

Short Summary of Research Papers– Juliane Begenau

Banking research

I study banks and the aggregate effects of regulating them. I build general-equilibrium models designed to match bank balance sheets, exposures, and macro moments to quantify how rules shape portfolios, risk, and funding, and how they interact with shadow banking and accounting. In my empirical work, I develop a novel measure of banks' risk exposures from regulatory microdata, and document banks' deposit rate setting behavior.

Banks, capital regulation, and general equilibrium:

In "Capital Requirements, Risk Choice, and Liquidity Provision in a Business Cycle Model", I study whether tighter bank capital requirements reduce lending using a quantitative general equilibrium (GE) model designed to match aggregate U.S. bank balance-sheet and business-cycle moments. Banks invest in risky credit and supply liquidity services to households through insured deposits. I take the scope of deposit insurance and its effect on banks' optimal capital structure as given to isolate the general-equilibrium channel. Deposits carry a convenience yield that lets banks fund themselves below the risk-free rate; when deposits are scarce, the convenience yield rises. I choose the parameter that governs the liquidity value's sensitivity to changes in the deposit supply so that the model matches the comovement between aggregate deposits and consumption. Combined with deposit insurance and implicit guarantees, the convenience yield on deposits gives banks incentives to increase leverage as much as allowed by regulation. Raising capital requirements reduces risk-taking and deposit issuance. In the absence of price adjustments, lending would fall. In GE, however, the scarcity of deposits increases their convenience yield, lowers banks' funding costs, and can therefore *raise* aggregate lending. This mechanism—rooted in the liquidity value of deposits—overturns the partial-equilibrium intuition that tighter capital regulation necessarily restricts credit. The result relies on the assumption that only banks issue deposit-like liabilities, an assumption I relax next.

In "Financial Regulation in a Quantitative Model of the Modern Banking System", we extend this framework to nonbanks, where shadow banks issue uninsured deposit-like claims and regulated deposits and shadow debt are imperfect substitutes. Only shadow bank debt is runnable. Both invest in the same assets and compete for equity; deposit insurance subsidizes regulated banks, making them inefficiently large and distorting liquidity premia, so shadow banks face lower debt costs and choose more leverage. Tighter capital requirements reduce regulated banks' leverage and shift intermediation toward shadow banks, with ambiguous effects on stability. On one hand, reducing aggregate liquidity through a decline in regulated deposits raises the convenience yield on shadow debt, encouraging them to increase leverage. On the other hand, stricter regulation narrows banks' subsidy-driven competitive advantage, raises the relative value of shadow-bank equity, and reduces incentives for high shadow-bank leverage. To resolve this ambiguity, we carefully calibrate the key liquidity preference parameters to match liquidity spread regression coefficients. In our calibrated environment, higher capital requirements reduce overall fragility—even with some migration to the shadow sector—while the convenience-yield channel helps preserve credit. Our work, thus, clarifies how convenience yield effects on bank and nonbank debt can overturn common objections against stricter banking regulation when a general equilibrium perspective is taken.

In ongoing work "Interest Rate Risk and Cross-Sectional Effects of Micro-Prudential Regulation," we evaluate capital and liquidity requirements in a heterogeneous-bank GE model with differentiated demand for insured versus uninsured deposits and portfolio choice between interest-rate-risky and credit-risky assets. Our innovation is to jointly rationalize banks' funding, run exposure, and portfolio choice, providing a laboratory for studying the effects of capital requirements. Tightening capital for the largest banks reduces fragility more effectively than

raising liquidity requirements on uninsured deposits, which distorts credit provision toward less-productive small banks through GE price effects.

Measuring risk and supervisory implications:

Banks create credit and liquidity, which exposes them to risk that accounting and purported hedging strategies often obscure. My work shows neither derivatives nor a “sleepy” deposit franchise neutralized banks’ duration risk, which helps explain the 2023 turmoil (including Credit Suisse).

In “Banks’ Risk Exposure”, we develop a novel method to construct measures of banks’ risk exposures using regulatory microdata on their fixed-income positions, including their derivatives. We infer exposures from how fair values co-move with rates, represent each fixed-income position with two factors (a 5-year high-quality bond for interest-rate risk, and a long–short 5-year BBB portfolio for credit risk), and proceed to represent each bank as a levered bond portfolio plus a residual franchise-value claim to match stock market values. These measures have highlighted, long before the 2022–2023 banking crisis, the large interest-rate risk exposures in banks’ holdings of long-term fixed-income securities. Unlike standard approaches that infer exposures through regressions, our measures directly exploit detailed, real-time information on the maturity structure and credit ratings of each bank’s individual holdings. We document the evolution of the two main risks in banks’ portfolios — interest rate risk and credit risk — over time. Historically, these risks have moved in opposite directions in financial crises, as the Fed cuts rates when credit spreads widen. In contrast, during the 2022–2023 banking crisis, Fed rate hikes caused simultaneous losses on banks’ long-term Treasury and credit-risky positions. Our key results are that many banks added interest rate exposure using derivatives and that banks’ franchise value provided limited hedging value during the recent rate hike period, 2022–23. Banks typically invest incoming deposits in long-duration securities, which can make net-interest margins (NIM) look stable. Together, these results clarify that banks’ role as liquidity providers exposes them to interest rate risk that their derivative use or sleepy depositors do not fully offset.

