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OPTIMAL TIME-CONSISTENT MACROPRUDENTIAL POLICY

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ABSTRACT

Collateral constraints widely used in models of financial crises feature a pecuniary externality, because agents do not internalize how collateral prices respond to collective borrowing decisions, particularly when binding collateral constraints trigger a crisis. We show that agents in a competitive equilibrium borrow "too much" during credit expansions compared with a financial regulator who internalizes this externality. Under commitment, however, this regulator faces a time inconsistency problem: It promises low future consumption to prop up current asset prices when collateral constraints bind, but this is not optimal *ex post*. Instead, we study the optimal, time-consistent policy of a regulator who cannot commit to future policies. Quantitative analysis shows that this policy reduces the incidence and magnitude of crises, removes fat tails from the distribution of returns and reduces risk premia. A key element of this policy is a state-contingent macro-prudential debt tax (i.e. a tax imposed in normal times when a financial crisis has positive probability next period) of about 1 percent on average. Constant debt taxes also reduce the frequency of crises but are less effective at reducing their severity and reduce welfare when credit constraints bind.

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