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- » Consistent track record of quality, in-depth research offerings;
- » Skilled team with extensive experience in advanced quantitative and qualitative analysis techniques;
- » Deep understanding of MENA market and access to wide-ranging database
- » Delivers high quality, client specific, insightful research reports; highlighting key client issues and uncovering key answers/opportunities for the clients.















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Executive Summary

Decrease in Credit Default Swap (CDS) spreads of the GCC countries and fall in the countries' sovereign yields indicate positive investor sentiments. This coupled with expectations of rate cuts by the U.S Fed, fall in 10-year U.S treasury yield have lowered the cost of capital for the GCC countries.

In August 2018, Moody's Investors Service downgraded the long-term issuer ratings of the Kingdom of Bahrain to 'B2' with negative outlook from 'B1' negative outlook. The ratings agency cited increase in liquidity risks, slow implementation of fiscal reforms and high gross borrowing needs of the government as reasons for the downgrade. In October 2018, Saudi Arabia, Kuwait and UAE pledged USD 10 billion financial aid to Bahrain. Following this, the country's rating was revised in December 2018 to 'B2' with stable outlook.

In March 2019, Moody's Investors Service downgraded the long-term issuer and senior unsecured bond ratings of the government of Oman to Ba1 from Baa3. The agency cited that persistently wide fiscal and current account deficits, limited scope for fiscal consolidation because of the government's economic and social stability objectives, and Oman's dependence on external financing as reasons for the downgrade.

CDS spreads for all countries except Oman were lower in H1 2019, compared to H1 2018. The greatest decrease has been for Bahrain mainly owing to the financial support from neighbouring countries. Oman's CDS spread has increased because of rating downgrade.

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

For GCC countries other than Bahrain and Oman, the cost of capital decreased because of fall in risk free rates as their credit ratings remained unchanged. The 10-year U.S. treasury yield has fallen from 2.85% in Jul-Aug 2018 to 2.00% in Jun 2019 on the back of trade tensions, global growth uncertainties and expectation of easing of rates by the Fed. Cost of capital under the ratings method has increased for Bahrain and Oman compared to H1 2018, because of rating downgrade for both countries.

Cost of capital (under the implied ERP method) increased for most GCC countries when compared to H1 2018 values, except for Dubai 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 financial aid between the market and rating agencies.



Table 1.1: GCC WACC, H1 2019

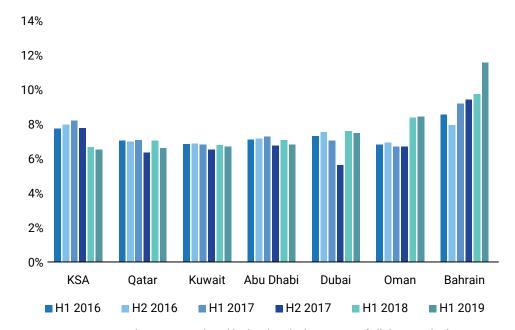
	WACC							
	Implied ERP Method		CDS Spreads Method Ratings		Method Average		rage	
	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018	H1 2019	H1 2018
Bahrain	N.A	7.00%	10.70%	11.00%	12.40%	11.20%	11.55%	9.73%
Abu Dhabi	6.90%	6.90%	6.80%	7.20%	6.70%	7.10%	6.80%	7.07%
Dubai	6.90%	7.00%	8.00%	8.10%	7.50%	7.70%	7.47%	7.60%
Oman	6.70%	6.50%	9.60%	9.70%	9.00%	8.90%	8.43%	8.37%
Kuwait	6.50%	5.90%	6.90%	7.30%	6.70%	7.10%	6.70%	6.77%
Qatar	6.10%	6.40%	6.90%	7.50%	6.80%	7.20%	6.60%	7.03%
KSA	5.50%	5.10%	7.10%	7.60%	6.90%	7.30%	6.50%	6.67%

Source: Marmore Research;

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

Since H2 2017, the average WACC from the three methods has witnessed a substantial decline for Saudi Arabia, while the opposite trend is observed in the case of Bahrain, Dubai and Oman. Despite witnessing a mild decline in H1 2019 compared to H1 2018, the WACC of Abu Dhabi, Qatar and Kuwait have been within a tight range in the past few years.

Figure 1.1: GCC WACC, H1 2016 to H1 2019



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

Why worry about WACC?

