MAS Monetary Authority of Singapore

Financial Stability Review 2021

6 Dec 2021

Macroprudential Surveillance Department
Economic Policy Group

Key Messages

Key messages: External backdrop

The global financial system has stayed resilient over the past year despite the undulating course of the COVID-19 pandemic

Global financial conditions remain accommodative at this juncture, even as market expectations of tighter monetary policy have increased against a pick-up in cost and price pressures

However, medium-term vulnerabilities have grown

- **High corporate indebtedness**
- **Increased sovereign debt**
- **Stretched asset valuations**

Key messages: Singapore corporates, households and financial sector

In Singapore, indicators of vulnerability for the corporate, household and financial sectors have generally improved through the COVID-19 pandemic

Stress tests confirm that corporates, households and financial institutions would be well-placed to withstand further adverse shocks

Continued vigilance and prudence are warranted, in view of considerable downside uncertainty from the pandemic and rising interest rates in the coming years

- Sectoral disparities in performance will persist
- Firms should strengthen buffers against potential further shocks

- Households should exercise prudence in taking on large, new loan commitments
- Highly leveraged households should build up financial buffers to cushion against stresses

- Banks should maintain prudent levels of provisions and strong liquidity profiles

Global Financial and Economic Environment

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While unprecedented policy support has lifted economies out of the crisis, it has also led to rising debt and stretched asset valuations

Vulnerabilities

High corporate indebtedness

- Cashflow disruptions and accommodative global financial conditions have led to a further build-up of debt
- Increase has been uneven across regions and sectors

Increased sovereign debt

- Sovereign debt-to-GDP levels have risen with large fiscal support measures and decline in tax revenues
- Deepening sovereign-bank nexus raises contagion risks to banking stability

Stretched asset valuations

- Stretched equity valuations relative to fundamentals and rising property prices relative to incomes increase market susceptibility to a sharp and disorderly correction

Vulnerabilities could interact with potential shocks to amplify financial stability risks

Shocks

Sharp tightening in financial conditions

- Sustained trend of higher inflation could trigger more aggressive monetary policy normalisation, forcing a sharp repricing in financial assets and capital outflows from EMEs

Growth setbacks

- Renewed COVID-19 outbreaks could impede global economic recovery

Policy risk

- Policy missteps in the timing, pace and sequence of withdrawal of support measures could exacerbate both growth and inflation risks

Corporates, Households, and Property in Singapore

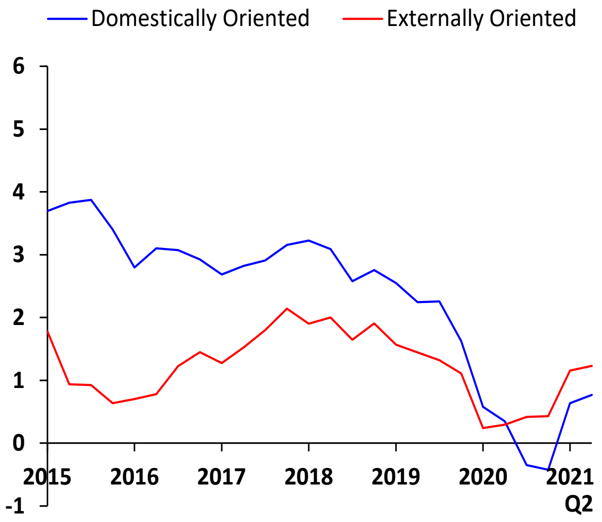
Vulnerability of corporates has eased from elevated levels

Corporate sector FVI (y-o-y changes)	Q2 2020	Q2 2021
Overall Corporate FVI	→	↘
Leverage risk	→	→

