibid

premium, country risk premium among others. Beta – a measure of priced risk, is arrived by regressing the past price returns on an index. As private firms do not trade, estimation of beta becomes a complex process for private firms.

In order to estimate the value of beta for a private firm, we create a list of comparable public firms operating in the same industry. Firms with similar line of business and asset size would typically be considered as a good comparison. To ensure we have zeroed down on appropriate comparable enterprise(s), a simple regression test between the revenues could be done. Firms, which are affected by similar economic and industry factors, in general, would exhibit higher correlation.

Once the publicly listed comparable list is drawn, we may average their beta values and leverage ratios to arrive at levered beta for the particular sector or industry. This levered beta is then unlevered to arrive at the beta for the industry/sector. The unlevered beta could then be levered based on the debt to equity (D/E) ratio for the private firm. One may either use the management target set for debt to equity ratio or the industry average to re-lever the unlevered beta. Considering this as beta for the private firm, we proceed with the calculation of cost of equity using the Capital Asset Pricing Model (CAPM)³.

Part I. Cost of Equity

Capital Asset Pricing Model (CAPM) states that the equity investors in addition to risk free rate demand a premium for bearing the extra risk of enterprise operations. The additional risk is referred to as Equity Risk Premium (ERP). ERP for a company is dependent on the “beta” which measures the relative risk of the company with respect to the entire market.

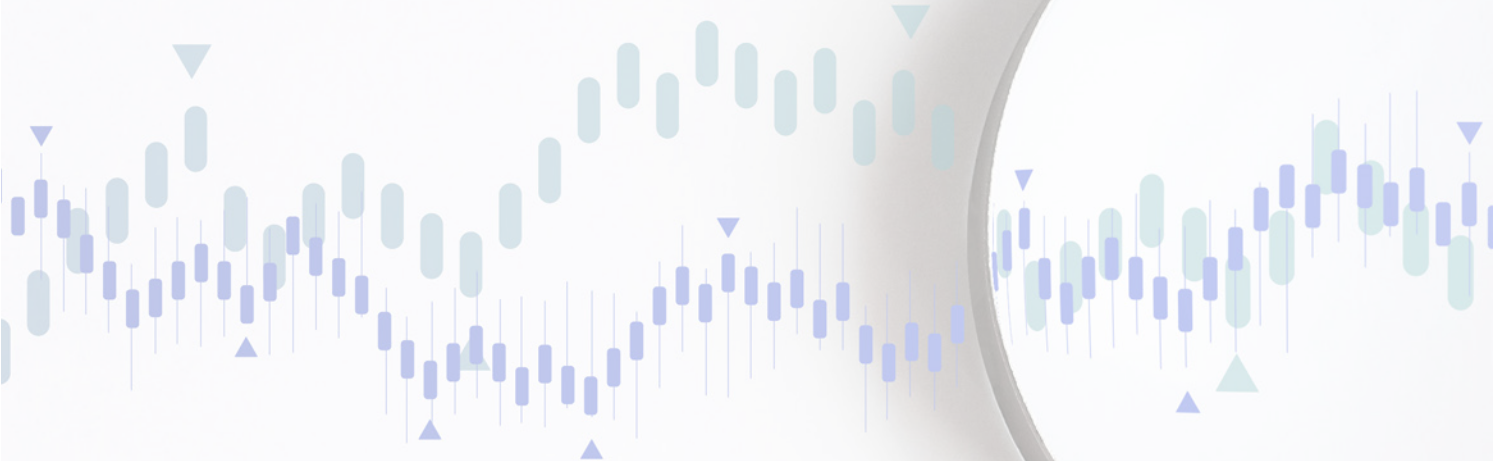
CAPM can be expressed mathematically as,

Cost of Equity, K_e = Risk free-rate, R_f + Beta * (ERP)

The easy way out to calculate ERP is to find the difference between historic long-term return of equity index and the risk-free investment, such as government bonds. Though it appears simple, the methodology has its drawbacks especially for emerging and frontier countries like the GCC region

³ We have illustrated the cost of equity calculation using CAPM methodology, as it is popular and widely used. Other available methods include Arbitrage Pricing Theory and Fama French three factor model

1. In the recent past, all the GCC countries have issued bonds in order to bridge the deficit in their budgets. However, due to the absence of active trading of the locally issued bonds, the yield data obtained is often stale. Hence, we have used the summation of the 10-year US treasury yield and country specific sovereign risk premium to compute the risk free rate.



