



European Financial Management / Volume 9, Issue 2 / p. 163-177

## The Underinvestment and Overinvestment Hypotheses: an Analysis Using Panel Data

Artur Morgado, Julio Pindado

First published: 29 May 2003

<https://doi.org/10.1111/1468-036X.00214>

Citations: 67

### Abstract

We study the relationship between firm value and investment to test the underinvestment and overinvestment hypotheses. The results obtained, using panel data methodology as the estimation method, indicate that the abovementioned relation is quadratic, which implies that there exists an optimal level of investment. As a consequence, firms that invest less than the optimal level suffer from an underinvestment problem, while those investing more than the optimum suffer from overinvestment. The quadratic relation is maintained when firms are classified depending on their investment opportunities, the optimum being in accordance with the quality of investment opportunities.

### References



Adedeji, A., 'Does the pecking order hypothesis explain the dividend payout ratios of firms in the UK?', *Journal of Business Finance & Accounting*, Vol. 25, 1998, pp. 1127-55.

| [Google Scholar](#) |

Arellano, M. and Bond, S., 'Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations', *Review of Economic Studies*, Vol. 58, 1991, pp. 277-97.

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

Arellano, M. and Bond, S., *Dynamic Panel Data Estimation Using DPD98 for GAUSS: A Guide for Users* (London: Institute for Fiscal Studies, 1998).

| [Google Scholar](#) |

Blundell, R., Bond, S., Devereux, M. and Schiantarelli, F., 'Investment and Tobin's *Q*: evidence from company panel data', *Journal of Econometrics*, Vol. 51, 1992, pp. 233–57.

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

---

Chen, S. and Ho, K., 'Market response to product-strategy and capital-expenditure announcements in Singapore: investment opportunities and free cash flow', *Financial Management*, Vol. 26, 1997, pp. 82–8.

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

---

Cleary, S., 'The relationship between firm Investment and Financial Status', *The Journal of Finance*, Vol. 54, 1999, pp. 673–92.

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

---

Del Brio, E., Perote, J. and Pindado, J., 'Measuring the impact of corporate investment announcements on share prices: the Spanish Experience', *Journal of Business, Finance and Accounting*, 2003, forthcoming.

| [Google Scholar](#) |

---

Doukas, J., 'Overinvestment, Tobin's *q* and gains from foreign acquisitions', *Journal of Banking and Finance*, Vol. 19, 1995, pp. 1285–303.

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

---

Fazzari, S., Hubbard, R. and Petersen, B., 'Financing constraints and corporate investment', *Brooking Papers on Economic Activity*, Vol. 1, 1988, pp. 141–95.

| [Google Scholar](#) |

---

Hubbard, R., 'Capital-market imperfections and investment', *Journal of Economic Literature*, Vol. 36, 1998, pp. 193–225.

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

---

Jensen, M. and Meckling, W., 'Theory of the firm: managerial behaviour, agency cost and ownership structure', *Journal of Financial Economics*, Vol. 3, 1976, pp. 305–60.

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

---

Jensen, M., 'Agency costs of free cash flow: corporate finance and takeovers', *American Economic Review*, Vol. 76, 1986, pp. 323–9.

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

Kaplan, S. and Zingales, L., 'Do investment-cash flow sensitivities provide useful measures of financing constraints?', *Quarterly Journal of Economics*, Vol. 112, 1997, pp. 169–215.

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

---

Lang, L. and Litzenberger, R., 'Dividend announcements. Cash flow signalling vs. free cash flow hypothesis?', *Journal of Financial Economics*, Vol. 24, 1989, pp. 181–91.

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

---

Lang, L., Ofek, E. and Stulz, R., 'Leverage, investment and firm growth', *Journal of Financial Economics*, Vol. 40, 1996, pp. 3–29.

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

---

Lewellen, W. and Badrinath, S., 'On the measurement of Tobin's *q*', *Journal of Financial Economics*, Vol. 44, 1997, pp. 77–122.

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

---

Miguel, A. and Pindado, J., 'Determinants of capital structure: new evidence from Spanish panel data', *Journal of Corporate Finance*, Vol. 7, 2001, pp. 77–99.

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

---

Modigliani, F. and Miller, M., 'The cost of capital, corporation finance and the theory of investment', *American Economic Review*, Vol. 48, 1958, pp. 261–97.

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

---

Moulton, B., 'Random group effects and the precision of regression estimates', *Journal of Econometrics*, Vol. 32, 1986, pp. 385–97.

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

---

Moulton, B., 'Diagnostics for group effects in regression analysis', *Journal of Business and Economic Statistics*, Vol. 5, 1987, pp. 275–82.

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

---

Myers, S., 'Determinants of corporate borrowing', *Journal of Financial Economics*, Vol. 5, 1977, pp. 147–76.

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

---

Myers, S. and Majluf, N., 'Corporate financing and investment decisions when firms have information that investors do not have', *Journal of Financial Economics*, Vol. 13, 1984, pp. 187–221.

---

Nohel, T. and Tarhan, V., 'Shares repurchases and firm performance: new evidence on the agency costs of free cash flow', *Journal of Financial Economics*, Vol. 49, 1998, pp. 187-222.

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

---

Stiglitz, J. and Weiss, A., 'Credit rationing in markets with imperfect information', *American Economic Review*, Vol. 71, 1981, pp. 393-410.

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

---

Stulz, R., 'Managerial discretion and optimal financing policies', *Journal of Financial Economics*, Vol. 26, 1990, pp. 3-27.

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

---

Vogt, S., 'The cash flow/investment relationship: evidence from U.S. manufacturing firms', *Financial Management*, Vol. 23, 1994, pp. 3-20.

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

---

Vogt, S., 'Cash flow and capital spending: evidence from capital expenditure announcements', *Financial Management*, Vol. 26, 1997, pp. 44-57.

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

---

Whited, T., 'Debt, liquidity constraints and corporate investment: evidence from panel data', *The Journal of Finance*, Vol. 47, 1992, pp. 1425-60.

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

## Citing Literature



[Download PDF](#)

### ABOUT WILEY ONLINE LIBRARY

[Privacy Policy](#)

[Terms of Use](#)

[About Cookies](#)

[Manage Cookies](#)

[Accessibility](#)

[Wiley Research DE&I Statement and Publishing Policies](#)

[Developing World Access](#)

## **HELP & SUPPORT**

[Contact Us](#)

[Training and Support](#)

[DMCA & Reporting Piracy](#)

## **OPPORTUNITIES**

[Subscription Agents](#)

[Advertisers & Corporate Partners](#)

## **CONNECT WITH WILEY**

[The Wiley Network](#)

[Wiley Press Room](#)

---

Copyright © 1999-2025 John Wiley & Sons, Inc or related companies. All rights reserved, including rights for text and data mining and training of artificial intelligence technologies or similar technologies.

**WILEY**