In “Unstable Inferences from Banks’ Stable Net-Interest Margins”, we show that a widely used proxy for interest rate risk—NIM—is in fact uninformative about banks’ true exposure. We construct a hold-to-maturity long–short Treasury portfolio that generates a stable NIM while retaining substantial duration risk. Because cash flows from Treasury securities are predictable, we can engineer this stable NIM by dynamically adjusting leverage and the maturity structure of the long–short portfolio. Although the resulting net income is smooth, the portfolio’s duration, and thus its interest rate sensitivity, remains large. This finding cautions against the common practice of using stable NIMs to infer low interest rate risk. We also show that in a falling interest-rate environment, banks’ actual duration exposure can mask weak fundamentals [9, 11].

Most banking models assume variables represent market values; regulation in practice relies on *book* values. However, book ratios are poor indicators of a bank’s health as they are slow to incorporate losses. In “A Q-Theory of banks,” we document large gaps between banks’ book and market equity—especially in crises—and slow leverage adjustment. We build a dynamic heterogeneous-bank model with slow credit loss recognition and costly liquidation at book-based constraints to study the implications for optimal policy design. We design the model to fit book and market value data jointly. A tighter capital requirement reduces lending in this environment (as we abstract from liquidity premia to isolate credit and book-vs-market forces), and regulatory ratios (e.g., restricting book equity ratios) cannot directly curb risk-taking by banks. Equipping regulators with an additional tool—mark-to-market accounting intensity—reveals interesting policy trade-offs: delaying loss recognition can preserve lending by smoothing deleveraging. But delayed loss recognition also invites excessive liquidation risk when

credit losses build up but remain hidden. We estimate the model using simulated moments and show that countercyclical capital buffers can backfire if the delayed-loss accounting channel is ignored. By easing up on restricting leverage in bad times, banks that would have otherwise been forced to deliver remain highly levered. Accounting rules are a key policy lever: accelerating loss recognition in normal times disciplines risk-taking, aligns books with market values, and reduces failure risk at lower output cost than raising capital requirements alone. The policy insight is that risk-obscuring accounting rules should be set jointly with capital rules.

Bank pricing and monetary transmission:

Traditional banks operate a network of branches to harvest deposits across their footprint optimally. How do banks set deposit rates across their branch network and over monetary cycles?

In "Uniform Rate Setting, Branch Expansion, and the Deposit Channel" we document that banks set uniform deposit rates across their branch networks. Hence, differences in deposit pricing across monetary policy regimes may not be the primary driver of local deposit growth differences. Cross-local market differences in deposit growth during monetary tightening reflect entry and expansion into attractive markets (the extensive margin), not within-bank local price dispersion. Local cross-bank "rate gaps" matter but are economically small relative to the extensive margin of entry. This paper reframes standard cross-sectional tests of the deposit channel: patterns often attributed to localized pricing power in concentrated markets can arise even when within-bank local pricing is inactive, because adjustment occurs primarily on the extensive (entry) margin. Our results provide reduced-form discipline for structural models with bank-specific deposit demand and endogenous fragility. Accounting for these two essential strategies—uniform pricing and targeted branch expansion—is thus essential for measuring monetary policy transmission through banks.

Intermediation in alternative assets research

As production has shifted toward intangible, R&D-intensive activity, financing has migrated from collateral-based bank lending to specialized private-market funds using bespoke contracts. Public pensions now route substantial savings through these intermediaries, yet infrequent valuations and opaque fees impede risk and net performance measurement. Despite important advances in the literature, private-fund opacity still limits what we can measure about activities and sources of growth.

Private equity/credit and fees:

In "Fee Variation in Private Equity", we examine the investment contract—the limited partnership agreement that channels capital from investors to funds and then to portfolio companies—and show that opaque terms produce heterogeneous fees even within the same fund under ostensibly similar conditions. Those fee differentials translate into dispersion in net-of-fee performance even after accounting for observables, indicating bargaining and access-channel frictions with clear fiduciary stakes for pension funds and other large allocators. This evidence informed SEC discussions on fund transparency.

Private equity/credit as allocators:

In "The Rise of Alternatives", we analyze why private funds have grown in public pension portfolios since the early 2000s. Most explanations (underfunding, yield-seeking) account for surprisingly little cross-plan variation in risky asset shares. Instead, heterogeneous beliefs about private-market risk and return—shaped by experience, consultants, and peers, and reinforced by fee dispersion and limited mark-to-market—predict reallocations from public equities toward private funds. A portfolio-choice model with leverage limits clarifies the mechanism. Calibrated to match early-2000s portfolio allocations, the model implies that—even for risk-seeking (more constrained) investors—portfolios would tilt toward public equities unless perceived risk-

adjusted returns to privates rise. We show that reasonable differences in beliefs can quantitatively account for the aggregate increase in private-market allocations across plans and jurisdictions.