Current Yields of 10-Year International Sovereign Issues

Country	Yield
Oman	6.80%
Bahrain	5.50%
Dubai	2.70%
Kuwait	2.60%
KSA	2.40%
Qatar	2.10%
Abu Dhabi	1.75%

Source: Reuters; Note: Yields of latest 10-year international sovereign bonds, as of June 30, 2020

2. Equity markets are volatile and risk premiums calculated with short historical data experience significant estimation errors.
3. Almost all GCC exchanges are still undergoing a lot of transformation in terms of regulations, trading platforms, instrument availability, and corporate disclosures. This coupled with nascent secondary market for bonds will make the risk premiums calculated with historical numbers inaccurate.

While the traditional way of calculating ERP has many obstacles due to lack of data and volatile nature of equity markets in the region, we compute Equity Risk Premium data using alternate methods such as:

a. Sovereign Rating

Taking the U.S market’s equity risk premium (ERP) of 6.01%⁴, the ERP of GCC countries are arrived at by adding the default spread based on their credit rating:

ERP for GCC Countries based on Credit Rating

Country	U.S. ERP	Country Rating	Default Spread	Total Equity Risk Premium
Bahrain	6.01%	B2	8.16%	14.2%
Oman	6.01%	Ba3	5.34%	11.3%
Saudi Arabia	6.01%	A1	1.04%	7.1%
Qatar	6.01%	Aa3	0.90%	6.9%
Kuwait	6.01%	Aa2	0.74%	6.7%
Abu Dhabi	6.01%	Aa2	0.74%	6.7%
Dubai	6.01%	Aa2	0.74%	6.7%

Source: Moody's, Aswath Damodaran, Marmore Research

b. CDS Spreads

Rating agencies are generally considered to be slow in updating their ratings. Therefore, instead of arriving at default spread based on rating, we have used CDS spreads as a proxy. In this method, the CDS spread of a country’s bond (adjusted for spread of risk free country) is considered as default spread instead of looking at the yield differentials of similarly rated bonds.

For example, the adjusted CDS for Bahrain (3.9%) is the difference between the 10-year CDS for Bahrain (4.2%) and U.S (0.3%).

ERP for GCC Countries on CDS Spread

Country	US Eq. Risk Premium	10-year CDS	Adjusted CDS	Total Equity Risk Premium
Bahrain	6.01%	4.2%	3.9%	9.9%
Oman	6.01%	3.9%	3.6%	9.6%
Dubai	6.01%	2.4%	2.1%	8.1%
KSA	6.01%	1.4%	1.1%	7.1%
Kuwait	6.01%	1.1%	0.8%	6.9%
Qatar	6.01%	1.0%	0.7%	6.8%
Abu Dhabi	6.01%	1.2%	0.9%	6.7%

Source: Aswath Damodaran, Thomson Reuters Eikon, Marmore Research

⁴ Aswath Damodaran- 1st April 2020

c. Implied ERP

Implied equity risk premium is an alternative approach to estimate risk premiums. Assuming that stocks are correctly priced, if we can estimate the expected cash flows from buying stocks, then we can estimate the expected rate of return on stocks by computing an internal rate of return (IRR). Subtracting out the risk free rate from IRR should yield an implied equity risk premium.

The inputs such as risk free rate and perpetual growth rate, required for calculation of Implied ERP were not readily available for GCC countries. In addition, the lack of consensus earnings growth estimate makes it hard to determine the market’s view on growth for the next 5 years.

