



FE@POLY

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Department Corner

Registration for Summer and Fall 2007 will begin April 16. An email regarding online registration will be sent out by the registrar.

Summer Courses:

- FE 611 (Session Y)
- FE 627 (Session Y)
- FE 655 (Session X)
- FE 673 (Session X)
- FE 675 (Session X)
- FE 6804 (online research course)

News from the Department of Finance and Risk Engineering



The Department of Finance and Risk Engineering has moved at last into its new office space in Rogers Hall 517—our POLY Home, bringing together all our staff and faculty. This is an important step which will facilitate student and faculty interaction and at the same time provide an opportunity to develop our resources. For example, already, we have a variety of journals available for students, a small but smart Financial Engineering library for consultation, a Financial Lab appropriately equipped which will help us provide broader services and deal with the growth of our program (another 60% this spring compared to last spring, on top of our 66% growth rate in the Fall term!).

At the same time, we were able to launch a number of programs and activities which will profit all of us. The department has launched its first Working Research Papers Series which is outlined in this newsletter; a faculty-student seminar to be held monthly was launched in March, and a new faculty, Barry Blecherman, has joined the department. Barry is both an economist and an energetic colleague that will help all of us diversify our programs. For example, a document proposing a MINOR to all undergraduate Engineering students at POLY, is already in the pipeline, seeking approval by the University's appropriate committees. There are also additional and noteworthy events. Fred Novomestky and I were invited to lecture at the University of Paris II in January; Jigar Patel (POLY, MSFE 2007) has received the Leonid Nevzlin Prize for

an outstanding applied research paper on hedge funds profitability. My trip to China was quite fruitful. I was invited to speak at the Hong Kong University and Beijing University. A new journal entitled FINOMETRIKA—Financial Metrics is planned in which we will be involved, to be published by the Polytechnic University of Hong Kong (where I also delivered a talk). Throughout the world, there is a recognition that our program is both expanding in quality and in quantity. The Department is also receiving and planning for a number of activities including a lecture by Barry Guttenplan on Taxation for Foreigners (as a guest of the Students Club), visits and lectures by Professor Munier from France (on Extensions in Risk Attitudes), Professor Pierre Vallois (On Memory and Range Processes) from France, and others... stay tuned... stay involved.

*Charles S. Tapiero
Morton L. Topfer Chair Distinguished Professor
Chair, Department of Finance & Risk Engineering*

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What We Should Know About China and the Market



Out of China

By Charles S. Tapiero, Chair, Department of Finance & Risk Engineering

China is in a challenging position, embedded between development and social inequities, between assuming the mantle of a superpower and introspection. China's financial markets reflect this quagmire through its volatility, risk taking and a concern for future risk. Can Chinese corporations find a place in the global economy beyond being the purveyor of cheap labor and technology at cut throat prices? Can the Chinese brand their firms and provide sustainable returns for local and foreign investors? China is a "risky business" where risk management has yet to be introduced to protect both assets and people. The dangerous path where ends overbear means is at the same time a huge and exciting motivator for investors. A 1.3 Billion market (some say much more!!) of potential consumers, labor aplenty, the large number of a smart people highly motivated to learn raise the level of opportunities for collaborative ventures for the Department of Finance and Risk Engineering and our special programs in Financial Engineering.

Furthermore, the important contingent of Chinese students, from the mainland and other countries, provides a unique opportunity to have in New York an excellent resource in emerging markets which will put to creative use our own in-house brand of inter-cultural experts in finance and risk engineering. It is in this spirit that I have visited some of the leading academic institutions in China including Hong Kong Polytechnic University, Hong Kong University and Beijing University. Meetings with leading academics such as Professor W.K. Li, John Liu, Lan Wu and others has broadened our reach and our potential for joint research and joint action in Finance and Risk Engineering, Mathematics and Insurance.

Focus on the Chinese Stock Market

By Qi Fu, Financial Engineering Student 2007

The Chinese economy is the fastest growing economy in the world (10.4% in 2006 projected by ADB). It is distinct geographically, socially, culturally, politically and economically. In addition, the Chinese Stock Market has much lower correlation with world equity markets (especially with developed markets) and as a result provides an opportunity for diversification. At the same time, China's economy and its stock market is confronting many issues. Company quotes must better effect company earnings and valuation to avoid market bubbles and mispricing. Corporate governance and transparency, crucial to attract capital investments and for investor protection is a continuing challenge. The rule of law, copyright protection, shareholder rights and protection are increasingly recognized as a topic that the authorities ought to support, not only to protect Western interests but Chinese ones as well.

