Oliver Giesecke

Hoover Institution   ogiesecke@stanford.edu
434 Galvez Mall   Tel: (650) 725 3416
Stanford University
Stanford, CA, 94305-6003

CURRENT EMPLOYMENT

STANFORD UNIVERSITY, HOOVER INSTITUTION, 2022-PRESENT
> Research Fellow
> Research Group: State and Local Governance Initiative

PREVIOUS EMPLOYMENT

STANFORD UNIVERSITY, HOOVER INSTITUTION, 2021-2022
> Visiting Scholar

PRINCETON UNIVERSITY, 2016-2017
> Senior Research Specialist at the Julis-Rabinowitz Center for Public Policy & Finance

KPMG WIRTSCHAFTSPRUEFUNGSGESELLSCHAFT AG, 2012-2015
> Senior Quantitative Finance Consultant

FINANCIAL STABILITY AGENCY GERMANY (FMSA), 2012
> Risk Controlling Specialist

CREDIT SUISSE SECURITIES, 2011
> Mergers & Acquisition

THUERINGER-ENERGIE-TEAM, 2006-2008
> High-performance Cyclist (professional), Member of the German National Team

EDUCATION

COLUMBIA UNIVERSITY, 2017-2022
> Ph.D. Finance and Economics
> M.Phil. Finance and Economics
> Dissertation: "Essays on State and Local Government Finances"
> (Advisor: Stijn Van Nieuwerburgh)

YALE UNIVERSITY, 2015-2016
> Visiting Ph.D. student in economics

THE GRADUATE INSTITUTE GENEVA, 2014-2016
> M.Sc. International Economics
> Thesis: "Contingent Financial Instruments–a Structural Policy Instrument for Natural Resource Rich Economies?" (Advisor: Ugo Panizza)

GOETHE-UNIVERSITY, 2008-2011
> B.Sc. Finance and Economics
> Thesis: "The Development of the European Monetary Union and the Issues during the Financial Crisis" (Advisor: Volker Wieland)

OTHER PROFESSIONAL ACTIVITIES

UNITED NATIONS PROJECT TO FOSTER EDUCATION FOR SUSTAINABLE DEVELOPMENT
    Accredited trainer to foster financial literacy of middle school students
INDEPENDENT EXPERT COMMISSION THURINGIAN MINISTRY OF ECONOMICS
    Athlete representative for the prevention of drug abuse

HONORS, SCHOLARSHIPS AND FELLOWSHIPS

BEST 3RD YEAR PAPER AWARD, COLUMBIA BUSINESS SCHOOL
ROGER F. MURRAY FELLOWSHIP, 2019-2020
COLUMBIA BUSINESS SCHOOL GRADUATE SCHOLARSHIP
SCHOLARSHIP DEUTSCHER AKADEMIKER AUSTAUSCHDIENST (DAAD)
FELLOWSHIP DEUTSCHE SPORTHILFE

TEACHING EXPERIENCE

House of Debt: Understanding Macro and Financial Policy (MPA)
Princeton University, Atif Mian.

Empirical Asset Pricing (Ph.D.)
Columbia University, Stijn Van Nieuwerburgh

Quantitative Hedge Fund Strategies (Ph.D.)
Columbia University, Achilles Venetoulias

PUBLICATIONS

"Trends in State and Local Pension Funds" *with Joshua D. Rauh, Annual Review of Financial Economics, Volume 15, forthcoming*

Unfunded public pension obligations represent the largest liability for state and local governments in the United States. As of fiscal year 2021, the total reported unfunded liabilities of these plans is $1.076. In contrast, the market value of the unfunded liability is approximately $6.501 trillion. As a result, the reported funding ratio of 82.5% falls to 43.8 under a market-based valuation. The market values reflect the fact that accrued pension promises are a form of government debt with strong statutory and contractual rights. The assumed discount rates are based on expected returns and remain elevated relative to risk-free rates, despite a decline since 2014. As a result, not only is the unfunded pension liability understated, but also the yearly pension cost for newly accruing liabilities. In order to achieve high returns, pension funds have accumulated large exposure to risky assets, in particular alternative investments, which results in highly uncertain investment returns.

Complimentary public pension dashboard with additional metrics and recent updates available at: https://publicpension.stanford.edu.

RECENT COMMENTARY AND POLICY WRITING

"Pension Reform: Conceptual Foundations and Practical Challenges" *with Seamus H. Duffy, Hoover Institution Press*

Underfunded pension are the largest liability for state and local governments across the United States. As a result of increasing recognition of the associated risks, recent statutory funding mandates led to a sharp increases in required contributions, threatening city services and employee

bases. As funding pressure mounts, pension reforms offer a viable tool for prudent economic policy. We propose five general principles that guide pension reform considerations and discuss how these principle stand in contrast to current policy and actuarial practices. Current actuarial valuation practices of pension liabilities often dissuade cities from adopting pension reforms and can lead to sub-optimal policy outcomes. We illustrate the application of the general principles in the context of several local governments in the U.S., which have recently executed or are actively deliberating a pension reform.