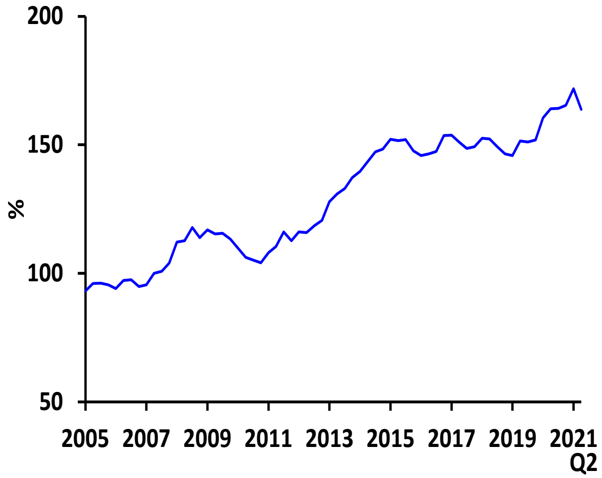
Y-o-y Changes in FVI

Decreased significantly | **Broadly Unchanged** | **Increased significantly**

Median ROA of SGX-listed Firms



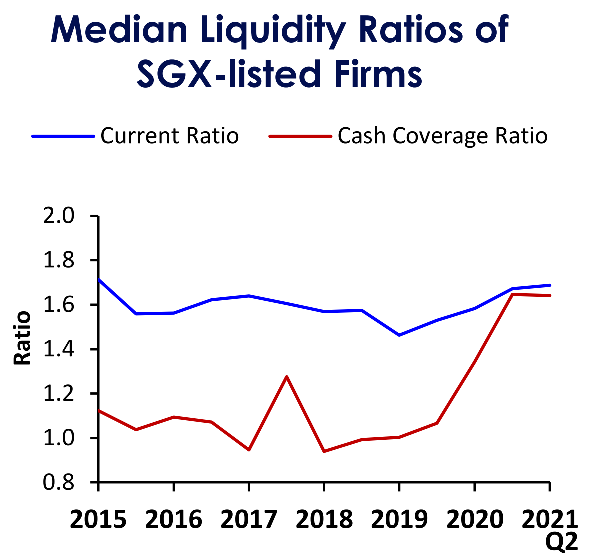
Singapore's Corporate Debt as % of GDP

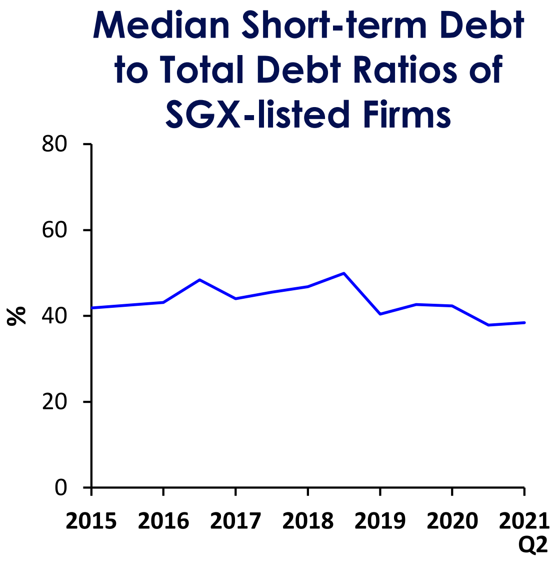


- Broad-based improvement in vulnerability across all risk measures
- Leverage risk has eased marginally with
  - Improvement in profitability (ROA),
  - Strengthened debt servicing ability, and
  - Moderation in corporate debt growth

Liquidity and maturity risks have also generally eased, while foreign currency risk remains stable

