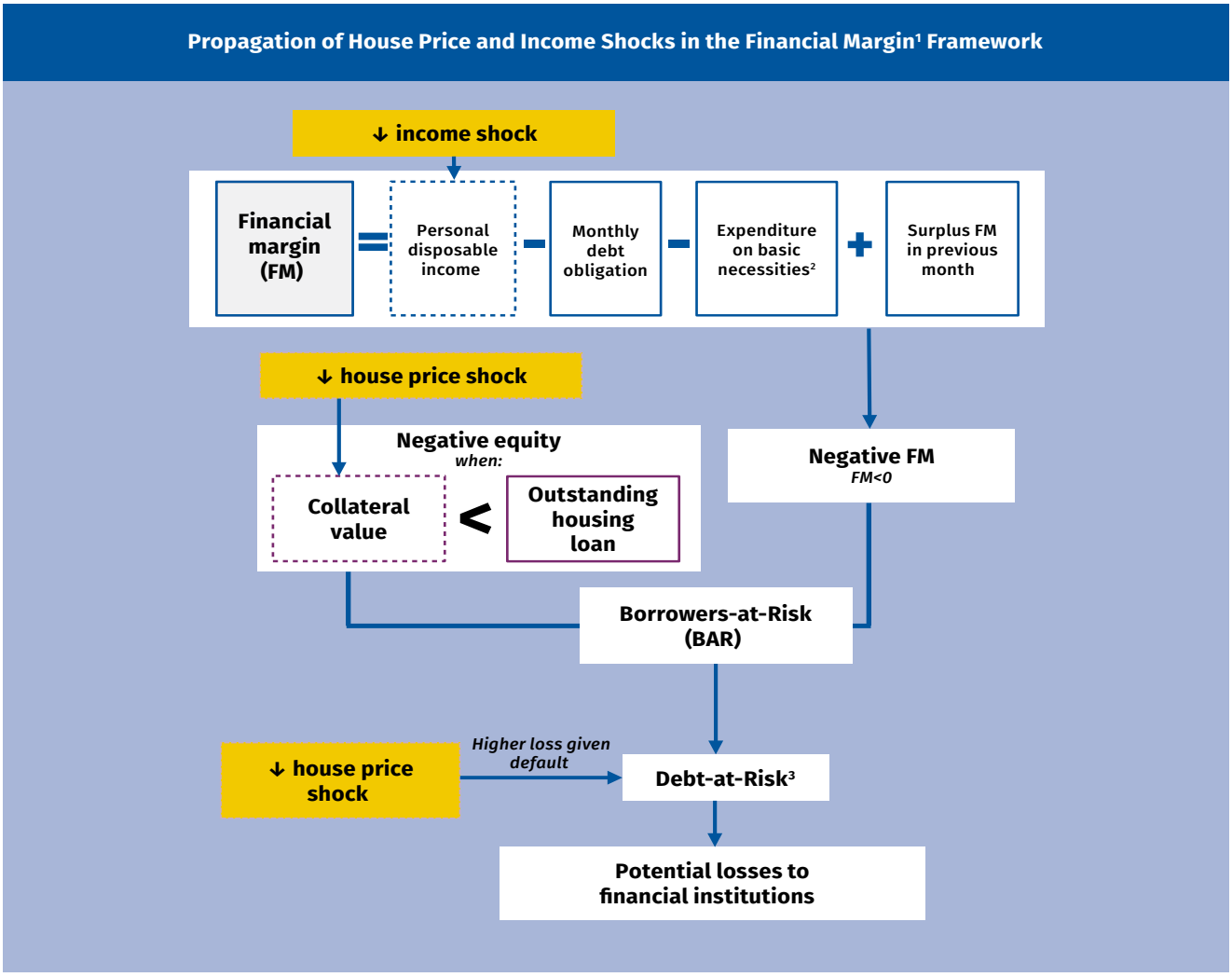
Can Malaysian Households Survive a House Price Shock?

A steep house price decline can potentially weaken household resilience, in turn leading to stress in the banking system.[14] Building upon the financial margin framework[15] featured in previous sensitivity analyses, the Bank has extended the analyses to test the resilience of households and banks in the face of a hypothetical housing market correction (Diagram 1.1). This study simulates an extreme decline in house prices, coupled with a simultaneous decline in household income that tends to accompany a severe correction in the housing market.

Who Defaults?

In establishing which borrowers default, this study focuses on two key factors that influence debt repayment behaviour following a house price decline: (i) ability to repay; and (ii) willingness to repay.