Implied Risk Premium for GCC Countries

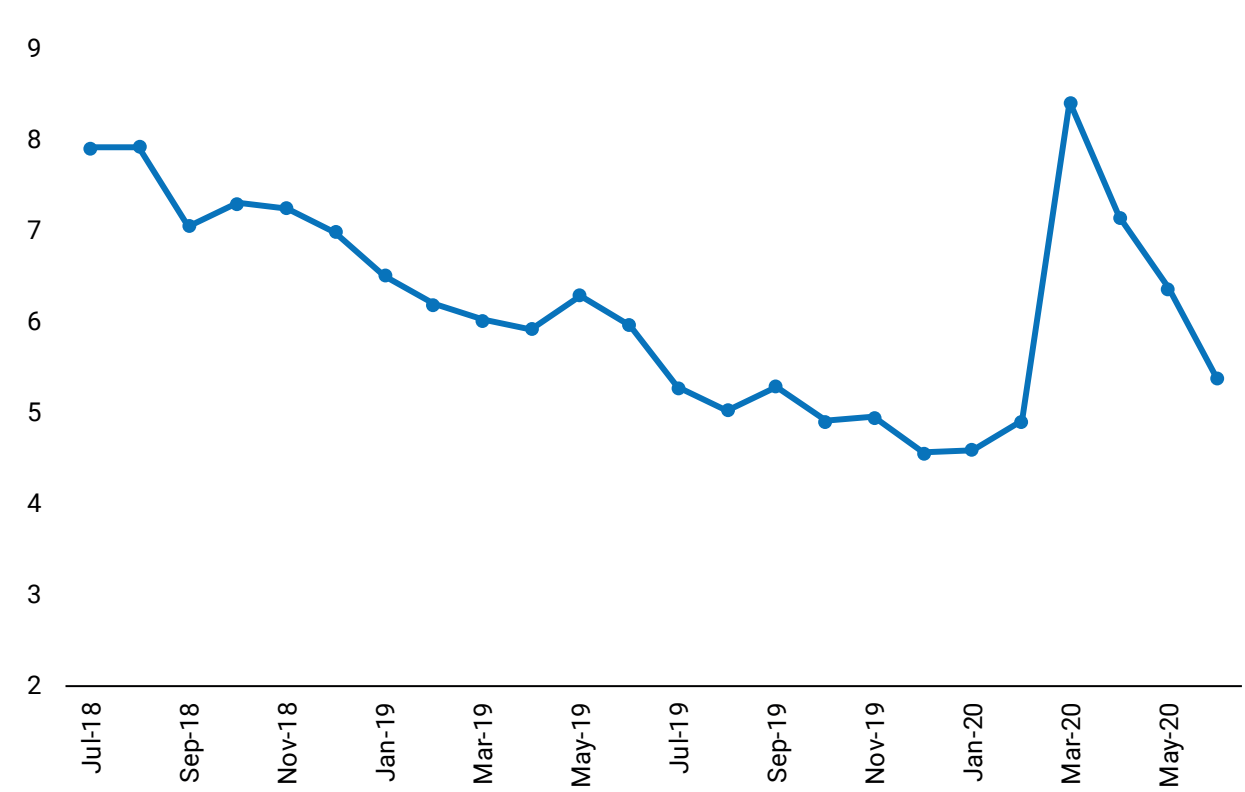
Country	Index Level*	Implied Equity Risk Premium
Abu Dhabi	4,285	6.9%
Oman	3,516	6.4%
Qatar	8,998	6.0%
Dubai	2,065	5.5%
Kuwait	4,904	5.2%
KSA	7,224	4.2%
Bahrain	1,277	N.A

Source: Thomson Reuters Eikon, Marmore Research * As of 30-Jun-2020

Cost of Capital, under the implied ERP method, could not be computed for Bahrain as the yield of the sovereign issue (5.5%) is lower than the default spread based on credit rating (8.16%). This is because of the difference in the perception levels of the financial aid between the market and the rating agencies.

The graph below highlights the fall in the yield of the sovereign issue post the financial aid announcement in the first week of Oct 2018. There was a huge spike in the yield during the period of market turbulence in March 2020 and the yields have since decreased to close to pre-crisis levels at around 5.5%.