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 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.



¹ Prof. Aswath Damodaran

² ibid

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, Ke = Risk free-rate, Rf + 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

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.

Table 2.1: Current Yields of 10-Year International Sovereign Issues

Country	Yield
Oman	6.48%
Bahrain	6.02%
Dubai	3.61%
Qatar	3.47%
KSA	3.41%
Abu Dhabi	2.64%
Kuwait	2.60%

Source: Reuters; Note: Yields of latest 10-year international sovereign bonds, as of June 30, 2019

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

- 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 5.3%⁴, the ERP of GCC countries are arrived at by adding the default spread based on their credit rating:

Table 2.2: ERP for GCC Countries based on Credit Rating

Country	US Eq. Risk Premium	Rating	Default Spread	Total Equity Risk Premium
Bahrain	5.3%	B2	6.21%	11.5%
Oman	5.3%	Ba1	2.82%	8.1%
Saudi Arabia	5.3%	A1	0.79%	6.1%
Qatar	5.3%	Aa3	0.68%	6.0%
Kuwait	5.3%	Aa2	0.56%	5.9%
Abu Dhabi	5.3%	Aa2	0.56%	5.9%

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.

The adjusted CDS for Bahrain (3.0%) is the difference between the 10-year CDS for Bahrain (3.2%) and U.S (0.2%).

⁴ Aswath Damodaran- 1st Jul 2019

Table 2.3: ERP for GCC Countries on CDS Spread

Country	US Eq. Risk Premium	10-year CDS	Adjusted CDS	Total Equity Risk Premium
Oman	5.3%	4.3%	4.1%	9.4%
Bahrain	5.3%	3.2%	3.0%	8.3%
Dubai	5.3%	1.7%	1.4%	6.7%
KSA	5.3%	1.4%	1.1%	6.4%
Kuwait	5.3%	1.2%	1.0%	6.3%
Qatar	5.3%	1.2%	0.9%	6.2%
Abu Dhabi	5.3%	0.9%	0.7%	6.0%

Source: Aswath Damodaran, Thomson Reuters Eikon, Marmore Research

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.

Table 2.4: Implied Risk Premium for GCC Countries

Country	Index Level*	Implied Equity Risk Premium
Abu Dhabi	4,980	6.2%
Kuwait**	5,418	5.5%
Dubai	2,659	4.7%
Qatar	10,456	4.5%
Oman	3,885	3.5%
KSA	8,822	3.3%
Bahrain	1,471	N.A

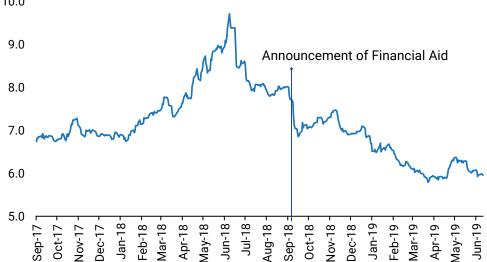
Source: Thomson Reuters Eikon, Marmore Research * As of 30-Jun-2019 ** Kuwait All Share Index

Cost of Capital, under the implied ERP method, could not be computed for Bahrain as the yield of the sovereign issue (6.02%) is lower than the default spread based on credit rating (6.21%). 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. The change in outlook from negative to stable by the rating agencies in Dec 2018 could also be an explanatory factor.

10.0 9.0

Figure 2.1: Bahrain 10-Year Sovereign Yield (in percentage)



Source: Reuters;

While comparing the average equity risk premium of GCC countries from all three methods, Bahrain has the highest ERP, affected by continuous downgrades of its credit rating, which has pushed up the ERP using ratings method. Although the financial aid provided to Bahrain resulted in the narrowing of its CDS spreads, the average ERP is much higher than that of its closest GCC peer. Oman, whose country credit rating has also been downgraded to junk territory by all three major rating agencies, had a much lesser average ERP. Oman's average was pulled down by the low ERP value calculated through the implied ERP method. The implied ERP of other GCC countries remained at a narrow band between 5.3% and 6.0%