Diagram 1.1: Sensitivity Analysis Framework



[1] Residual monthly disposable income and surplus FM in previous month, after deducting debt repayments and expenditure on basic necessities
[2] For this study, basic necessities are defined as: (i) food and non-alcoholic beverages; (ii) housing rental and maintenance; (iii) water, electricity, gas and other fuels; (iv) transportation; (v) education; (vi) healthcare; and (vii) communication services
[3] The proportion of debt of borrowers-at-risk to total household debt after taking into account the potential loss given default

Source: Bank Negara Malaysia

[14] The experience in the United States during the 2008 Global Financial Crisis offers one example.
[15] Refer to the Financial Stability Review 1H 2019 Information Box 'An Enhanced Financial Margin Framework for the Household Sector', page 14-15.

(i) Ability to repay

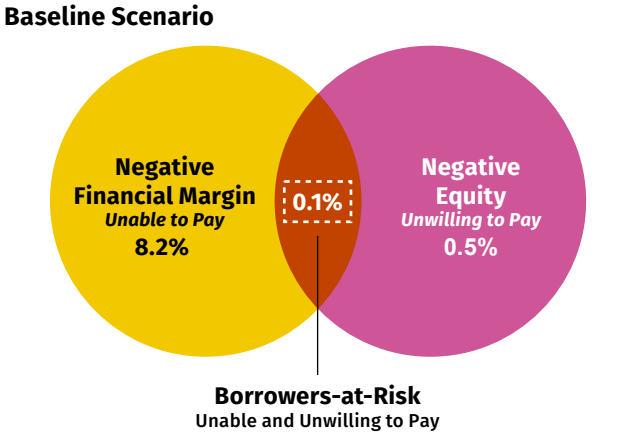
Households' debt repayment capacity is assessed using the financial margin framework - whether a household has additional financial buffers after paying off monthly debt obligations and spending on basic needs. Income shocks are propagated via this channel by directly reducing the household's financial margin and hence pushing more households into a position of negative financial margin.

(ii) Willingness to repay

The potential for a household to default on a housing loan is also likely to be higher if the household is in a negative equity[16] position where it is no longer worthwhile to service the monthly instalments of a loan for a property that is worth less than the total outstanding loan amount. House price shocks propagate via this channel by pushing households into negative equity, making them less willing to repay their loans.

On its own, each factor may not be able to sufficiently predict whether a household will default. The 'Double Trigger Hypothesis'[17] (Diagram 1.2) states that households are more likely to default when both conditions – inability to repay and negative equity – are met. Otherwise, loan defaults may not occur as (a) households with negative financial margin may compensate by drawing down other assets (e.g. EPF Account 2 holdings) or seeking support from family and friends to continue making loan repayments; while (b) households with a negative equity position would still have a strong incentive to continue payments, as defaulting may tarnish their credit history making it difficult to access future credit. Defaulting is also unfavourable for owner-occupiers, who account for the majority (82%) of Malaysian housing loan borrowers, as this would result in the borrowers losing their homes. However, households with negative financial margin and negative equity are in a particularly perilous position as they lack both the incentive and means to repay their loan.

Diagram 1.2: Double Trigger Hypothesis



Note: Figures are as a share of total number of household borrowers

Source: Bank Negara Malaysia

Scenarios and Stress Parameters

This simulation covered all housing loan borrowers with three stress scenarios applied (Table 1.2). A baseline estimation is first performed based on the steps laid out in Diagram 1.1:

1. Identify which borrowers are in both negative equity and negative financial margin (i.e. borrowers-at-risk).
2. Borrowers-at-risk are assumed to cross-default on all loans held.
3. Translate the defaults from borrowers-at-risk into potential losses to banks.

Then, shocks are applied to all housing loan borrowers based on the three scenarios and the above steps are repeated. Besides pushing borrowers into a position of negative equity, house price shocks have the additional effect of reducing the collateral that banks can salvage from the housing loans (i.e. increasing loss given default), thereby increasing banks' potential losses.

[16] Outstanding housing loan held by a borrower is greater than the market value of the corresponding house.
[17] Bhutta et al (2010). 'The Depth of Negative Equity and Mortgage Default Decisions'.