Exhibit: Bahrain 10-Year Sovereign Yield (in percentage)



Source: Reuters

While comparing the average equity risk premium of GCC countries from all three methods, Bahrain and Oman have the highest ERP, affected by continuous downgrades of their credit rating, which has pushed up the ERP using ratings method. The CDS spreads have also widened and the average ERP is much higher than that their closest GCC peers. The implied ERP of other GCC countries remained at a narrow band between 4.2% and 6.9%. The implied ERP for Abu Dhabi has seen a notable increase due to the low estimates of long-term growth leading to a huge fall in its stock index.

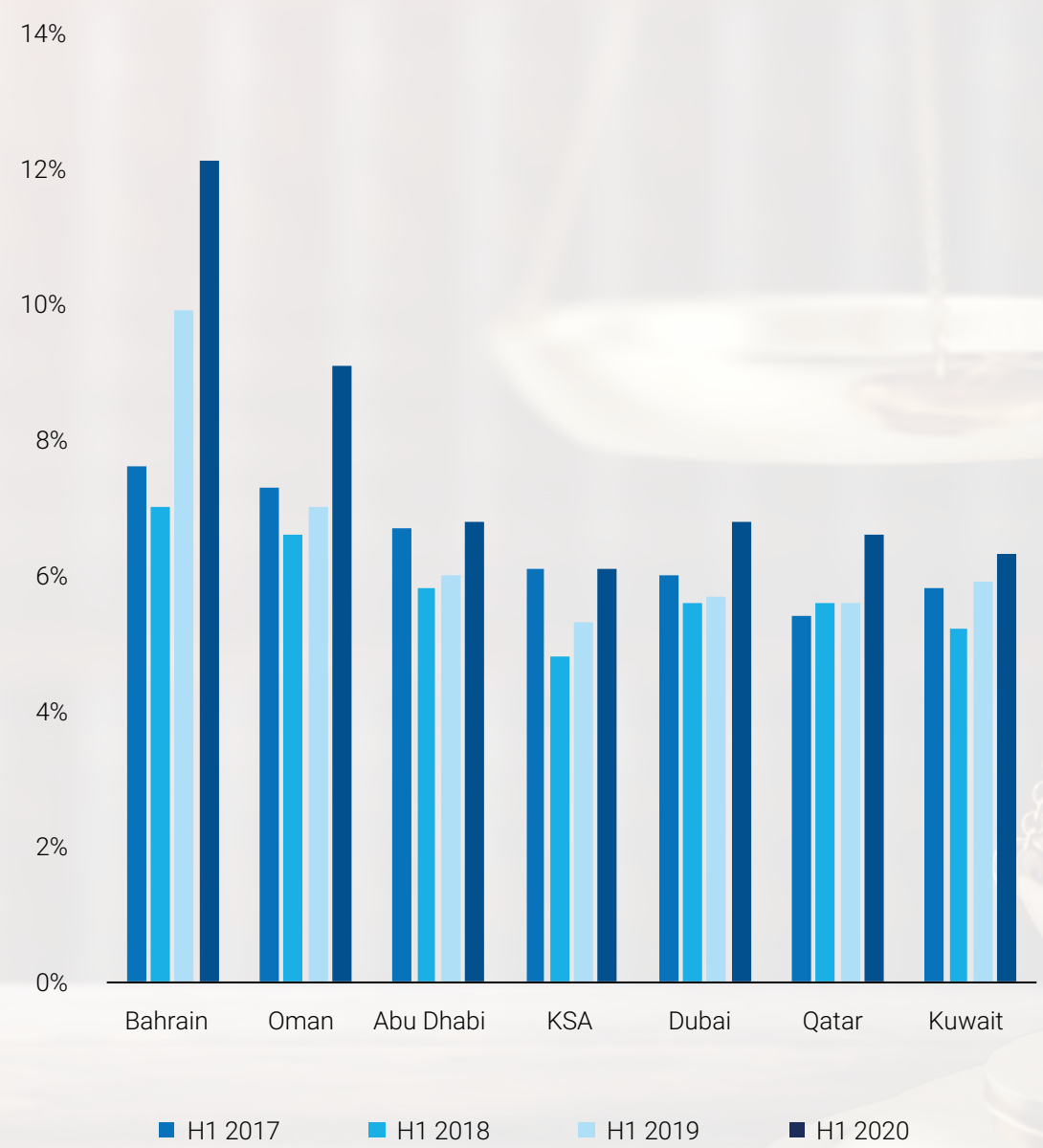
GCC Equity Risk Premium, H1 2020

Country	Equity Risk Premium			Average
	Implied ERP Method	CDS Spread Method	Ratings Method	
KSA	4.2%	7.1%	7.1%	6.1%
Kuwait	5.2%	6.9%	6.7%	6.3%
Qatar	6.0%	6.8%	6.9%	6.6%
Dubai	5.5%	8.1%	6.7%	6.8%
Abu Dhabi	6.9%	6.7%	6.7%	6.8%
Oman	6.4%	9.6%	11.3%	9.1%
Bahrain	-	9.9%	14.2%	12.1%

Source: Reuters

In comparison to previous periods, the average ERP for all GCC countries have increased in H1 2020 from that of H1 2019 mainly due to investors commanding a higher implied ERP on account of lowered GDP growth estimates leading to a fall in stock index values in all GCC countries since the outbreak of COVID-19 in China in January. The increase in ERP has been higher for Bahrain and Oman due to successive downgrades increasing the ERP calculated through the other two methods as well.

GCC Equity Risk Premium, H1 2017 to H1 2020



Source: Marmore Research; ERP mentioned in the chart is the average of the three methods.

Part II. Cost of Debt

The cost of debt can be inferred easily as it entails specific cost in the form of interest payments made in cash. To compute the cost of debt, entire debt, including money market debt in the form of commercial papers/ notes, bank debt in the form of loans/overdraft, financial leases and bonds raised is aggregated. The interest payments made as a proportion of interest bearing debt instruments provides us with the debt cost.