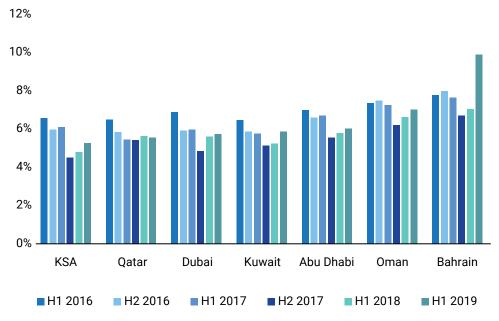
Table 2.5: GCC Equity Risk Premium, H1 2019

Country	Equity Risk Premium					
	Implied ERP Method	CDS Spread Method	Ratings Method	Average		
KSA	3.3%	6.4%	6.1%	5.3%		
Qatar	4.5%	6.2%	6.0%	5.6%		
Dubai	4.7%	6.7%	-	5.7%		
Kuwait	5.5%	6.3%	5.9%	5.9%		
Abu Dhabi	6.2%	6.0%	5.9%	6.0%		
Oman	3.5%	9.4%	8.1%	7.0%		
Bahrain	-	8.3%	11.5%	9.9%		

Source: Reuters

In comparison to previous periods, the average ERP for all GCC countries have increased in H1 2019 when compared to H1 2018, due to the fall in oil prices and the effect of escalation in geopolitical tensions. Bahrain has seen the biggest movement in ERP during the first half of 2019, as the aforementioned factors in addition to continuous downgrades in credit ratings have all contributed to investors demanding a higher premium over its GCC peers. The average ERP was at its lowest point at the end of H2 2017 as oil prices started staging a recovery due to production cuts.

Figure 2.2: GCC Equity Risk Premium, H12016 to H1 2019



Source: Marmore Research; Implied ERP is the average value of all 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:

Cost of Debt, after-tax = (Interest charge incurred/Total Debt) * (1- Tax rate)

= (36/600) * (1-0.05)

= 5.70%

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

WACC = (Proportion of Debt * Cost of debt, after-tax) + (Proportion of Equity * Cost of Equity)

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.

Rf for KSA = 10-yr U.S T-Yield (2.00%) + KSA Sovereign Risk Premium (0.79%)

= 2.79%

Saudi Arabia sovereign bond rating stands at A1 (Moody's) and A- (S&P ratings). Considering the U.S market equity risk premium of 5.3%⁵, the ERP for Saudi Arabia is arrived at by adding the default spread based on their credit rating.

Compared to H1 2018, the equity risk premium estimated using the rating methodology remains unchanged. The equity risk premium estimated using the CDS methodology has decreased by 20 bps because of lower CDS spread. In the implied ERP method, though there is better earnings growth expectation, the risk premium has increased considerably because of fall in sovereign yield and low share index levels. 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 positive market sentiments. The effect of increase in equity risk premium on cost of capital is lessened by decrease in risk free rate.

Kuwait

Kuwait's ERP based on credit rating and CDS spread remains unchanged at 5.9% and 6.3% respectively because of ratings re-affirmation. The implied ERP for Kuwait is 5.5%, up by 200bps from H1 2018 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 better earnings expectation.

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 three methods.

UAE

Dubai, with a higher CDS spread of 1.68% compared to Abu Dhabi's 0.91% had a higher ERP (CDS Method) of 6.7% while Abu Dhabi's ERP stood at 6.0%.

⁵ Aswath Damodaran-1st Jul 2019

Oman

In March 2019, Moody's Investors Service lowered the long-term issuer and senior unsecured bond ratings of the government of Oman to Baa3 from Ba1. The agency 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 8.12% based on the credit rating methodology. Based on the CDS methodology, Oman's ERP is the highest at 9.43%. However, the implied ERP stood at 3.5% for Oman. This low implied ERP could be attributed to the country's muted long-term growth outlook.

Table 3.1: Sovereign Ratings of GCC Countries, 2018

Country	Moody	's Rating	S&P Ratings		
Country	H1 2019	H1 2019 H1 2018		H1 2018	
KSA	A1	A1	A-	A-	
Kuwait	Aa2	Aa2	AA	AA	
Qatar	Aa3	Aa3	AA-	AA-	
UAE	Aa2	Aa2	AA	AA	
Oman	Ba1	Baa3	ВВ	ВВ	
Bahrain	B2	B1	B+	B+	