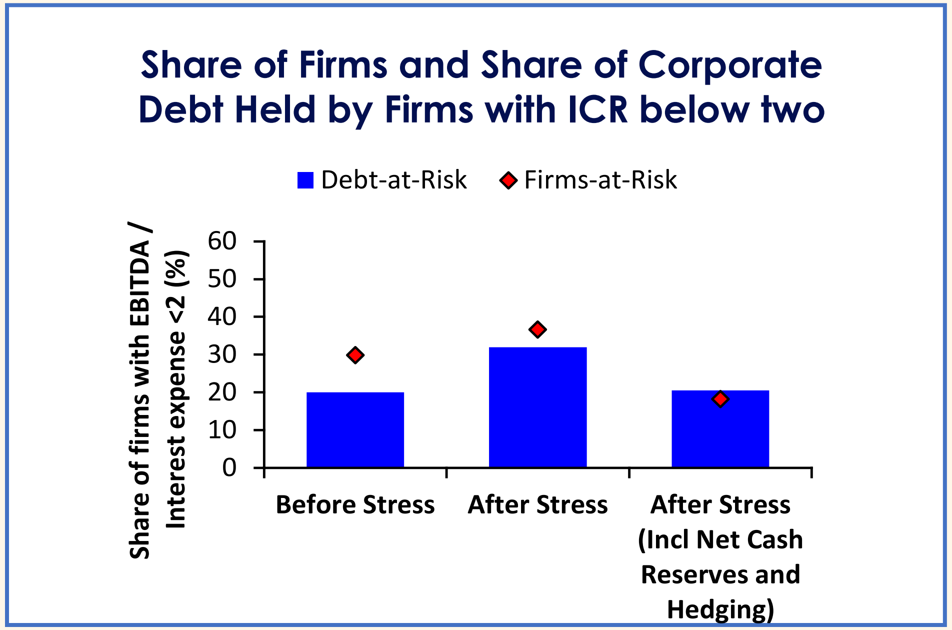
Corporate sector FVI (y-o-y changes)	Q2 2020	Q2 2021
Overall Corporate FVI	→	↘
Liquidity risk	↘	↘
Maturity risk	↗	↘
Foreign currency risk	→	→





- SGX-listed firms maintained healthy cash buffers and improved their maturity profiles
- Maturity risk eased as firms
  - Raised more cash organically in H2 2020 and H1 2021, and
  - Borrowed less from short-term debt market
- Foreign currency risk has remained stable

Singapore's corporate sector remains resilient to shocks, but sectoral variations in corporate performance persist

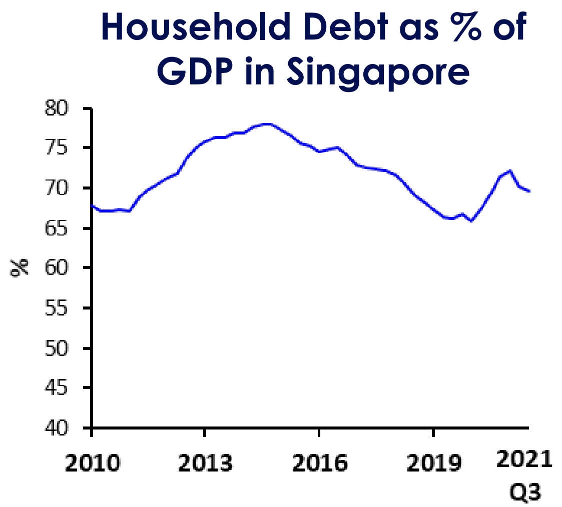


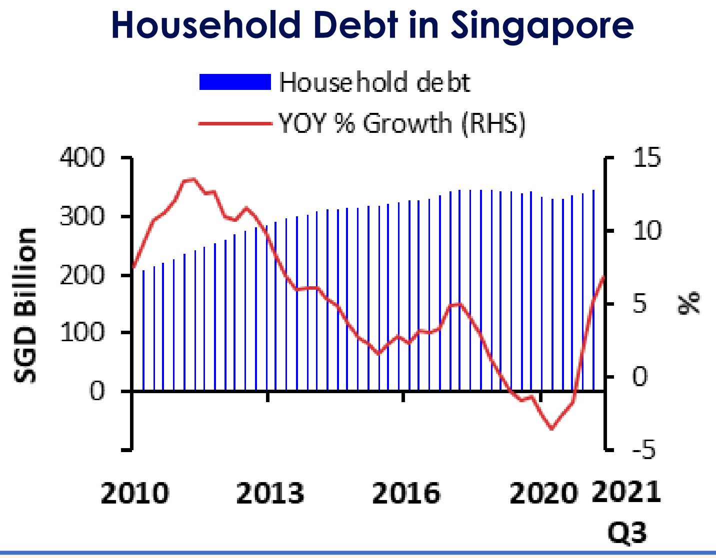
- MAS' stress test suggests that most SGX-listed corporates would be resilient to interest rate and earnings shocks
- Despite the improved outlook, projected growth outcomes across sectors are expected to remain uneven

