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**PERSONAL CONTACT**

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**EDUCATION**

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**PhD Candidate Finance** 2013-Current  
*Gies College of Business, University of Illinois Urbana-Champaign, IL*

**MS Business Administration** 2011-2013  
*College of Business, Seoul National University, South Korea*

**BS Civil, Urban and Geosystem Engineering**  
**BS Technology Management** 2006-2011  
*College of Engineering, Seoul National University, South Korea Cum Laude.*

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**RESEARCH INTERESTS**

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Asset Pricing, Innovation, Financial Frictions, Production Network

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**WORKING PAPERS**

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- **Creation by Connecting the Dots: The Risks and Rewards of Novel Innovation**  
(Eunji Oh, Job market paper)

This paper examines whether the systematic equity risk of firms reflects the risk of their R&D strategies from various perspectives. More novel R&D strategy is risky because it can lead to more extreme outcomes. This risk could indirectly affect the firm's systematic risk. In the event of success, however, the productivity of the technologies developed by the novel R&D strategy could be pro-cyclical. Thus, public firms with more novel technologies could be more subject to aggregate risk. To investigate this problem, using patent citations, I devise an ex-ante measure for the novelty of innovation, Tech Synthesis Level (below TSL), which quantifies the degree to which new technology is drawn from prior technologies in far different technological fields. I find that patents with high TSL are associated with more extreme technological outcomes both at the patent and startup-level. In the public firm analyses, I find that high TSL is associated with high abnormal returns by 2.36 percent (annualized), as well as with high systematic volatility. These findings support the hypothesis that the failure probability of an R&D project increases systematic risk. I also find evidence to show that high TSL patents are technologically more productive when aggregate innovation is very active. Hence, firms with high TSL patents are subject to high systematic equity risk.

- **Intangible Assets as Collateral: Implications for Equity Premium** (Eunji Oh)

The number of loans and firms that use intangibles as collateral has gradually increased in practice since 1994. I present empirical evidence by using *Dealscan* data of US-originated secured long-term loans. I find that firms using intangibles as collateral, in addition to traditional collateralizable assets, have higher stock returns than the firms pledging only tangible assets to secure corporate loans. Further, they could achieve a similar or even slightly higher level of leverage, despite the assumption in many theoretical and empirical studies that this is impossible. In the sample, I show that stocks with intangibles as collateral can be hedging assets for the aggregate financial shock, which is estimated with the assumption that only tangible assets can be used as collateral. Therefore, higher returns of intangibles-pledging stocks are not explained by systematic co-movement with conventional financial shocks. Other sources that could affect the stocks pledging intangibles are the risks related to intangible capital productivity. I find that the intangible productivity factor helps explain some additional variation in the stock return differences between the stocks pledging intangibles and those pledging only tangibles, but it does not make the abnormal return statistically insignificant.

## **WORKS IN PROGRESS**

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- **Enforcement Constraint Shock and Cross-Section of Stock Returns** (Eunji Oh, F. Yang and X. Hao)

We investigate the importance of the exogenous financial shock (enforcement constraint shock) on a cross-section of stock returns within the general equilibrium model frame work. We extend the theoretical model in Jermann and Quadrini(2012) to include firm heterogeneity to investigate the effect of financial shock on a cross-section of the stock returns. The financial shock seems to be priced systematically with the positive price of risk in the model, but we could not find strong empirical evidence to show that the financial shock is a systematic factor that determines the cross-section of equity returns.

- **Production Network and Stock Returns** (Eunji Oh)

I investigate potential differences in stock returns associated with the characteristic of the supplier–customer network using COMPUSTAT segmentation data. I compare firms with more inter-industry and more intra-industry linkages. My original conjecture was that firms with more inter-industry linkages have higher stock returns, which is consistent with extant literature, because they are more likely to be positively exposed to systematic risk. However, the empirical result currently supports the opposite—that firms with more inter-industry linkages have significantly lower returns than firms with fewer inter-industry linkages. This could imply the existence of a factor that is solely subject to the network characteristics, but at the same time, this might be because a portfolio of firms with more intra-industry linkages is more pro-cyclical and possibly related to the firm entry in boom and exit in the recession type factor. This project attempts to discover the channel behind this puzzling fact.

## **HONORS, SCHOLARSHIPS, AND FELLOWSHIPS**

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- 2018 - 2019 University of Illinois Fellowship
- 2018 Summer Beatrice Fellowship
- 2013 University of Illinois Fellowship

- 2011 - 2012 Superior Academic Performance Scholarship, Seoul National University
- 2006 - 2010 Korean National Science & Technology Scholarship, Seoul National University

## TEACHING EXPERIENCES

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University of Illinois, Urbana-Champaign:

- Spring 2016: **FIN 221 Corporate Finance**  
Teaching Assistant
- Summer 2016: **FIN 221 Corporate Finance**  
Instructor

Seoul National University:

- 2011 - 2013: **Financial Management (Undergraduate, MBA)**  
Teaching Assistant
- 2011 - 2012: **Corporate internal MBA program for *Daelim Industrial Co., Ltd.***  
Teaching Assistant
- 2010: **Saessak Tutoring & Mentoring program**  
(for students from poor socio-economic households)  
Private tutor, Online teaching

## RESEARCH EXPERIENCES

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University of Illinois, Urbana-Champaign:

- 2013-2018: **Research Assistant**  
For Dana Kiku, Jaewon Choi, Vyacheslav Fos, and Alex Chinco

Seoul National University:

- 2011 - 2013: **Research Assistant**  
For Joon Chae and Jungwook Kim

## PRESENTATIONS

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- University of Illinois, Department Seminar, 9/28/18
- University of Illinois, Department seminar, 4/29/16

## OTHER EXPERIENCES

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Seoul National University:

- 2011-2012: **Assistant Analyst**  
Consulting *Ottogi Co., Ltd., Korea Securities Computing Corporation*
- 2011-2013: **Administrative assistant**  
Arranged international field trips for graduate students  
Prepared SNU-Samsung finance conferences

## SKILLS

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Sas, Python, Matlab, Stata, Excel VBA, Microsoft Office, Latex, C

## LANGUAGES

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English, Korean(Native)

## REFERENCE

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