For instance, consider ABC Ltd., which has SAR 500mn in the form of long-term bonds and SAR 100mn in the form of bank loans. Annual interest payments include SAR 36mn and the tax rate for the firm is 5%.

Total Debt = Short-term Debt (money market/commercial papers/notes payable)

- + Long-term debt (bonds)
- + Bank debt (loans/overdraft/working capital finance)
- + Financial lease obligations

Thus, on a total debt of SAR 600mn ABC Ltd. pays an annual charge of SAR 36mn. From this, we can infer that the interest charged for ABC Ltd. 6%. As interest payments are tax deductible, we may find the after tax cost of debt as:

$$\begin{aligned}\text{Cost of Debt, after-tax} &= (\text{Interest charge incurred} / \text{Total Debt}) * (1 - \text{Tax rate}) \\ &= (36/600) * (1 - 0.05) \\ &= \mathbf{5.70\%}\end{aligned}$$

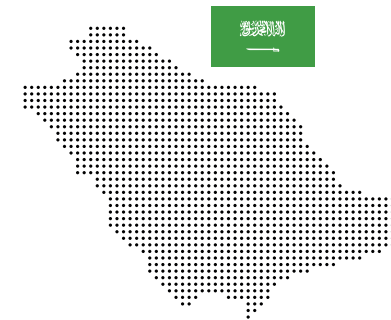
Part III. Cost of Capital

Having found out the cost of debt and cost of equity, we could compute the cost of capital as weighted average cost of capital as

$$\text{WACC} = (\text{Proportion of Debt} * \text{Cost of debt, after-tax}) + (\text{Proportion of Equity} * \text{Cost of Equity})$$

Chapter 3

Country wise Commentary



Saudi Arabia

Risk-free rate for Saudi Arabia is estimated by adding sovereign risk premium for Saudi Arabia to the 10-yr US Treasury yield. There are multiple ways to compute the risk-free rate for a country.

$$\begin{aligned}\text{Rf for KSA} &= \text{10-yr U.S T-Yield (0.70\%)} + \text{KSA Sovereign Risk Premium (1.04\%)} \\ &= \mathbf{1.74\%}\end{aligned}$$

Saudi Arabia sovereign bond rating stands at A1 (Moody's) and A- (S&P ratings). Considering the U.S market equity risk premium of 6.01%⁵, the ERP for Saudi Arabia is arrived at by adding the default spread based on their credit rating.

