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| **6. Marginal cost of capital structure.** |
| **Marginal cost of capital** (**MCC**) is the cost of obtaining another dollar of new capital. *The marginal cost rises as more and more capital is raised during a given period.*  The **marginal cost of capital schedule** is a graph that relates the firm's weighted average cost of each dollar of capital to the total amount of new capital raised.  The cost of capital is level to the point at which one of the costs of capital changes, such as when the company bumps up against a debt covenant, requiring it to use another form of capital. The **break point** (**BP**) is the dollar value of new capital that can be raised before an increase in the firm's weighted average cost of capital occurs.  **Break point = Amount of capital at which the source's cost of capital changes / proportion of new capital raised from the source**  *Example*  Consider the following schedule of the costs of debt and equity for a company.  http://www.analystnotes.com/graph/l2/08/SS08SBsubc2.gif  Assuming the company's target capital structure is 50% debt and 50% equity, the corresponding marginal cost of capital schedule looks like this:  http://www.analystnotes.com/graph/l2/08/SS08SBsubc1.gif  The break points are at $10 million and $20 million.  The company can invest up to $10 million with WACC = 9%. After $10 million, the company will have to raise new equity and new debt at higher costs, and WACC will rise to be 12% if the company wants to raise an additional $10.  MCC is the cost of last dollar raised by the company, while WACC is the weighted average cost of all capital components used by the company. The MCC will increase as a firm raises more and more capital.   * Large, established firms typically obtain all the equity capital by retained earnings. * Due to the floating costs of issuing new stocks, the cost of retained earnings is always less than the cost of newly issued common equity. * If a firm requires so much capital that it has to issue new common stock, the WACC will rise because of the increase cost of new equity. |

**Basic Questions**

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| **1** Gigantic Corporation has calculated the following:  WACCs = 5.75%  WACCe = 6.15% REBP = $35,750,000  Which of the following correctly matches new capital to be raised with MCC?  A. $35,750,000 in new capital; MCC = 5.75% B. $35,750,000 in new capital; MCC = 6.15% C. $40,000,000 in new capital; MCC = 5.75% | | |
| **Check** [**AnalystNotes**](http://analystnotes.com?ref=notes) **for the correct answer and a detailed explanation.** | | |
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| **Poster** | **User Comments** |  |
| yu0825 | What is REBP? |  |
| Beret | REBP = retained earnings breakpoint.   The point in funding new projects where the firm exhausts or uses up the retained earnings is called the retained earnings breakpoint. At the breakpoint, the WACC changes because the firm must issue new common stock (which is more expensive than retained earnings due to flotation costs) in order to continue funding projects. |  |
| tschorsch | Is WACC[s] the cost for retained earnings and WACC[e] the cost for issuing new equity? |  |
| DariSH | What is WACCs? |  |
| DonAnd | weighted average cost of capital (knock knock!!!!) |  |

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| **2**  The market value of XYZ Corp.'s common equity is currently $600 million and the market value of this debt is $400million. The cost of equity is estimated at 12% and the before tax cost of debt is estimated at 8%. Suppose that the company wishes to raise an additional $150 million to finance its expansion. However, the company estimated the debt will now cost them 9% (before tax) and the equity will cost 14%. If the company wishes to maintain its existing capital structure, and its tax rate is 40%, what will be the company's new WACC and consequently, its marginal cost of capital?  A. New WACC: 10.56% Marginal cost of capital: 15.8%. B. New WACC: 9.12% Marginal cost of capital: 15.3%. C. New WACC: 12.0% Marginal cost of capital: 14.7%. | | |
| **Check** [**AnalystNotes**](http://analystnotes.com?ref=notes) **for the correct answer and a detailed explanation.** | | |
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| **Poster** | **User Comments** |  |
| kutta2102 | Important to remember that the marginal cost needs to be calculated using % above the old wacc and not just the numerical difference. |  |
| azramirza | 10.6/9.12 - 1 = 15.8%  how did this come??? can someone help?? |  |
| SrobH | its the Old WACC divided by the New WACC, they rounded the Old WACC, which makes it look confusing. |  |
| DonAnd | The %change in WACC |  |
| DonAnd | WACC(old)=(0.4)(0.08)(0.6)+(0.6)(0.12)=0.0912(9.12%) WACC(new)=(0.4)(0.09)(0.6)+(0.6)(0.14)=0.1056(10.56%) MCC=(10.56/9.12)-1=0.157895 (15.8%) |  |

**Review Questions**

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| **1**  ABC Company has estimated its REBP to be equal to $75,000,000. Which of the following statements is true? (WACCs: the WACC before REBP; WACCe: the WACC after REBP) |
| A. If total new capital raised is less than $75,000,000, then MCC = WACCs. |
| B. If total new capital raised is less than $75,000,000, then MCC = WACCe. |
| C. If total new capital raised is greater than $75,000,000, then MCC = WACCs. |