Corporate finance research

While my banking research focuses on the supply of credit and liquidity to the economy, my corporate finance research agenda focuses on the real economy side and investigates how financial intermediation frictions influence firms' financing choices and responses to macroeconomic conditions. I analyze how financial frictions mediate the effects of macro conditions and production technologies on firm financing and investment behavior.

Business cycle and the cost of capital:

In "Firm Financing over the Business Cycle", we show that corporate financing patterns vary dramatically with firm size and profitability over the business cycle. Small firms raise debt and equity in booms, while large firms substitute between debt and equity over the business cycle. We build a quantitative model with heterogeneous firms, endogenous debt pricing, firm dynamics, and financial frictions that rationalizes the data. We calibrate the model to US publicly traded firms. During a boom, investment opportunities increase for everyone. However, smaller firms have higher growth potential—leading to a higher marginal productivity of their capital and relatively higher funding needs. While equity financing costs make debt financing more attractive for an unlevered firm, raising too much debt risks bankruptcy, which endogenously drives up credit spreads and acts as an endogenous borrowing constraint. Small firms—with high investment needs—use equity for their remaining funding needs. Large firms, in contrast, are close to their optimal scale and have fewer investment needs: in good times, they rake in more revenue and use the reduction in credit spreads to finance equity payouts to shareholders with debt.

Intangibles and the cost of capital:

In "Firm Selection and Corporate Cash Holdings", we document that the secular rise in average corporate cash holdings has been a cohort-level effect of new R&D intensive firms, not a within-firm phenomenon. To explain this fact and quantify its relevant forces, we estimate a dynamic corporate finance model with endogenous firm entry into public equity markets at the cohort-industry level using simulated method of moments. The model shows that a selection mechanism for R&D-intensive firms explains roughly half the average cash holding increase in the data. Falling entry costs for intangible-based production admit less profitable, less collateral-rich firms that cannot borrow cheaply; they rely on equity and retained earnings—held as cash—to finance investment. These results highlight how financial frictions and the economy's shift toward intangibles since the early 1980s shape corporate financing choices.

In "Big data in finance and the growth of large firms", we show how advances in information processing reshaped the firm-size distribution and contributed to rising concentration. As data capacity expanded, markets learned more precisely about data-rich large firms than about small firms, relatively lowering large firms' cost of capital; investors shifted portfolios accordingly. This big-data advantage explains a meaningful share of the post-1980 increase in concentration.

Publications and forthcoming/accepted papers

1. Begenau, Juliane, Maryam Farboodi and Laura Veldkamp. “Big data in finance and the growth of large firms”, *Journal of Monetary Economics*. Volume 97, 2018, Pages 71-87
2. Begenau, Juliane, and Juliana Salomao. “Firm Financing over the Business Cycle”, *The Review of Financial Studies*, Volume 32, Issue 4, 1 April 2019, Pages 1235–1274. Lead article.
3. Begenau, Juliane. “Capital Requirements, Risk Choice, and Liquidity Provision in a Business Cycle Model” *Journal of Financial Economics*, Volume 146, Issue 2, May 2020, Pages 355-378
4. Begenau, Juliane, and Berardino Palazzo. “Firm Selection and Corporate Cash Holdings”, *Journal of Financial Economics*, Volume 139, Issue 3, March 2021, Pages 697-718. Editor’s choice.
5. Begenau, Juliane, and Tim Landvoigt. “Financial Regulation in a Quantitative Model of the Modern Banking System” *Review of Economic Studies*, Volume 89, Issue 4, July 2022, Pages 1748-1784. (WFA Award for best paper on financial institutions)
6. Begenau, Juliane and Emil Siriwardane. “Fee Variation in Private Equity”, *The Journal of Finance* 79, no. 2 (2024): 1199-1247
7. Begenau, Juliane, Saki Bigio, Jeremy Majerovitz, and Matias Vieyra. “A Q-Theory of banks.” *Review of Economic Studies*. Forthcoming.
8. Begenau, Juliane, Pauline Liang, Emil Siriwardane. “The Rise of Alternatives”. Conditionally accepted at *The Review of Financial Studies*.

Working papers

9. Begenau, Juliane, and Erik Stafford. “Do Banks Have an Edge?” October 2019. Working paper.
10. Begenau, Juliane, and Erik Stafford. “Unstable Inferences from Banks’ Stable Net-Interest Margins.” April 2022. Working paper.
11. Altavilla, Carlo, Juliane Begenau, Lorenzo Burlon, and Franziska Maruhn. “Determinants of bank performance: evidence from replicating portfolios” July 2024. Working paper.
12. Begenau, Juliane, Monika Piazzesi, and Martin Schneider. “Banks’ Risk Exposure.” August 2025. Working paper.
13. Begenau, Juliane, and Erik Stafford. “Uniform Rate Setting, Branch Expansion, and the Deposit Channel.” September 2025. Working paper.
14. Begenau, Juliane, Vadim Elenev, and Tim Landvoigt. “Interest Rate Risk and Cross-Sectional Effects of Micro-Prudential Regulation.” April 2025. Working paper.