Domestic Opportunities

On the domestic front, investors flush with money, are now seeking opportunities to invest globally, thus providing greater diversification and capital market efficiency. Currently, opportunities within China have dwarfed external ones, but increasingly, it is recognized that unless there is such a global investment, the current levels of productivity might not be sustainable. A commensurate need for financial institutions to develop, both in diversity and quantity, are recognized needs as (i.e. hedge funds and investment banks) for long-term market growth. Despite some similarities to countries affected by the Asian Financial Crisis, e.g. high corporate debt-equity ratio, macro economic indicators suggest stable growth. This is due to the insatiable demand of local markets, the culture of entrepreneurship and the excellent manpower available throughout China. However, while there are still such great challenges and opportunities, the conventional wisdom in China believes that capital and exchange-rate controls should not yet be relaxed while these issues are still glaring, to assure the sustainability of China's move forward.

The Chinese economic and financial environment provides ample opportunities for research. Students from China at Polytechnic University have considered a number of topics. In particular, following the PRC government's move to unify tradable and non-tradable shares, there is likely to be an increased merger activity. What are its implications? There may be opportunities for arbitrage due to mispricing. To recognize these opportunities and profit from them, a number of sophisticated pricing models are considered that recognize on the one hand the complexity of Chinese markets and its economy as well as a deep understanding of Chinese laws. +

(Data Sources: ADB Asian Development Bank, Joseph Wang's China Quant pages, Global Asset Allocation: Philosophy, Process and Performance. Wang, Charles. *Academy of Asset Management: Qi Fu, Financial Engineering 2007*).

Faculty On The Move

- **Professor Tapiero** delivered a lecture at the Polytechnic University in Hong Kong on "Market Pricing Mutual Insurance". For the last few years, academic professors at this institution, focusing on Maritime Insurance have used professor's Tapiero research on such problems.
- **Professor Bertrand Munier** joins the department of Finance and Risk Engineering as an International Professor Associate. Professor Munier worked closely with the Department on Technology and Urban Risks Finance. Professor Munier delivered a series of lectures with Professors Ian Juran and Charles Tapiero on Urban Risk and Finance. Professor Munier has contributed extensively to extensions of utility theory and its relationships to decision making and economic analysis.
- **Professor Barry Blecherman** joins the Department of Finance and Risk Engineering assuming responsibilities for the core courses in Economics and the development of additional elective courses in Contract Economics, Behavioral Economics and Finance, the development of a minor in Finance and Risk Engineering for all undergraduates at Polytechnic University as well as co-participant in developing the department's forthcoming Ph.D. program. The addition of Professor Blecherman, the spirit and the developer of the BSTM and MSTM programs in Management, provides significant resources that will help diversify the Department's programs and its outreach.
- **Professor Fred Novomestky** delivered a talk in Paris on Financial Engineering—an R perspective.
- **Professor Konstantin Kogan**, currently spending his sabbatical year in the Department and an International Professor Associate, has just finished a book with Professor Charles Tapiero on Supply Chains: Games and Risk Valuation, to be published by Springer-Verlag in the International Series in Operations Research and Management Science.

Faculty Research and Publications

CHARLES S. TAPIERO

Papers Presented at Meetings:

Society for Computational Economics: Computing in Economics and Finance, Limassol, Cyprus, June 22-24, 2006, "The Optimal Dividend Policy and the Market Pricing of Mutual Insurance"

Workshop on Networks, Queues, Performance & Stochastic Modeling, Israel Meeting, May 17-19, Paper "Financial Pricing of Franchises and real Options"

NSF Meeting at the University of Michigan on "Integrated Risk Management in Operations and Global Supply Chain Management: Risk, Contracts" and "The Pricing of Franchises" (2 papers) June 2-4.

Publications:

"Risk Management," John Wiley. *Encyclopedia on Actuarial*, Ed J. Teugels, Bjorn Sundt, 2004

"Risks and Assets Pricing," 62 Pages, *Handbook of Engineering Statistics*, Spinger 2006, Ed. Huang Pham

"Consumers Risk and Quality Control in a Collaborative Supply Chains," *European Journal of Operations Research*, October 18, 2006

"Reliability Design and RVaR," *International Journal of Reliability, Quality and Safety Engineering (IJRQSE)*, Vol. 12, No.4, August 2005

"Value at Risk and Inventory Control," *European Journal of Operations Research*, 2005, vol 163, issue no. 3, 769-775

Risk Attitudes, *Encyclopedia of Quantitative Risk Assessment*, Brian Everitt, Professor Kings College, London, UK and Ed Melnick, Editors, New York University, USA, Wiley, Forthcoming 2007 (with Bertrand Munier, ESAM)

Risks and Supply Chains, Risk Measurement and Assessment, Forthcoming 2006 (with A. Grando).