"Financial Challenges Facing US Cities: Milwaukee, Wisconsin", *with Dean Ball, Seamus H. Duffy, and Jillian Ludwig, Hoover Institution Press*

The City of Milwaukee, like many cities around the United States, has faced financial challenges in recent years. Budgetary constraints have put pressure on the city's ability to promote economic growth, fund its pension obligations, and maintain basic infrastructure. Addressing these challenges requires research-based solutions and an innovative approach to governance that places data and evidence at the forefront of policymaking.

WORKING PAPERS

"Deep Learning for Corporate Bonds' *with Jetlir Duraj*

We estimate an asset pricing model for the U.S. corporate bonds market using bond portfolios, as well as a large longitudinal dataset of individual bonds that we augment with fundamental characteristics of the issuer. We further enrich the information set with a large set of macroeconomic time series. We estimate diverse model architectures with two approaches: (1) minimizing the mispricing loss, and (2) maximizing the Sharpe ratio. We find that, contrary to the equivalence of these two approaches in the sense of financial theory, maximizing the Sharpe ratio performs better for individual bonds, whereas the difference is smaller for bond portfolios. The out-of-sample annual SDF portfolio Sharpe ratios are in the range of .59 to 1.00, and show statistically significant excess returns (alphas) relative to conventional risk factors. Our results are robust to the exclusion of financials and REITs.

"How Much Do Public Employees Value Defined Benefit versus Defined Contribution Retirement Benefits?" *with Joshua Rauh*

We survey public employees across the United States about their preferences regarding retirement plan options, and in particular at what employer contribution rate public employees would agree to switch to a defined contribution (DC) plan on a forward-looking basis. Overall, 89.2% of respondents are willing to accept a hard freeze of their defined benefit (DB) plan and the introduction of a DC plan at some contribution level. Conditional on acceptance, the median minimum contribution rate that respondents would require—if no additional retirement benefits would accumulate under their existing plan—is 10% of payroll, while the mean is 18.2% of payroll. The perceived and actual financial generosity of the pension plan relates negatively to the acceptance rate and positively to the minimum required contribution. More senior employees are somewhat less likely to accept the DC option, but there is over 80% acceptance even among long-tenured employees. Consistent with typical DB accrual patterns in the presence of early retirement options, employees with around 20 years of service require the largest DC contributions to switch. Employees who perceive the financial stability of their current plan as weaker are, on average, more likely to accept a DC plan and at lower contribution levels. We find no statistically significant heterogeneity with respect to educational

attainment or financial literacy, making an explanation of the results based on cognitive ability less likely. In comparison to the economic cost of prevailing DB plans, introducing DC options that are acceptable to employees could potentially improve the sustainability of pension systems across the United States without compromising employees' satisfaction with their pension plan options.

<u>Presented at:</u> Stanford GSB, University of Amsterdam, CEPR European Conference on Household Finance 2023.

"The Bond Lending Channel of Monetary Policy" *with Olivier Darmouni and Alexander Rodnyansky (Submitted)*

Corporate bond markets are a growing source of funding for companies throughout the world. How does a firm's debt structure affect the transmission of monetary policy? This paper sheds light on a new corporate finance mechanism in which monetary policy disproportionately impacts market-financed firms as bonds have higher downside risks relative to bank loans. We present high-frequency evidence consistent with this channel in the euro area: firms with more bonds are more affected by surprise monetary actions than their counterparts. This finding stands in contrast to a standard bank lending channel and suggests a key role for bond markets in monetary transmission.

<u>Finalist European Central Bank Young Economist Competition 2021</u>

<u>Presented at:</u> EPR ESSIM 2021, CEPR and Bank of Finland Joint Conference on Monetary Policy Tools and Their Impact on the Macroeconomy, SED 2021, EFA 2020, 9th MoFiR Workshop on Banking, SFS Cavalcade 2020, CFM London Macro Workshop, Bocconi, University of Cambridge, Columbia Business School, LMU Munich, and NYU Stern, Georgetown University.

"Local Government Valuation" *with Haaris Mateen and Marcelo Sena (Submitted)*

We construct a novel data set on the fiscal position of municipalities in the United States and document a secular decline in their financial health. Our data combines financial data from the Annual Comprehensive Financial Reports (ACFRs) of municipalities along with Census data of their revenue and expenditure cash flows. We find that a large share of municipalities operate with a negative net position-akin to a negative book equity position in the corporate context. We find that most of the decline originates from the accumulation of legacy obligations, i.e., pensions and other post-employment benefits (OPEBs); this is recognized by municipal bond markets through higher credit spreads. While accounting values from the ACFRs are informative, they are based on book valuations which potentially convey limited information about the economic value of assets and liabilities. Thus, we turn to the market valuation of local governments' equity by estimating an SDF that matches the valuation of a wide range of assets in the economy to prices future tax and expenditure claims. Using market prices for tax and expenditure claims, and market valuations of liability positions we find that the market values of equity are highly correlated with the book values. The negative equity position-in terms of book and market values-for some local governments suggests the presence of implicit insurance by the state and federal governments.

