Statement of Research Interest

NBER Digital Economics and AI Tutorial Application

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Graduate Study

I am a fourth-year PhD candidate in Finance at INSEAD (2023–present), specializing in asset pricing and macro-finance.

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Research Interests and Current Projects

Public institutions reach financial markets through more than official statements. Central banks communicate through social media, while firms disclose the government risks they face in regulatory filings. My research asks how these institutional forces are transmitted to financial markets: how the signals that institutions send shape beliefs and uncertainty, and how differences in firms' exposure to those signals generate cross-sectional differences in risk premia and real outcomes.

Institutional Communication and Market Uncertainty

My paper, *"Tweeting the Tone: Central Bank Sentiment and Asset Prices,"* examines whether Federal Reserve communication on social media conveys market-relevant information and how this channel differs from formal FOMC statements. I assemble nearly 170,000 tweets posted by the Board of Governors and the twelve regional Reserve Banks between 2012 and 2024. Using VADER, a lexicon- and rule-based sentiment analyzer, I construct daily measures and compare how social-media tone and policy-statement tone relate to market outcomes.

The two channels display sharply different patterns. Days with unusually positive or unusually negative tweet tone coincide with higher implied volatility and elevated trading activity, especially around monetary-policy announcements. By contrast, FOMC statement tone on the same day is negatively related to volatility. In the cross section, stocks with greater exposure to tweet sentiment earn persistently lower returns after controlling for standard factors. What matters is not simply whether news sounds *"good"* or *"bad"*; the medium, the institutional source, and the extent to which tone and timing align across the Board, regional Reserve Banks, and formal FOMC statements may alter how investors interpret a message. To my knowledge, this paper is the first to study the market implications of official social-media posts across the Federal Reserve System.

Government Risk and Asset Composition

My paper, *"Intangible Capital and Government Risk,"* turns from what institutions communicate to what firms disclose about the government risks they face. This paper investigates how intangible capital conditions both the pricing of government risk and firms' investment responses. I use a large language model to score risk-factor disclosures in 10-K filings from 2007 to 2024 and construct GovRisk, a severity-weighted measure of firm-level exposure. Government risk carries no significant premium on its own; its pricing depends on the assets through which a firm creates value.

Intangible capital flips the sign of the GovRisk premium. The high-minus-low GovRisk portfolio earns a negative annual six-factor alpha among low-intangible firms and a positive alpha among high-intangible firms, for a 6.4 percent annual spread. Thus, the same disclosed exposure is associated with opposite return patterns depending on a firm's reliance on intangible assets. This conditional premium is concentrated among larger, less financially constrained firms. Within this group, higher GovRisk also predicts a reallocation from knowledge capital toward organizational capital, indicating the heterogeneity of intangible assets. By linking a text-based exposure measure to expected returns and investment choices, the paper connects the pricing of institutional risk to firms' real responses.

A Unified Research Agenda

Together, the two papers study complementary stages of the transmission of institutional forces to financial markets. The first examines how the medium and source of Federal Reserve communication relate to stock returns and market uncertainty. The second examines how firms' asset composition conditions the pricing and real consequences of government risk. Their common insight is simple: institutional transmission depends on both the signal and the firm.

This perspective disciplines my research. Empirically, I develop novel firm-level exposure measures using large-scale textual data, including central bank communications and regulatory disclosures. I integrate these measures with standard financial datasets to examine how institutional signals affect cross-sectional returns, market volatility, and firm dynamics. Methodologically, I combine empirical asset-pricing tools with machine learning and natural language processing techniques to extract economically meaningful signals from unstructured text. A core objective of this research is to identify the mechanisms through which macroeconomic expectations are transmitted to financial markets. From a theoretical perspective, my work is motivated by macro-finance frameworks in which heterogeneity in exposure to aggregate shocks generates cross-sectional differences in risk premia and real outcomes.

My broader goal is to contribute to the macro-finance literature by clarifying how institutional quality, communication, and execution shape the transmission of macroeconomic shocks and the pricing of risk in equilibrium. I am especially interested in how institutional signals affect uncertainty, coordination, and expectation formation, and how these forces jointly influence asset prices and real economic activity across firms.