Compared to H1 2019, the implied equity risk premium has increased due to the increase in U.S. Equity Risk Premium from 5.3% to 6.01% and fall in Tadawul index due to lowered growth expectations in 2020 due to COVID-19. The equity risk premium estimated using the CDS methodology has decreased by 20 bps because of lower CDS spread. Though there has been increase in the equity risk premium computed by this method, the value is still lower than the other methods, reflecting the overall positive market sentiments. The effect of increase in equity risk premium on cost of capital is lessened by the decrease in risk free rate.

⁵ Aswath Damodaran- 1st Jul 2019



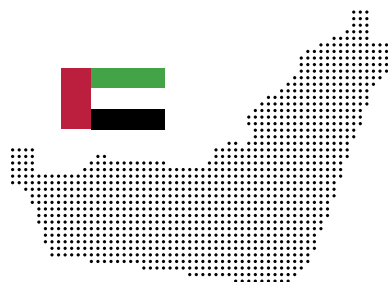
Kuwait

Kuwait's ERP based on CDS spread and credit rating are at 5.7% and 6.7%. The implied ERP for Kuwait is 5.2%, down by 300bps from H1 2019 values. The cost of capital based on rating and CDS methods have come down because of fall in risk free rates. The cost of capital based on implied ERP method has increased because of lowered earnings expectation due to GDP fall.



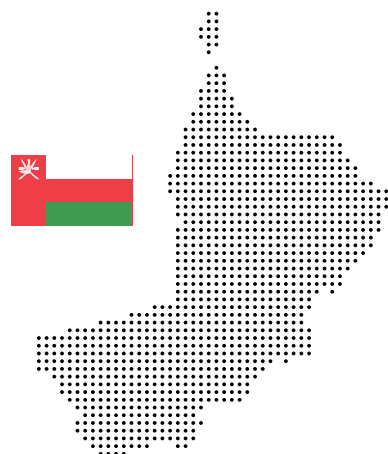
Qatar

Qatar witnessed no changes in its credit ratings since the last publication. Lower CDS spreads, decrease in risk free rate, lower yield on its sovereign bonds have resulted in a decrease in cost of capital under all methods except implied method due to lowered growth expectations.



UAE

Dubai, with a higher CDS spread of 2.4% compared to Abu Dhabi's 1.0% had a higher ERP (CDS Method) of 8.09% while Abu Dhabi's ERP stood at 6.72%.



Oman

In March 2020, Moody's Investors Service lowered the long-term issuer and senior unsecured bond ratings of the government of Oman to Ba1 from Ba2. The agency again lowered the ratings in June 2020 to Ba3. It cited that persistently wide fiscal and current account deficits, limited scope for fiscal consolidation because of the government's economic and social stability objectives, Oman's dependence on external financing as reasons for the downgrade.

Oman whose rating is lower than that of KSA, Kuwait, Qatar and UAE has its ERP at 11.3% based on the credit rating methodology. Based on the CDS methodology, Oman's ERP stood at 9.60%. However, the implied ERP stood at 6.04% for Oman indicating that its stock index had not fallen as much as expected of its rating and sovereign yields.

Sovereign Ratings of GCC Countries, 2020

	Moody's Rating		S&P Ratings	
	H1 2020	H1 2019	H1 2020	H1 2019
KSA	A1	A1	A-	A-
Kuwait	Aa2	Aa2	AA-	AA
Qatar	Aa3	Aa3	AA-	AA-
UAE	Aa2	Aa2	AA	AA
Oman	Ba3	Ba1	BB-	BB
Bahrain	B2	B2	B+	B+

Source: Moody's, S&P



Bahrain

Bahrain's sovereign rating was downgraded by S&P Global ratings to BB-. The ERP from ratings method increased to 14.2% due to the increase in default spread. This has had the effect of increasing CDS spreads from 3.2% in H1 2019 to 4.2% in H1 2020. As the yield on Bahrain's sovereign bonds was lower than the ratings based default spread, the implied IRP could not be computed.

