Online Box 1.1. Indicator-Based Framework Update

Despite improvements at nonfinancial firms across advanced economies and emerging markets, global financial vulnerabilities continue to be elevated in a number of sectors (Online Box Figure 1.1.1, panels 1 and 2).[1] In the *sovereign* sector, debt levels remain close to historical highs for most major economies, and fiscal deficits remain elevated. Improving growth prospects and the beginning of unwinding of fiscal stimulus resulted in a modest decline of debt-to-GDP ratios for advanced economies in 2021, with expectations of further declines by 2023. The improvement in fiscal position is anticipated to take longer in emerging markets (see the April 2022 *Fiscal Monitor*).

Conditions have improved at *nonfinancial firms*, supported by strong earnings growth and ample balance sheet liquidity. Median leverage declined across most advanced economies and emerging markets, with so far limited pressure on margins from inflation-sensitive sectors. Firms with access to capital markets have taken advantage of abundant market liquidity, keeping cash buffers above pre-pandemic levels and extending debt maturities. Vulnerabilities remain, however, in emerging markets, especially in China, reflecting strains in credit markets related to developments at property developers.

Outside the United States and euro area, vulnerabilities in the *household* sector remain elevated in other advanced economies and emerging markets. For example, household-debt-to-GDP ratios in Australia, Canada, and China remain at levels higher than before the global financial crisis, while house prices have continued to grow at a robust pace. However, as household incomes have broadly recovered in most jurisdictions, debt service ratios have strengthened, easing liquidity mismatch risks across most advanced economies and emerging markets.

In the *banking* sector, capital and liquidity positions of the global banking system have strengthened and surpassed pre-pandemic levels. However, vulnerabilities remain in emerging markets (especially in China), where banks may face some challenges as unprecedented policy support is removed.

Among *nonbank financial institutions*, vulnerabilities have eased somewhat for asset managers in the United States and euro area but remained elevated for insurers. Credit risk exposures, leverage, and interconnectedness with banks declined for asset managers, while liquidity and maturity mismatches remained as key vulnerabilities, particularly in emerging markets (except China). In the insurance sector, healthy profitability metrics and a strong performance in risk assets drove improvements in some credit and leverage indicators, but this was offset by a deterioration in other indicators associated with an ongoing search for yield, such as increasing liquidity and currency mismatches.

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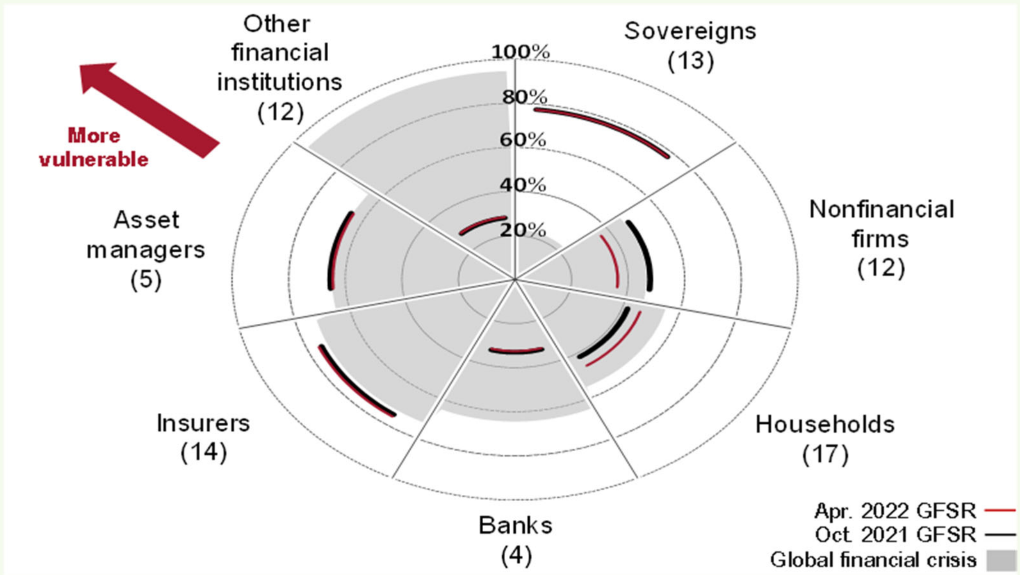
[1] The focus of the framework is restricted to on-balance-sheet vulnerabilities, given the absence of available data for off-balance-sheet vulnerabilities for a cross section of countries. Due to the nature of the data and their reporting frequency, most of the current data points are through the second quarter of 2021. For further details on the methodology employed in the framework, see Online Annex 1.1 of the April 2019 *Global Financial Stability Report.*

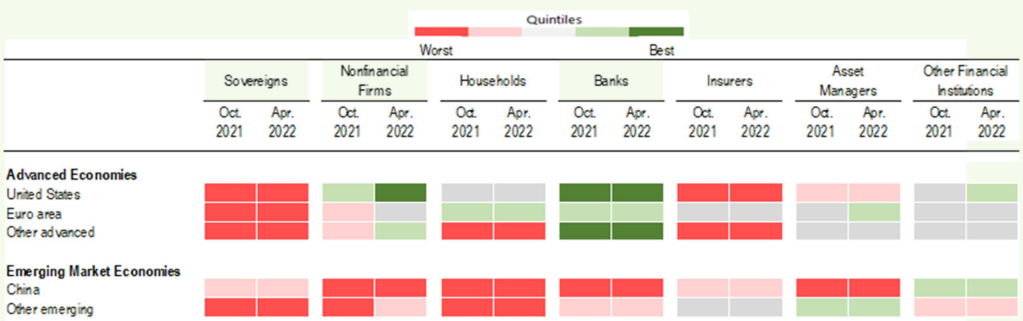
Online Box Figure 1.1.1. Global Financial Vulnerabilities

1. Proportion of Economies with Elevated Vulnerabilities, by Sector

(Percent of countries with high and medium-high vulnerabilities, by GDP [assets of banks, asset managers, other financial institutions, and insurers]; number of vulnerable countries in parentheses)



2. Financial Vulnerabilities by Sector and Region



Sources: Banco de Mexico; Bank for International Settlements; Bank of Japan; Bloomberg Finance L.P.; China Insurance Regulatory Commission; European Central Bank; Haver Analytics; IMF, Financial Soundness Indicators database; IMF, World Economic Outlook database; Reserve Bank of India; S&P Global Market Intelligence; S&P Leveraged Commentary and Data; Securities and Exchange Commission of Brazil; Securities and Exchange Board of India; WIND Information Co.; and IMF staff calculations.

Note: See the online technical annex for the April 2019 GFSR for details on the Indicator-Based Framework methodology. In panel 1, "global financial crisis" reflects the maximum vulnerability value during 2007–08. In panel 2, dark red shading indicates a value in the top 20 percent of pooled samples (advanced and emerging market economies pooled separately) for each sector during 2000–21 (or longest sample available), and dark green shading indicates values in the bottom 20 percent. In panels 1 and 2, for households, the debt service ratio for emerging market economies is based on all private nonfinancial corporations and households. A change in the structure of the publicly available data of several jurisdictions for other financial institutions resulted in a change in vulnerability levels, particularly in the euro area, as the methodology was adjusted to use predominantly country-level rather than euro area aggregates, and data for captive financial institutions and financial auxiliaries were included where available. Other advanced economies comprise Australia, Canada, Denmark, Hong Kong Special Administrative Region, Japan, Korea, Norway, Singapore, Sweden, Switzerland, and the United Kingdom. Other emerging market economies are Brazil, India, Mexico, Poland, Russia, and Turkey. GFSR = *Global Financial Stability Report.*