Household financial vulnerabilities were unchanged from the past year, but have remained slightly higher than pre-COVID levels

Household sector FVI (y-o-y changes)	Q3 2020	Q3 2021
Overall household FVI	↗	→
Leverage risk	↗	→
Maturity risk	↘	↘

* The extent of risk is classified by band thresholds. While leverage risk remains within the same band in Q3 2021, the level of the indicator is higher compared to Q3 2020 as well as Q4 2019 before the onset of COVID-19.

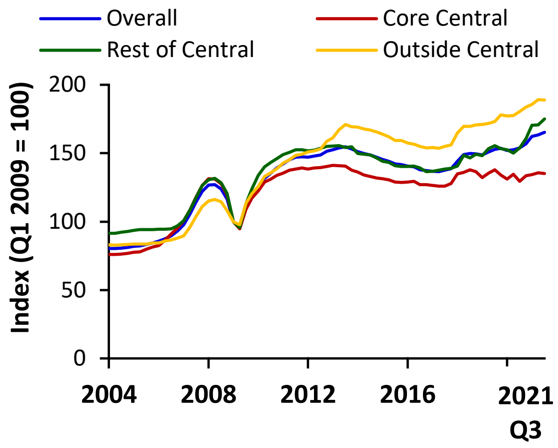




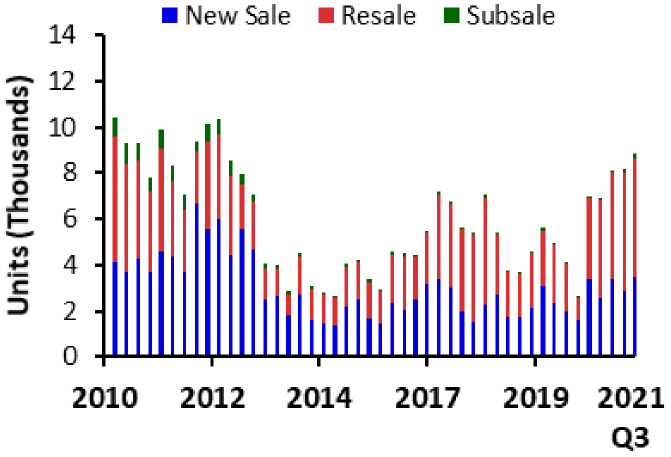
- The higher level of vulnerability relative to pre-COVID reflects the increase in leverage risk over the same period
- The higher leverage is underpinned by an increase in housing loans in tandem with a resilient private residential property market, over the past year

Private residential property prices and transactions have gathered pace

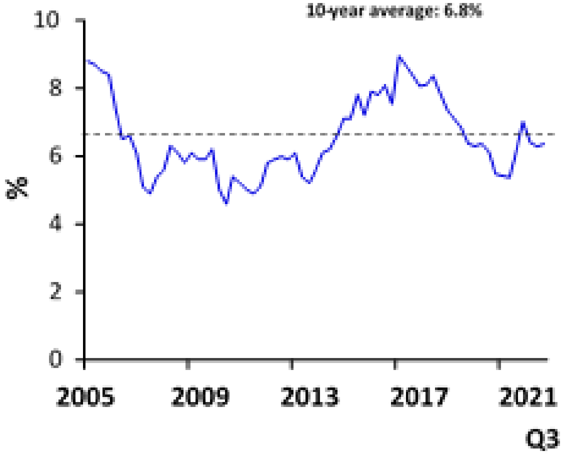
Private Property Price Indices by Region, Index