<u>NASDAQ Best Paper Award in Asset Pricing</u>

<u>Presented at:</u> UEA 11th European Meeting, Brookings Institution 2022 Municipal Finance Conference, UEA 16th North America Meeting, Midwest Finance Association 2023 Annual Meeting, Western Finance Association 2023 Annual Meeting, Stanford University GSB

"Local Governments' Response to Fiscal Shocks: Evidence from Connecticut" *with*

Haaris Mateen

The deteriorating fiscal position of municipalities across the United States raises the question which adjustment mechanisms municipalities have at their disposal and what their effects are. We utilize quasi-experimental variation in the year of property tax assessments in the state of Connecticut to provide causal evidence of the fiscal adjustment following a large decline in property values after the Great Financial Crisis. We find that local governments adjust tax rates to maintain stable tax revenues; there is no change in public employment levels and limited adjustments of public services. Our micro data on people's location further allows us to causally estimate the migration elasticity to a change in property tax rates. We find evidence of inter-state migration in response to an increase in property tax rates; and no statistically significant response of intra-state migration. Detailed property and location choice data reveal the elasticity of migration with regard to the property tax bill. An increase in the property tax bill by ten percent leads to an average increase in the migration propensity by about 1.5%.

UEA North America Meeting 2021 Honorable Mention

Presented at: Columbia University, Columbia Business School, AREUEA National Conference 2021, UEA North America Meeting 2021, EEA-ESEM 2022.

"Local Fiscal Constraints and Amplification of Regional Shocks"

How do municipal finances interact with local labor market shocks? I show that the observed general equilibrium response to local labor market shocks contains an economically important amplification effect through local financial constraints. At the center of the local financial amplification channel is the housing market. Local governments in the United States receive a median share of 63.1% of own source revenues from property taxes. I show that exogenous shocks to local labor markets affect the housing market and exerts fiscal pressure on local government finances. Local governments-on average-increase property taxes and cut amenities. Both policy responses affect the relative attractiveness of a location which amplifies the initial shock. I estimate a multiplier of 1.7x through this local financial constraint channel.

"Inter-regional Inequalities: The Role of Governmental Revenues and Spending" *with Dhruv Singal*

What is the role of governmental interventions in response to structural shocks to the economy? Does it mitigate or exacerbate inter-regional inequalities? What role does the government assume to redistribute resources across the economy? How much of the resource allocation is achieved through automatic stabilizers vs. discretionary spending? We answer these questions by constructing a novel dataset on spatially disaggregated governmental accounts for the local, state and federal government which includes the main components of governmental revenues and expenditures. This dataset is analogous to the national accounts of the Bureau of Economic Analysis (BEA) for the government sector except that we construct these accounts for every county in the United States. The data allows us to examine the governmental response—both for revenues and expenditures—to local economic shocks. Specifically, we focus on the trade shock subsequent to China's accession to the WTO in 2001. Increased import competition led to closures of plants and layoffs of workers. The spatially concentrated manufacturing sector meant that some regions experienced a large economic shock while others remained unscathed. We study the response of governmental revenues and

expenditures of the local, state, and the federal government.

"Economic Impact of Water Scarcity" *with Jessica Goldenring and Dhruv Singal*

What is the economic impact of water scarcity? The World Resource Institute projects that 44 countries experience high or extremely high water distress in 2040. We assess the economic impact of water scarcity on land valuations. This Ricardian approach is commonly used in the literature to assess the impact of climate change. Specifically, we focus on farmland valuations in California—one of the most productive farmlands in the world. The semi-arid climate makes its valuation particularly sensitive to the amount of surface and groundwater water available for irrigation. The detailed administrative transaction data from the counties' assessor offices allows us to estimate repeat sales indices as opposed to a hedonic model which make our results less likely to be affected by unobserved confounders. We find that parcels with better access to freshwater see a 24.9%-25.9% larger appreciation in land values per acre over the time period from 2011 to 2020 depending on the exact specification; we find no statistical significant differential price change between 2000-2011. The differential change in land values points towards large economic effects of water scarcity with beliefs about future climatic conditions being updated due to two severe episodes of drought and signals of legislative willingness to curb groundwater overdraft.

Presented at: Public Policy Institute of California (PPIC), Columbia Business School, Columbia University, Hoover Institution.

"State and Local Government Financial Fundamentals" *with Seamus H. Duffy*

The Stanford Municipal Finance Dashboard, available at https://municipalfinance.stanford.edu, is an original resource to provide financial fundamentals for all state governments and the 500 largest local governments in the United States. We summarize the financial position of public entities by several important financial metrics similar to the practice in the corporate finance context. These metrics have been largely missing for public entities. We close this gap by publishing these indicators and provide an aggregate financial strength score for all state governments and the largest local governments in the United States. This document describes the methodology that we use.

RESEARCH PAPERS IN PROGRESS

"Local and State Government Debt Management" *with Joshua Rauh*
"COVID-19 Infections Absent Residential Segregation" *with Harrison Hong, Jeffrey Kubik, Haaris Mateen, Neng Wang, Jinqiang Yang*
"Policy Preferences: A Computational Linguistic Approach" *with Anand Chitale, Lea Frermann, José Montiel Olea*