

- RESEARCH AGENDA -

My research is centered in Financial Economics, with applications related to monetary and fiscal policy along with the term structure of equity. To date, I have focused primarily on the interaction between asset pricing and macroeconomic policy. Asset prices play a fundamental role in the daily lives of most people as they face important choices about saving in the form of cash, bank deposits, bonds, stocks, and even real estate. This directly translates to the macroeconomy through decisions about physical investment and production by firms along with consumption decisions by households.

Monetary and fiscal policy impact asset prices through their influence on interest rates together with taxation and government spending. I am currently interested in the impact of asset prices on the welfare implications of optimal monetary policy; the effect of fiscal policy on the behavior of asset prices; and the characterization of the intertemporal distribution of the equity premium. In the future, I will continue to focus on areas where my research has the potential to shed light on the relationship between policy and asset pricing. I describe below the three primary active areas in which I intend to focus my future research.

The Relationship between Asset Pricing and Macroeconomic Policy

My dissertation work has focused on the relationship between asset pricing and macroeconomic policy. Many previous studies have sought to determine the optimal behavior of monetary policy, and their predominant conclusion is that it is optimal for monetary policy to concentrate mainly on stabilizing inflation. However, existing studies do not match the low risk-free rate and high equity premium found in financial data. The equity premium is important because it captures the welfare costs of recessions. The low risk-free rate is also crucial because it captures the extent to which households and firms are forward looking when making consumption and investment decisions. My contribution is to incorporate this data while evaluating the welfare implications of simple monetary policy rules that are functions of inflation and output.

For my job market paper, “Asset Pricing and the Welfare Effects of Monetary Policy,” I construct a novel asset pricing-oriented New Keynesian model to evaluate the welfare effects of monetary policy. To match asset pricing facts, I incorporate recursive preferences and long-run risk in productivity. When combined, I find these characteristics lead to policy recommendations that place significantly greater weight on output and less weight on inflation compared to the existing literature. Greater weight is placed on stabilizing output because the welfare costs of recessions are much higher upon matching the equity premium. At the same time, a low risk-free rate suggests that agents are very patient and forward looking, implying that monetary policy can more effectively and persistently reduce the average markup with higher inflation volatility. The difference in welfare between the implementation of complete inflation stabilization (as is often suggested in prior literature) versus the optimal policy in the asset pricing framework is over \$3,000 for each individual.

In another paper, “Inflating Away Debt: Trading Off Inflation Risk and Taxation Risk,” I evaluate the effects of monetary policy reacting to the debt-output ratio in a simple interest rate rule using a model that prices risk consistent with the data. In contrast to my job market paper, this paper focuses on the interaction of fiscal and monetary policy when taxes are distortionary. In this setting, a Taylor rule in which the inflation target increases with the debt-output ratio (thus inflating away debt) can improve welfare, but only at debt levels above 200%. At such high debt levels, taxes are forced to adjust more to deal with greater interest payments, causing higher tax and equity risk. By allowing for greater inflation in response to higher debt, monetary policy can bring greater certainty to the tax rate and reduce consumption risk, which improves welfare.

In the future, I plan to investigate the effects of asset pricing when combined with the fiscal theory of the price level, endogenous growth, and different lengths of maturity for public debt. At the center of the fiscal theory of the price level is an asset pricing formula for real government debt, which pins down inflation. It is a setting in which fiscal policy is unwilling and unable to adjust taxes to reduce debt, instead relying strictly on inflation to balance the budget. This setting is becoming increasingly relevant as Congress finds it politically difficult to react sufficiently to increasing debt levels. The incorporation of endogenous growth is another dimension of interest, as there is considerable evidence that policy can impact long-term growth rates. In my papers described above, growth is assumed to be exogenous, which severely limits the potential long-term effects of policy. Finally, the length of maturity for public debt could also have important consequences. Existing studies, including my own, do not typically capture the duration of public debt in the data because we assume one-period debt that rolls over each period.

Fiscal Policy and Market Returns

In the paper “Taxes, Spending, and Market Returns,” William Waller and I investigate the channels through which tax and spending shocks impact equity and bond returns. Unlike previous studies, we address this topic in a way that decomposes current returns into news about cash flows and news about discount rates. The news decomposition provides us with an empirical foundation for modeling the theoretical relationship between fiscal policy and asset prices.

We use narrative methods to identify plausibly exogenous shocks to fiscal policy. Our main findings suggest that tax increases lead to lower cash flow news and lower discount rates. However, the discount rate news dominates, so that higher taxes are associated with higher equity returns. We show that this empirical finding is consistent with the predictions of a standard New Keynesian model.

Term Structure of Equity

The term structure of equity characterizes the intertemporal distribution of the equity premium. The intertemporal distribution is extremely important in finance for the valuation of projects, specifically projects with different maturities or durations. In a paper with Hengjie Ai, Max Croce, and Kai Li, “Production-Based Term Structure of Equity Returns,” we study the link between expected returns and the timing of cash flows in a general equilibrium production economy. Standard neoclassical RBC models produce an upward-sloping term structure of equity returns. Our economy, in contrast, incorporates heterogeneous exposure to aggregate productivity shocks across capital vintages, yielding a downward-sloping term structure over a ten-year horizon, consistent with recent empirical findings. We provide a unified framework that relates the properties of the term structure of aggregate dividends to the properties that we observe in the cross section for firms with different risk characteristics.

In the future, I will examine the international setting in a paper with Hengjie Ai, Max Croce, and Philip Howard, “International Equity Term Structures and Current Account.” In this analysis, we propose a novel production-based general equilibrium model to study the link between current account dynamics and international risk premia over different maturity horizons. Our model reproduces key features of both international investment flows and excess returns. Additionally, our economy rationalizes the international co-movements observed among macroeconomic quantities and equity yields.