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Mapping Heat in the U.S. Financial System

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Abstract: We provide a framework for assessing the build-up of vulnerabilities to the U.S. financial system. We collect forty-six indicators of financial and balance-sheet conditions, cutting across measures of valuation pressures, nonfinancial borrowing, and financial-sector health. We place the data in economic categories, track their evolution, and develop an algorithmic approach to monitoring vulnerabilities that can complement the more judgmental approach of most official-sector organizations. Our approach picks up rising imbalances in the U.S. financial system through the mid-2000s, presaging the financial crisis. We also highlight several statistical properties of our approach: most importantly, our summary measures of system-wide vulnerabilities lead the credit-to-GDP gap (a key gauge in Basel III and related research) by a year or more. Thus, our framework may provide useful information for setting macroprudential policy tools such as the countercyclical capital buffer.

JEL classification: G01, G12, G21, G23, G28.

Keywords: Financial vulnerabilities; Financial crisis; Financial stability; Systemic risk; Early warning system; Heat maps; Data visualization; Macroprudential policy; Countercyclical capital buffers.

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