TWO ESSAYS ON FINANCING AND VALUE OF R&D: EVIDENCE FROM GLOBAL MARKETS

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Two Essays on Financing and Value of R&D:
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This thesis involves two essays on the financing and the value of R&D. The first essay extends previous literatures of financial constraints on R&D to a global context. Inherent in its nature of lacking collateral value, R&D is arguably susceptible to financing constraints. Existing literature on whether financing frictions limit R&D, however, is not clear for non-U.S. firms. We analyze fiscal year end accounting data of 4,118 stocks from 16 developed countries and 5 emerging markets over the 1995 to 2007 period and find international evidence that financing constraints matter for R&D after controlling for external equity finance and change in cash reserves. The positive link between R&D and financial factors is stronger in developed countries than in developing countries, and is strongest in G6 countries except for Canada. We also find statistically significant evidence in developing countries such as India and Taiwan. The evidence points to the conclusion that efficient access to finance drives R&D investments and in turn promotes economic growth. Our micro level findings on young and mature firms in both developed and developing countries provide greater insight of the importance of equity finance and shed light on public policy objectives for many countries.
The second essay fills a gap in existing literatures on the value shareholders place on R&D and how that value differs across countries. We aim to examine the cross-sectional variation in the marginal value of R&D that arises from differences in corporate financial policy. We analyze fiscal year annual excess return and accounting data of 7,444 stocks from 16 developed countries and 6 emerging markets over the 1995 to 2007 period and find international evidence that there is a positive relationship between excess stock return and change in R&D, and that marginal value of cash declines with larger R&D investments and higher leverage. Moreover, the mean marginal value of R&D is greater than one for developed countries as a whole. This number is a quantitative measure of the importance of R&D to corporate future earnings in the eyes of shareholders. The evidence is consistent with the claim well documented in previous literature that R&D investment is one of major driving forces of economic innovation and growth. Our findings corroborate the importance of R&D to economic growth from a market perspective.
# TABLE OF CONTENTS

ABSTRACT ........................................................................................................... I
ACKNOWLEDGEMENTS ............................................................................... III

Chapter One: Does Financing Constraints Limit R&D Activities?
....................................................................................................................... 1
  1.1. Introduction ............................................................................................. 2
  1.2. Model Development ............................................................................... 10
  1.3. Data and Descriptive Statistics ............................................................ 12
      1.3.1. Sampling Criteria ........................................................................... 15
      1.3.2. Local industrial stocks ................................................................. 16
      1.3.3. Backfilling issue and outliers ...................................................... 21
      1.3.4. Final sample ............................................................................... 22
  1.4. Empirical Results .................................................................................. 29
      1.4.1. Results for general sample ............................................................ 29
      1.4.2. Results for split sample ............................................................... 35
  1.5. Conclusions ........................................................................................... 39

Chapter Two: R&D Valuation from a Market Perspective .......... 42
  2.1. Introduction ............................................................................................. 43
  2.2. Model Development ............................................................................... 51
  2.3. Data and Descriptive Statistics ............................................................ 54
      2.3.1. Sampling Criteria ........................................................................... 56
      2.3.2. Final sample ............................................................................... 60
  2.4. Empirical Results .................................................................................. 66
      2.4.1. Results for general sample ............................................................ 66
      2.4.2. Results for split sample ............................................................... 73
  2.5. Conclusions ........................................................................................... 77

Reference ........................................................................................................ 80
Appendix ........................................................................................................ 96
Table 1-1. Variable Definition ................................................................. 96
Table 1-2. Sample Distribution and Descriptive Statistics .......... 101
Table 1-3. Financing constraints and R&D without controlling for stock issues and change in cash holdings ........................................ 114
Table 1-4. Financing constraints and R&D after controlling for stock issues .......................................................... 116
Table 1-5. Financing constraints and R&D after controlling for stock issues and change in cash holdings ........................................ 118
Table 1-6. Financing constraints and R&D without controlling for stock issues and change in cash holdings – sample splits .......... 120
Table 1-7. Financing constraints and R&D after controlling for stock issues – sample splits .......................................................... 122
Table 1-8. Financing constraints and R&D after controlling for stock issues and change in cash holdings – sample splits .......... 124
Table 1-9. Financing constraints and R&D after controlling for stock issues and change in cash holdings – R&D intensive industries ........................................................................................................ 126
Table 1-10. Financing constraints and R&D after controlling for stock issues and change in cash holdings – period of financial crisis .......................................................................................................... 127
Table 2-1. Sample Distribution and Descriptive Statistics .......... 128
Table 2-2. Regression results for the marginal value of R&D without cross terms .................................................................................. 142
Table 2-3. Regression results for the marginal value of R&D with cross terms .................................................................................. 145
Table 2-4. Regression results for the marginal value of R&D with cross terms – sample splits ................................................................. 148
Table 2-5. Regression results for the marginal value of R&D with cross terms – intersection with the sample of Chapter One .......... 151
Table 2-6. Regression results for the marginal value of R&D with cross terms – R&D intensive industries .............................................. 153
Table 2-7. Regression results for the marginal value of R&D with cross terms – period of financial crisis .................................................. 155