

### Abstract

Emerging market companies typically have lower values than their counterparts in developed markets. In order to account for this practitioners typically use an ad hoc premium in discount rate in their DCF models – so called country risk premium. Approaches for this premium calculation do not have adequate theoretical basis in the literature. There is an alternative to premium which is in accounting for a country risk through scenario approach. However it is difficult to implement practically because of the calibration problem. Thus there is a problem of a country risk.

The concept of country risk premium has to be abandoned. We propose following procedure in emerging company DCF valuation.

- 1) Calculate theoretical discounted value as if the business is from developed country.
- 2) Account for the risk of an emerging market applying the discount. The discount can be obtained through analysis of differences between emerging and developed stock market multiples. As a result the problem of an emerging country risk stops being «black box» and becomes clear, observable and verifiable.

This paper proposes critical analysis of the theory and practice of discount rates. In addition paper gives a theoretical basis for country risk from the prospective of New Institutional Economics.

**Key words:** sovereign premium, country risk premium, emerging markets, valuation, value, discounted cash flow

**JEL:** G32

### References

1. Damodaran, A. 2002. Investment Valuation: Tools and Techniques for Determining the Value of Any Asset, Second Edition. 2nd ed. New York: Wiley, 992 p. (Russ. ed.: Damodaran A. 2006. Investicionnaja ocenka. Instrumenty i metody ocenki ljubyh aktivov. Moscow, Al'pina Biznes Buks, 2006. 1341 p.).
2. Dranev Ju. Ja., Nurdinova Ja.S., Red'kin V.A., Fomkina S.A. 2012. Modeli ocenki zatrat na sobstvennyj kapital kompanij na razvivajushhihsja rynkah kapitala [Cost of Capital Estimation Models in Emerging Markets]. Korporativnye finansy. no. 2 (22). pp. 107–117.
3. Ivashkovskaja I.V., Kuznecov I.A. 2008. Metody korrekcii rynochnyh mul'tiplikatorov na stranovye riski: jempiricheskoe issledovanie [Adjustments to the market multiples for valuation in emerging markets: empirical research]. Audit i finansovyj analiz., no. 5. pp. 94–110.
4. North, D. C. 1989. Institutions and economic growth: An historical introduction, World Development, 17 (9), pp. 1319–1332. (Russ. ed. Nort D. 1993. Instituty i jekonomicheskij rost: istoricheskoe vvedenie. Thesis. no. 2. pp. 69–91).
5. North, D. C., Wallis, J. J. and Weingast, B. R. 2009. Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History. Cambridge University Press, 345 p. (Russ. ed. Nort D., Uollis D., Vajngast B. 2011. Nasilie i social'nye porjadki. Konceptual'nye ramki dlja interpretacii pis'mennoj istorii chelovechestva. Moscow, Instituta Gajdara Publ., 480 p.).
6. Teplova T.V. 2013. Traktovka riska v analize sootnoshenija «risk-dohodnost'» na razvivajushhihsja rynkah kapitala. Innovacii na finansovyh rynkah. Moscow, NRU HSE Publ., pp. 290–367.

7. Jakovlev A.A., Sobolev A.S., Kazun A.P. 2013. *Mozhet li rossijskij biznes ogranichit' «silovoe davlenie» so storony gosudarstva? [Can Russian business limit illegal “violent pressure” of state actors?]* NRU HSE Publ., preprint no. WP1/2014/01. 31 p.
8. Acemoglu, D., Robinson, J.A. 2012. *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. London: Profile Books.
9. Alston, L.J. 2008. *new institutional economics*. In S. N. Durlauf, L. E. Blume (eds) *The New Palgrave Dictionary of Economics*, 32–39. Basingstoke: Nature Publishing Group Available at: <http://www.dictionaryofeconomics.com> (Accessed January 19, 2015).
10. Asness, C.S., Moskowitz, T.J., Pedersen, L.H. 2013. *Value and Momentum Everywhere*. *The Journal of Finance* 68(3): p.929–985.
11. Baker, N.L., Haugen, R.A. 2012. *Low Risk Stocks Outperform within All Observable Markets of the World*. Rochester, NY: Social Science Research Network. Available at: <http://papers.ssrn.com/abstract=2055431> (Accessed May 18, 2015).
12. Barro, R.J. 2005. *Rare Events and the Equity Premium*. National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w11310> (Accessed March 15, 2015).
13. Bekaert, G., Harvey, C.R. 1995. *Time-Varying World Market Integration*. *The Journal of Finance* 50(2): p.403–444.
14. Bekaert, G., Harvey, C.R. 2014. *Emerging Equity Markets in a Globalizing World*. Rochester, NY: Social Science Research Network. Available at: <http://papers.ssrn.com/abstract=2344817> (Accessed November 4, 2014).
15. Bekaert, G., Harvey, C.R., Lundblad, C.T., Siegel, S. 2014. *Political Risk Spreads*. National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w19786> (Accessed March 17, 2015).
16. Box, G.E.P. 1976. *Science and Statistics*. *Journal of the American Statistical Association* 71(356): p.791–799.
17. Caballero, R.J. 2008. *creative destruction*. In S. N. Durlauf L. E. Blume (eds) *The New Palgrave Dictionary of Economics*, 307–311. Basingstoke: Nature Publishing Group Available at: <http://www.dictionaryofeconomics.com/> (Accessed January 18, 2015).
18. Chorn, L.G., Shokhor, S. 2006. *Real options for risk management in petroleum development investments*. *Energy Economics* 28(4): p.489–505.
19. Cochrane, J.H. 2011. *Presidential address: Discount rates*. *The Journal of Finance* 66(4): p.1047–1108.
20. Copeland, T., Antikarov, V. 2001. *Real options: a practitioner’s guide*. New York: Texere.
21. Damodaran, A. 2012. *Response to Damodaran’s Country Risk Premium: A Serious Critique*. *Business Valuation Review* 31(2-3): p.85–86.
22. Damodaran, A. 2014. *Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2014 Edition*. Rochester, NY: Social Science Research Network. Available at: <http://papers.ssrn.com/abstract=2409198> (Accessed January 19, 2015).
23. Damodaran, A. 2015. *The Search for Investment Serenity: The Look Back Test! Musings on Markets*. Available at: <http://aswathdamodaran.blogspot.ru/2015/04/the-search-for-investment-serenity-look.html> (Accessed May 18, 2015).
24. Duarte, F., Rosa, C. 2015. *The Equity Risk Premium: A Review of Models*. Federal Reserve Bank of NY. Staff Report No. 714.
25. Erb, C.B., Harvey, C.R., Viskanta, T.E. 1996. *Expected Returns and Volatility in 135 Countries*. Rochester, NY: Social Science Research Network. Available at: <http://papers.ssrn.com/abstract=871253> (Accessed March 17, 2015).
26. Fernandez, P. 2015. *The Equity Premium in 150 Textbooks*. Rochester, NY: Social Science Research Network. Available at: <http://papers.ssrn.com/abstract=1473225> (Accessed January 20, 2015).