Source: Moody's, S&P

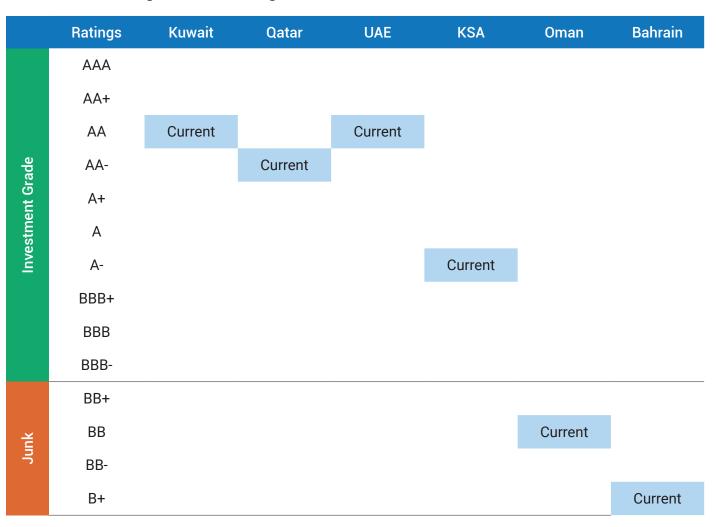
Bahrain

Bahrain's sovereign rating was downgraded to B2. Hence, the ERP from ratings method increased to 11.5%. Based on CDS method, ERP decreased to 8.5% because of considerable decrease in the CDS spread. 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 2019 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. This could be due to positive investor sentiments on the back of index inclusions of GCC bonds by global institutions. Oman and Bahrain's sovereign credit ratings remained in the junk territory on concerns about their dependence on oil revenues and their high external debt.

Table 4.1: S&P Ratings of GCC Sovereigns



Source: S&P; Data as of Jun 2019

GCC Risk Premium H1 2019 marmoremena.com 15

Table 4.2: Adjusted CDS of GCC countries, H1 2019 vs H1 2018

Country	Adjusted CDS – H1 2019	Adjusted CDS – H1 2018
Oman	4.1%	3.9%
Bahrain	3.0%	4.1%
Dubai	1.4%	1.4%
KSA	1.1%	1.2%
Kuwait	1.0%	0.9%
Qatar	0.9%	1.2%
Abu Dhabi	0.7%	0.8%

Source: Reuters, Marmore Research

Adjusted CDS spreads of Bahrain and Oman witnessed a noticeable change in H1 2019. Bahrain's CDS spread narrowed following financial aid from neighbouring countries in spite of rating downgrade. Oman's CDS spread widening is caused by rating downgrade.

Table 4.3: Risk Free Rate, H1 2019 vs H1 2018

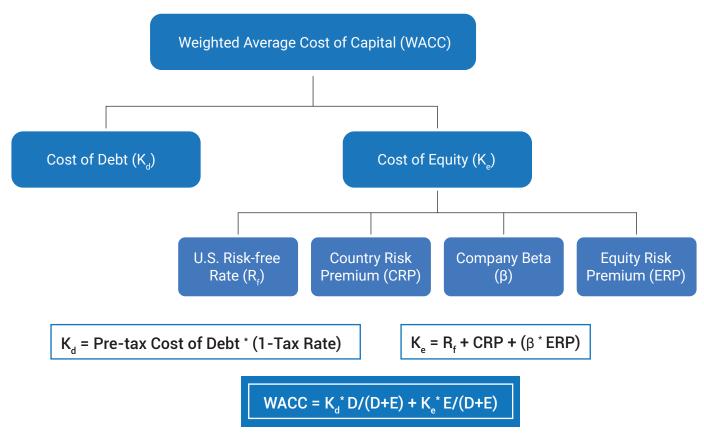
Country	H1 2019	H1 2018
Bahrain	8.21%	7.47%
Oman	4.82%	5.11%
Dubai	4.17%	4.50%
KSA	2.79%	3.57%
Qatar	2.68%	3.47%
Kuwait	2.56%	3.36%
Abu Dhabi	2.56%	3.36%

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. Bahrain witnessed an increase in risk free rate because of an increase in its sovereign risk premium, due to the downward revision of their long-term issuer ratings. Oman had also been downgraded, and its risk premium has increased. However, Oman's risk free rate has still decreased as the increase in risk premium has been offset by the decrease in the 10-year US treasury yield.

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 2.5 billion 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,

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

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. = Rf + β * (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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