Private Property Transaction Volume



Vacancy Rate for Private Residential Property

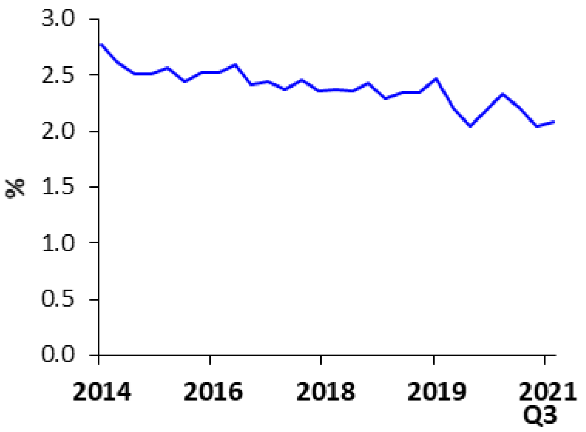


- Price increases were broad-based across the regions
- Transactions have increased, driven by both new sales and resales
- Vacancy rate has fallen, although it is close to levels near its long-run average.
- The Government will continue to closely monitor developments to promote a stable and sustainable property market

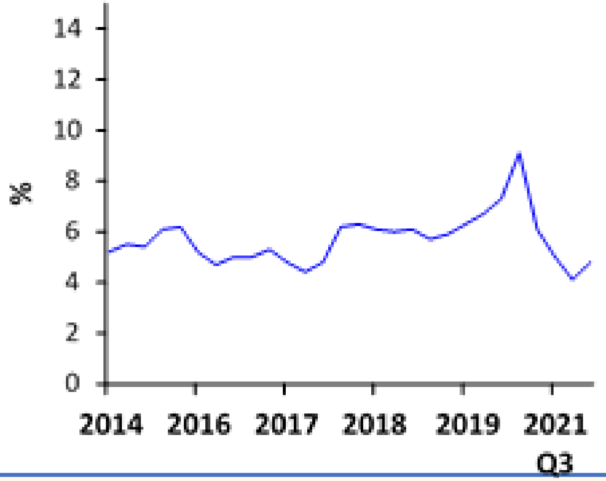
Maturity risk has declined, as households take on less short-term debt

Household sector FVI (y-o-y changes)	Q3 2020	Q3 2021
Overall household FVI	↗	→
Maturity risk	↘	↘

Credit Card Balances as % of GDP

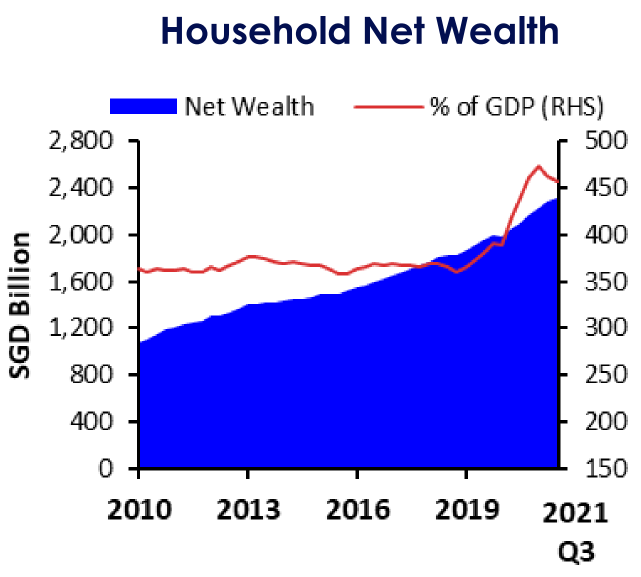


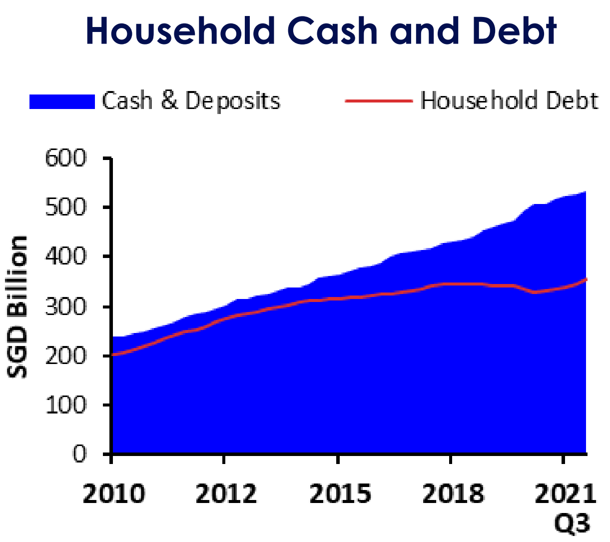
Credit Card Charge-off Rate



- Through the pandemic, credit card borrowings moderated with the pullback in discretionary spending
- Credit quality of short-term debt has improved
  - Decline in credit card charge-off rate