Final Note

Cost of capital in most of the GCC countries decreased in H1 2020 due to fall in 10-year U.S. treasury yields and respective countries' sovereign yields. Most GCC countries have seen their CDS spreads narrow during this period. In the recent past, CDS spreads narrowed on back of easing lockdown restrictions and resumption of economic activities in June, which had improved investors risk appetite. Oman and Bahrain's sovereign credit ratings remained in the junk territory on concerns over their widening fiscal deficits and their high external debt.

Adjusted CDS of GCC countries, H1 2020 vs H1 2019

Country	Adjusted CDS – H1 2020	Adjusted CDS – H1 2019
Oman	3.6%	4.1%
Bahrain	3.9%	3.0%
Dubai	2.1%	1.4%
KSA	1.1%	1.1%
Kuwait	0.9%	1.0%
Qatar	0.8%	0.9%
Abu Dhabi	0.7%	0.7%

Source: Reuters, Marmore Research

Adjusted CDS spreads of Bahrain and Oman witnessed a noticeable change in H1 2020. Oman's CDS spread narrowed on possible financial aid from other GCC countries in spite of rating downgrades. Bahrain's CDS spread widening is caused by continuing fiscal pressures despite receiving USD 4.57billion in aid from Saudi Arabia, Kuwait and UAE in May 2020.

Risk Free Rate, H1 2020 vs H1 2019

Country	H1 2020	H1 2019
Bahrain	8.86%	8.21%
Oman	6.04%	4.82%
Dubai	3.44%	4.17%
KSA	1.74%	2.79%
Qatar	1.60%	2.68%
Kuwait	1.44%	2.56%
Abu Dhabi	1.44%	2.56%