27. Fernandez, P., Linares, P., Acín, F., Isabel. 2014. Market Risk Premium Used in 88 Countries in 2014: A Survey with 8,228 Answers. Rochester, NY: Social Science Research Network. Available at: <http://papers.ssrn.com/abstract=2450452> (Accessed January 19, 2015).
28. Frazzini, A., Kabiller, D., Pedersen, L.H. 2013. Buffett's Alpha. National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w19681> (Accessed May 19, 2015).
29. Frazzini, A., Pedersen, L.H. 2014. Betting against beta. *Journal of Financial Economics* 111(1): p.1–25.
30. Fujita, S. 2008. Creative destruction and aggregate productivity growth. *Bus Rev (Federal Reserve Bank of Philadelphia)* 3: p.12–20.
31. Harvey, C.R. 1994. Predictable Risk and Returns in Emerging Markets. National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w4621> (Accessed March 17, 2015).
32. Harvey, C.R., Liu, Y., Zhu, H. 2014. . . . and the Cross-Section of Expected Returns. National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w20592> (Accessed March 17, 2015).
33. Haugen, R.A. 2009. *New Finance, The 4 edition*. Boston: Prentice Hall.
34. Hogan, W., Sturzenegger, F. 2010. *The Natural Resources Trap: Private Investment without Public Commitment New edition*. Cambridge, Mass.: The MIT Press.
35. Ilmanen, A. 2011. *Expected Returns: An Investor's Guide to Harvesting Market Rewards 1 ed*. N.Y.: Wiley.
36. Jensen, M.C., Black, F., Scholes, M.S. 1972. The Capital Asset Pricing Model: Some Empirical Tests. Praeger Publishers Inc. Available at: <http://papers.ssrn.com/abstract=908569> (Accessed November 4, 2014).
37. Koller, T., Goedhart, M., Wessels, D., McKinsey. 2010. *Valuation: Measuring and Managing the Value of Companies 5th ed*. New York, NY: Wiley.
38. Krasker, W.S. 1980. The 'peso problem' in testing the efficiency of forward exchange markets. *Journal of Monetary Economics* 6(2): p.269–276.
39. Kruschwitz, L., Löffler, A., Mandl, G. 2012. Damodaran's Country Risk Premium: A Serious Critique. *Business Valuation Review* 31(2): p.75–84.
40. Lintner, J. 1965. The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets. *The Review of Economics and Statistics* 47(1): p.13–37.
41. Mossin, J. 1966. Equilibrium in a capital asset market. *Econometrica: Journal of the econometric society*: p.768–783.
42. Rietz, T.A. 1988. The equity risk premium a solution. *Journal of Monetary Economics* 22(1): p.117–131.
43. Sharpe, W.F. 1964. Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk. *The Journal of Finance* 19(3): p.425–442.
44. Siegel, J.J. 2008. *Stocks for the long run: the definitive guide to financial market returns and long-term investment strategies*. New York: McGraw-Hill.
45. Taleb, N.N. 2007. *The Black Swan: The Impact of the Highly Improbable 1 ed*. N.Y.: Random House.