**Question**

Suppose that new security designs could be patented. The patent holder could restrict use of the new design or charge other firm’s royalties for using it. What effect would such patents have upon MM’s capital structure irrelevance theory?

**Answer**

[Modigliani](http://www.investopedia.com/terms/f/franco-modigliani.asp) and [Miller](http://www.investopedia.com/terms/m/merton-miller.asp), two professors in the 1950s, studied capital-structure theory intensely. From their analysis, they developed the capital-structure irrelevance proposition. Essentially, they hypothesized that in perfect markets, it does not matter what capital structure a company uses to finance its operations. They theorized that the market value of a firm is determined by its earning power and by the risk of its underlying assets, and that its value is independent of the way it chooses to finance its investments or distribute dividends.   
The basic M&M proposition is based on the following key assumptions:

* No taxes
* No transaction costs
* No bankruptcy costs
* Equivalence in borrowing costs for both companies and investors
* Symmetry of market information, meaning companies and investors have the same information
* No effect of debt on a company's earnings before interest and taxes (Investopedia, 2016).

**Reference**

Investopedia. (2016). Modigliani And Miller's Capital Structure Theories, Investopedia. United

States. Retrieved from: <http://www.investopedia.com/walkthrough/corporate-finance/5/capital-structure/modigliani-miller.aspx>