Aggregate household balance sheets remain resilient but households should continue to exercise prudence in taking on debt





- Net wealth of households continued to rise over the past year on the back of higher values of financial and property assets

- Household debt servicing burden is expected to remain manageable
  - Adequate financial buffers as liquid assets such as cash and deposits exceed total liabilities
  - MAS stress test shows mortgage servicing ratios remain manageable under shocks to income and interest rates

- Given uncertainties in outlook, households should
  - continue to exercise prudence in taking on large new loan commitments, and
  - build up financial buffers where possible, especially for those who are highly leveraged

Singapore Financial Sector

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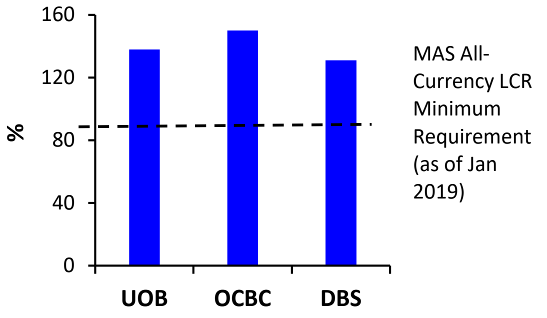
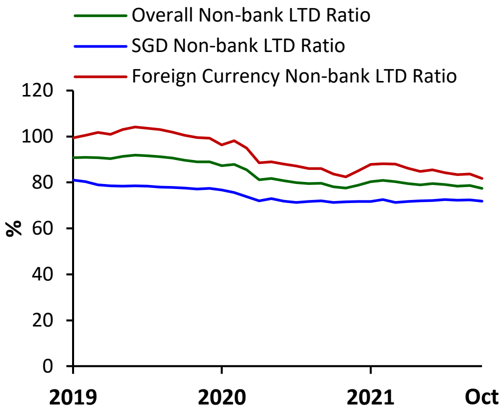
Overall banking FVI has improved, with an easing of liquidity vulnerabilities

Banking sector FVI (y-o-y changes)	Q3 2020	Q3 2021
Overall banking FVI	→	↘
Liquidity risk	→	↘
Maturity risk	→	→

Local Banking Groups' All-Currency LCR (Q3 2021)