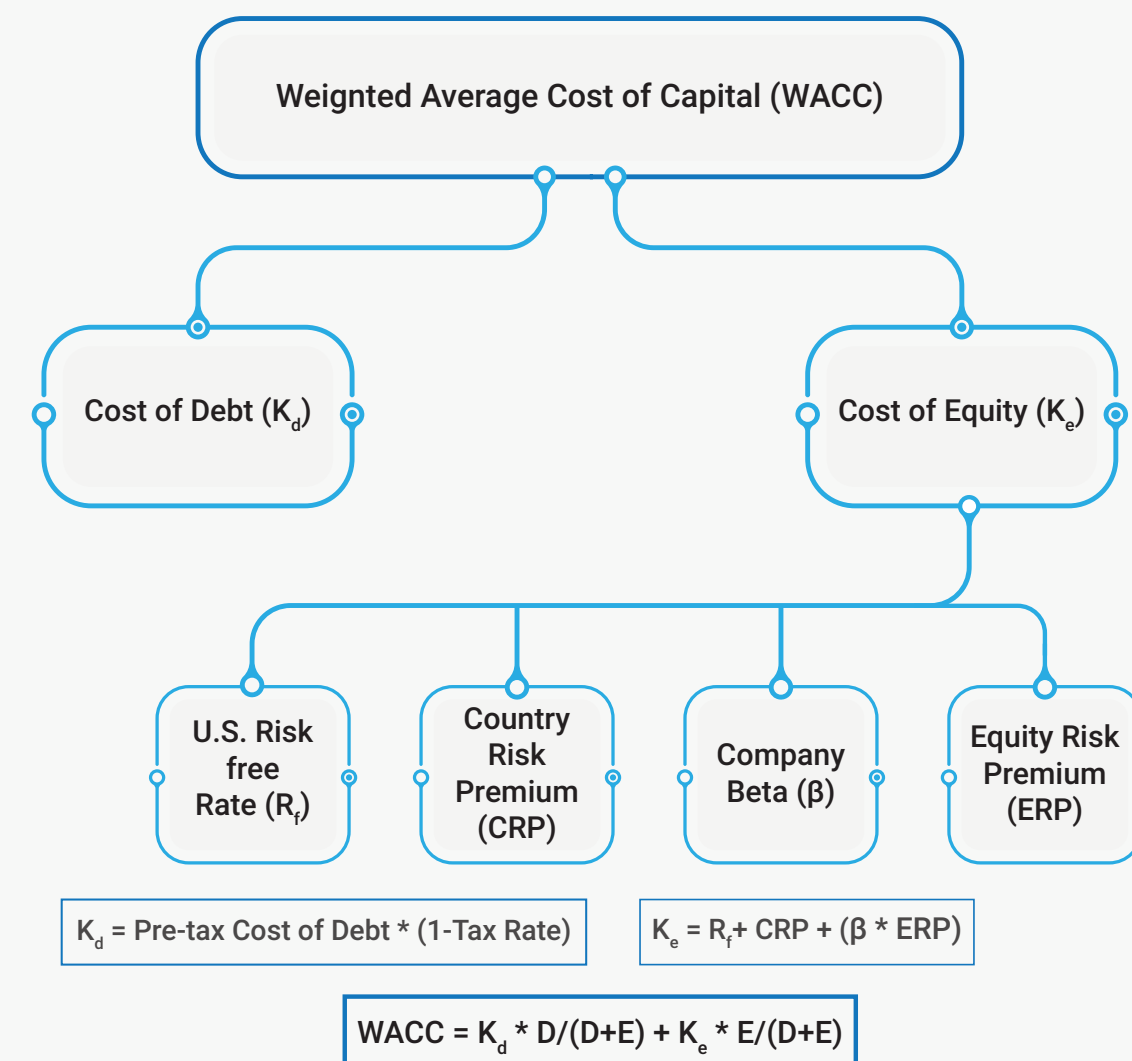
Source: Reuters, Marmore Research

Risk free rates for GCC countries has been computed by adding 10-year U.S treasury yield and country specific sovereign risk premium, based on credit rating to compute the risk free rate. The decrease in 10-year U.S. treasury yield has consequently decreased the risk free rates of all GCC countries except Bahrain whose sovereign risk premium has increased and Oman, which was downgraded twice since the start of COVID-19 crisis.

Chapter 4

Appendix

The broad methodology of our computation could be illustrated as:



Source: Marmore Research; Note: 'D' stands for Debt and 'E' stands for Equity.

Illustrative Example: Cost of Capital for a Private Firm

To illustrate this concept, we shall try to arrive at the cost of capital for a private cement company (ABC Ltd.) operating out of Saudi Arabia. Assume ABC Ltd has yearly revenues of SAR 2.5billion and that the management has set a D/E target of 30%.

Comparable companies would then include the following list of companies:

Company	Revenues (FY 2018)	D/E	Beta (levered)
Saudi Cement Co	SAR 1.12 bn	0.22	0.88
Southern Province Cement Co	SAR 0.89 bn	0.16	0.71
Arabian Cement Co	SAR 0.60 bn	0.18	0.83
Yanbu Cement	SAR 7.63 bn	0.07	0.75
Average		0.16	0.79

Source: Reuters

From the levered beta, for ABC Ltd. comparable we arrive at the unlevered beta,

Unlevered Beta = Levered Beta / (1+ (1-tax rate) (Average D/E))

= 0.79/ (1+ (1-0.05) (0.16))

= **0.69**

This is levered according to the Debt-to-Equity ratio of ABC Ltd

Levered Beta = Unlevered Beta * (1+ (1- tax rate)* (ABC Debt-to-Equity))

= 0.69 * (1+ (1-0.05) * (0.30))

= **0.89**

Considering this as the value of beta for the private firm, ABC Ltd. Its cost of equity is computed as below:

Cost of Equity for ABC Ltd. = $R_f + \beta * (\text{KSA Equity Risk Premium})$

= 2.79% + (0.89 * 5.22%)

= 7.41%

Cost of Debt was computed earlier as 5.7%. With the values of cost of equity and cost of debt, we may arrive at the WACC

Cost of Capital, WACC = $0.30 * (5.70\%) + 0.70 * (7.41\%)$

WACC, Cost of Capital for ABC Ltd. = 6.90%

Thus, the cost of capital for cement company ABC Ltd. with a capital structure of 30% debt and 70% equity in Saudi Arabia works out to be 6.90%.

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