

## THE COST OF CAPITAL, MACAULAY'S DURATION, AND TOBIN'S $q$

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First published: Summer 1989

<https://doi.org/10.1111/j.1475-6803.1989.tb00109.x>

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The authors wish to thank Stephen Ross and E. Lindenberg for providing the Tobin  $q$  data. They also acknowledge the incisive comments of two referees of this journal and the competent programming assistance of Asher Reves. Partial funding of this research by the Kruger Fund at the Jerusalem School of Business, The Hebrew University, is gratefully acknowledged.



### Abstract

It is shown empirically that the cost of equity capital estimated from the dividend discount model and Tobin's  $q$  are negatively related. The theoretical relationship between these variables is exploited to determine alternative estimates of the cost of equity capital and Macaulay's duration without having to estimate the growth rate  $g$  in the conventional manner. This new approach can readily be implemented for large firms reporting SFAS No. 33 data.

### References

1 Aivazian, V. A., and J. L. Callen. "Investment, Market Structure, and the Cost of Capital." *Journal of Finance* 34 (March 1979), pp. 85-92.

[Web of Science®](#) | [Google Scholar](#)

2 Arditti, E. D. "Risk and the Required Return on Equity." *Journal of Finance* 24 (March 1969), pp. 19-36.

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4 Boquist, J. A., G. A. Racette, and G. G. Schlarbaum. "Duration and Risk Assessment for Bonds and Common Stocks." *Journal of Finance* 30 (December 1975), pp. 1360–1365.

[Web of Science®](#) | [Google Scholar](#)

5 Brigham, E. F., D. K. Shome, and S. R. Vinson. "The Risk Premium Approach to Measuring a Utility's Cost of Equity." *Financial Management* 14 (Spring 1985), pp. 33–45.

[Web of Science®](#) | [Google Scholar](#)

6 Callen, J. L. "Estimating the Cost of Capital Using Tobin's  $q$ ." Working paper, McMaster University, 1986.

[Google Scholar](#)

7 Falkenstein, A., and R. Weil. "Replacement Cost Accounting: What Will Income Statements Based on SEC Disclosures Show—Part I." *Financial Analysts Journal* 33 (January–February 1977), pp. 46–57.

[Google Scholar](#)

8 Falkenstein, A., and R. Weil. "Replacement Cost Accounting: What Will Income Statements Based on SEC Disclosures Show—Part II." *Financial Analysts Journal* 33 (March–April 1977), pp. 48–56.

[Google Scholar](#)

9 Fama, E. F., and H. Babiak. "Dividend Policy: An Empirical Analysis." *Journal of the American Statistical Association* 63 (December 1968), pp. 1132–1168.

[Web of Science®](#) | [Google Scholar](#)

10 Farrell, J. L., Jr. "The Dividend Discount Model: A Primer." *Financial Analysts Journal* 41 (November–December 1985), pp. 16–25.

[Google Scholar](#)

11 Gordon, M. J. *The Investment, Financing, and Valuation of the Corporation*. Homewood, Ill.: Irwin, 1962.

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13 Gordon, M. J., and L. I. Gould. "The Cost of Equity Capital: A Reconsideration." *Journal of Finance* 33 (June 1978), pp. 849-862.

[Web of Science®](#) | [Google Scholar](#)

14 Lindenberg, E. B., and S. A. Ross. "Tobin's  $q$  Ratio and Industrial Organization." *Journal of Business* 54 (January 1981), pp. 1-32.

[Web of Science®](#) | [Google Scholar](#)

15 Lintner, J. "Distribution of Incomes of Corporations Among Dividends, Retained Earnings and Taxes." *American Economic Review* 46 (May 1956), pp. 97-113.

[Web of Science®](#) | [Google Scholar](#)

16 Myers, S. C. "Determinants of Corporate Borrowing." *Journal of Financial Economics* 5 (1977), pp. 247-275.

[Google Scholar](#)

17 Smirlock, M., T. Gilligan, and W. Marshall. "Tobin's  $q$  and the Structure-Performance Relationship." *American Economic Review* 74 (December 1984), pp. 1051-1060.

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