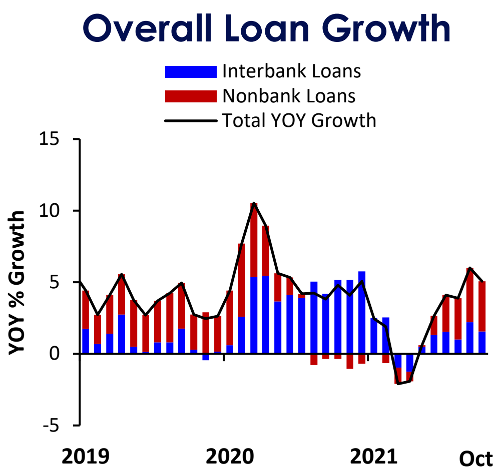
Banking System's Non-bank LTD Ratios

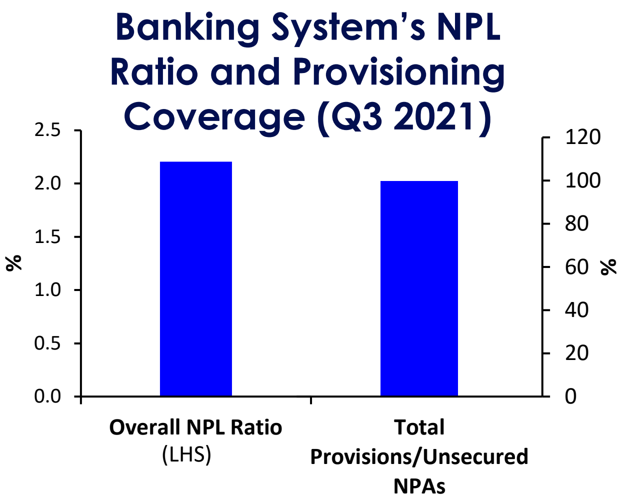


- Domestic systemically important banks (D-SIBs) have continued to maintain healthy liquidity buffers
- Both SGD and foreign currency loan-to-deposit (LTD) ratios are below 100%

Leverage vulnerabilities have increased slightly, as credit growth recovered steadily alongside improving economic prospects

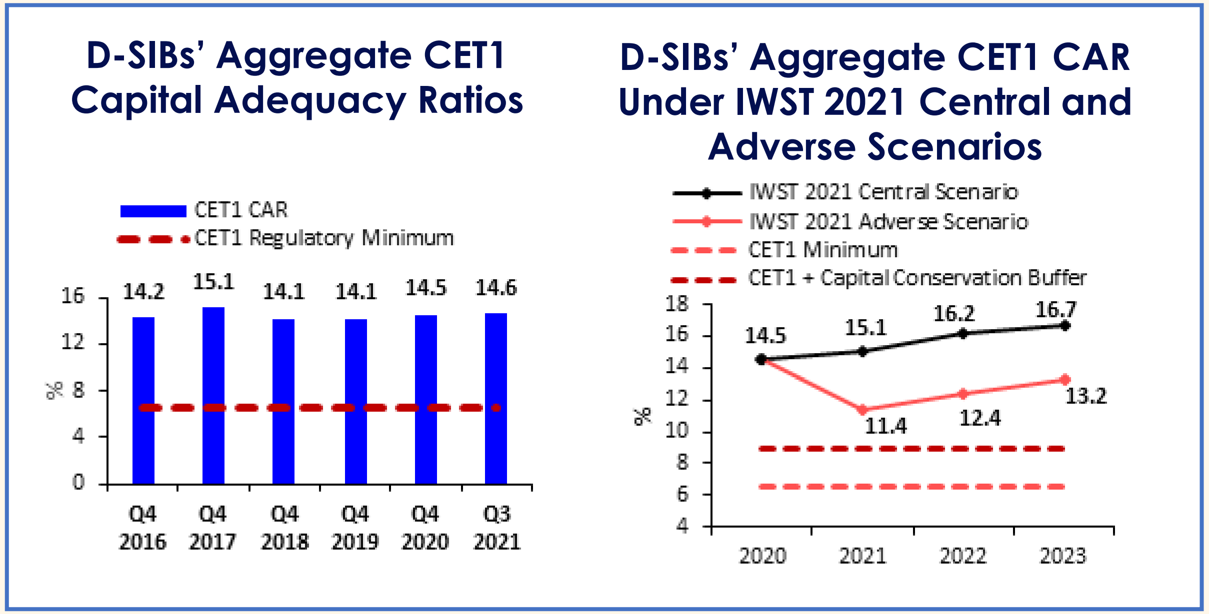
Banking sector FVI (y-o-y changes)	Q3 2020	Q3 2021
Overall banking FVI	→	↘
Resident leverage risk	→	↗
Non-resident leverage risk	→	→





- Overall credit growth has been healthy, largely driven by non-bank lending
- Resident non-bank lending registered robust growth, in turn raising resident leverage risk slightly
- Nevertheless, asset quality is healthy and provisioning coverage is adequate

Stress test shows that banks would be resilient to further downside risks



- Banks entered the COVID-19 pandemic from a position of strength
- Banks' capital positions have remained strong throughout the COVID-19 pandemic
- Results of the Industry-Wide Stress Test (IWST) 2021 show that banks in Singapore are well positioned to weather further adverse macroeconomic shocks

The non-bank FI sector has weathered the stresses from the pandemic well

- **Investment funds have been able to meet redemptions in an orderly manner**
  - Funds have faced more instances of significant redemptions compared to the prior year. These redemptions were largely driven by investors' asset reallocation actions.
- **Insurers have remained well-capitalised and would be resilient to downside risks**
  - Stress test shows that insurers would be able to continue meeting regulatory capital requirements even when subject to a range of macro-financial stresses.
- **Central counterparties (CCPs) would remain resilient against severe shocks**
  - Stress tests show that CCPs' financial resources would be sufficient to cover clearing member defaults under stress, with limited contagion risks.