Operational Performance in Manufacturing and Service Industries. Conceptual Framework and Research Agenda, *International Journal of performance Measurement*, with Alberto Grando and Valeria Belvedere, Forthcoming 2006.

"Supply Risk and Inventory Outsourcing" (with Alberto Grando), *Production Planning and Control* 2006, Vol. 17, No. 5, July 2006, 534-539

Strategic Quality Control, *Journal of Business, Economics and Management*, 2006



STANLEY PETERBURGSKY

Professor Stanley Peterburgsky submitted a paper titled, "Another Way to Expropriate Shareholder Wealth: Move to Nasdaq," for publication in the *Review of Financial Studies*, a leading finance journal. He is scheduled to present this paper at the following conferences:

- Southwestern Finance Association
- Midwest Finance Association

He has also been invited to present the paper at the following conferences:

- WHU – Otto Beisheim School of Management Research Conference
- NTU International Conference on Finance

He is currently completing a paper entitled, "In search of honest CEOs: The case of CEOs with non-profit experience." He is scheduled to present this paper at Hofstra University.

The Working Research Paper Series of the Department

The Department of Finance and Risk Engineering is pleased to announce a new research initiative: The Working Papers Series. The Series has seven papers spanning theoretical, computational and empirical issues in financial engineering. The following papers can be found in the Department's offices and on the website (www.poly.edu/fe)

WP-1-2007. Munier Bertrand and Charles S. Tapiero, Risk Attitudes* (To be published 2007)

WP-2-2007, Jigar Patel, Alternative Asset Allocation Decision in a Traditional Portfolio: Analysis of Hedge Fund Strategies in a Portfolio Context (Received the Leonid Nevzlin Prize, Spring 2007).

WP-3-2007: Charles S. Tapiero, Market Pricing and the Risk Premium of Mutual Insurance and the Optimal Dividend Policy.

WP-4-2007, Stanley Peterburgsky, Another Way to Expropriate Shareholder Wealth: Move to Nasdaq.

WP-5-2007, Charles S. Tapiero and Konstantin Kogan, Risk and Quality Control in a Supply Chain: Competitive and Collaborative Approaches*

WP-6-2007, Charles S. Tapiero and Konstantin Kogan, Sustainable Infrastructure Investment in a Labor Only Economy

WP-7-2007, Fred Novomestky, The Orthonormal R-Package.

* Papers accepted for publication

Spotlight on Barry Blecherman



The Department of Finance and Risk Engineering (FRE) is pleased to announce the addition of Professor Barry Blecherman to the Department's faculty. Professor Blecherman served Polytechnic as the Associate Provost for Undergraduate Education by creating and directing new courses, certificates, and degree programs.

He will be deeply involved in expanding the economics offerings of the Financial Engineering program and in helping to diversify the programmatic portfolio of the FRE Department.

After several years as an engineer and entrepreneur in information systems consulting, Professor Blecherman returned to the academic world at the Wharton School of the University of Pennsylvania where he received his M.A. and Ph.D. in Decision Sciences. He joined the faculty of Polytechnic University in 1994. His interests lie in the management science, behavioral decision theory and behavioral economics, information economics and strategy, game theory, and negotiations.

Professor Blecherman has been involved in classified work for U.S. Navy computer operating systems on AEGIS class cruisers, financial processing systems for a large bank, and many other technical projects. His experience includes project and technical management, business strategy, marketing, and computer systems management. He has consulted to start-up firms and Fortune 500 companies in areas of economic strategy, pricing, negotiations, and competitive analysis.

Polytechnic University FE Student Awarded Leonid Nevzlin Student Research Prize

The Leonid Nevzlin Student Research Prize was awarded to Jigar Patel for his paper "Alternative Asset Allocation Decision in a Traditional Portfolio: Analysis of Hedge Fund Strategies in a Portfolio Context." Jigar Patel is in his last semester of the Master's in Financial Engineering program and currently works for Asset Alliance, a hedge fund based in Manhattan. We are also told that following the prize, Jigar has been offered a significant position in an important hedge fund (we were asked not to divulge the company).



Leonid Nevzlin, a majority stakeholder and former executive of Yukos Oil in Russia donated money to the Department of Finance and Risk Engineering to create this Student Research Prize and to support the department's activities. Such a prize will be given once or twice a year, depending on the quality of the research submitted.

For more information about these PolyThinkers and the Department of Risk and Finance Engineering, please visit:
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Department of Finance and Risk Engineering
Polytechnic University
Six MetroTech Center
Brooklyn, NY 11201

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