Special Features

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Special Feature 2: Climate transition risk exposure of Singapore's banking and insurance sector

Background

- There is growing awareness of the risk that climate change poses to the financial system
  - Many central banks and regulators are seeking to better understand the risk and assess its implications for financial stability

- Feature focuses on transition risk, which is motivated by the significant adjustments that may be imminent amid the shift to a low-carbon economy in Singapore and globally

- Using regulatory data*, MAS estimated the financial system's exposure to transition risk by applying Battiston's concept of Climate Policy Relevant Sectors (CPRS)
  - CPRS is also commonly used by other institutions (e.g. IMF and ECB) to analyse climate transition risks

**MAS Notice 610 for banks and MAS Notice 122 for insurers*

Special Feature 2: Climate transition risk exposure of Singapore's banking and insurance sector

Key findings

- The banking sector's loan exposures to CPRS (excluding residential mortgages) have remained stable at 29–31% of total loan portfolio over 2015-2020
  - The loan exposures were mainly to CPRS with lower emissions, suggesting less susceptibility to potential impairments from changes in climate policy

- Over the same period, the insurance sector's investment exposure to CPRS has remained stable at 32–33% of total investment portfolio

Sum up

- This initial attempt at assessing financial sector risk associated with climate transition will help to inform further work in climate change's impact on the financial system

- MAS will continue to work closely in partnership with the industry, academia and other regulators to strengthen our understanding of the financial stability impact of climate change

Special Feature 4: An empirical analysis of the determinants of domestic interest rates and net interest margin (NIM)

Background

- Understanding the drivers of domestic interest rates and NIM provides insights on the financial system's resilience against shocks
    - In particular, we analysed the sensitivity of domestic interest rates to interbank funding rates in Singapore, proxied by Singapore Interbank Offered Rate (SIBOR).
    - The structural shifts in the banking landscape over the past two decades have affected the sensitivity

Special Feature 4:
An empirical analysis of the determinants of domestic interest rates and net interest margin

Key findings

- Structural drivers such as competition in the banking sector, in addition to conjunctural factors, are key determinants of domestic interest rates

- A low interest rate environment warrants need for increased surveillance
  - First, a rising interest rate environment is positive for banks' NIM and hence their overall profitability, as banks re-price their loans (as proxied by mortgage rates) higher to a larger extent compared to deposits
  - Second, banks with low NIM are more susceptible to larger declines in NIM when SIBOR declines.
    - This would happen if the competition-induced decline in lending rates outpaces the softening in deposit rates, especially as low deposit rates limit room for downward adjustment

- Further, there is asymmetric impact of interest rate changes across different borrower profiles (e.g. HDB vs private residential properties; foreign vs local banks)

Other Special Features

Special Feature 1: Integrated macro policy framework: An assessment of the ongoing research

- Integrated macro policy frameworks (IMPFs), involving the joint deployment of monetary, exchange rate, macroprudential and capital flows management policies, have surfaced prominently in recent years
- Optimal policy mix may not be a single solution but dynamically depends on country characteristics, nature of capital flows and types of shocks

Special Feature 3: Enhancing Corporate Surveillance with Probability of Default (PD) Model

- The pandemic has underscored the importance of timely surveillance of non-financial corporates to assess their vulnerabilities and inform the design of appropriate policy responses
- This Feature presents how EPG-MSD could enhance its surveillance framework of identifying vulnerable firms by complementing it with NUS Credit Research Initiative (NUS-CRI)'s PD model, which produces PD term structures of firms on a daily basis

Thank you

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