Table 1.2

House Price Shock – Stress Scenarios and Rationale

Shocks		Scenario	Parameters	Historical Comparison
House price shock		S1	↓20%	Double the greatest historical decline in house prices of 9.4% during the Asian Financial Crisis (AFC) in 1998
		S2	↓50%	Reversal of more than 9-years cumulative house price growth
Combination	House price shock	S3	↓20%	Similar to above
	Income shock		↓10%	Larger than the decline in aggregate household disposable income of 8.7% during the AFC

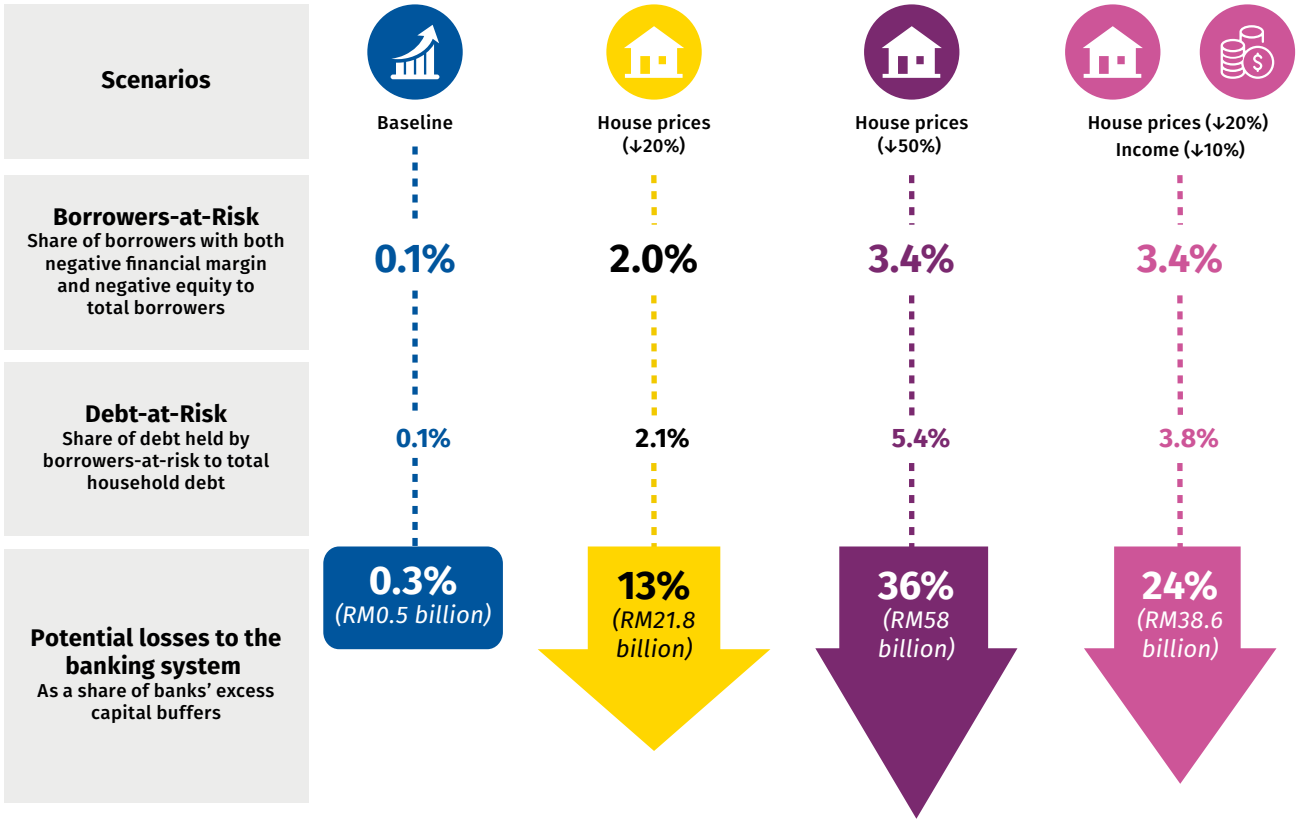
Source: Bank Negara Malaysia

Results

Overall, the impact of house price shocks is contained (Diagram 1.3). Borrowers-at-risk would increase to 2.0% and 3.4% of the total number of borrowers under S1 and S2, respectively (baseline: 0.1%). Correspondingly, losses to the banking system including potential cross-defaults on other loans would amount to 13% and 36% of banks' excess capital buffers, respectively (baseline: 0.3%).

In S3,[18] the simultaneous 10% decline in income coupled with a 20% house price decline would result in the share of borrowers-at-risk increasing to 3.4% of total borrowers, with losses equivalent to 24% of banks' excess capital

Diagram 1.3: Results of Sensitivity Analysis on Potential Losses to the Banking System



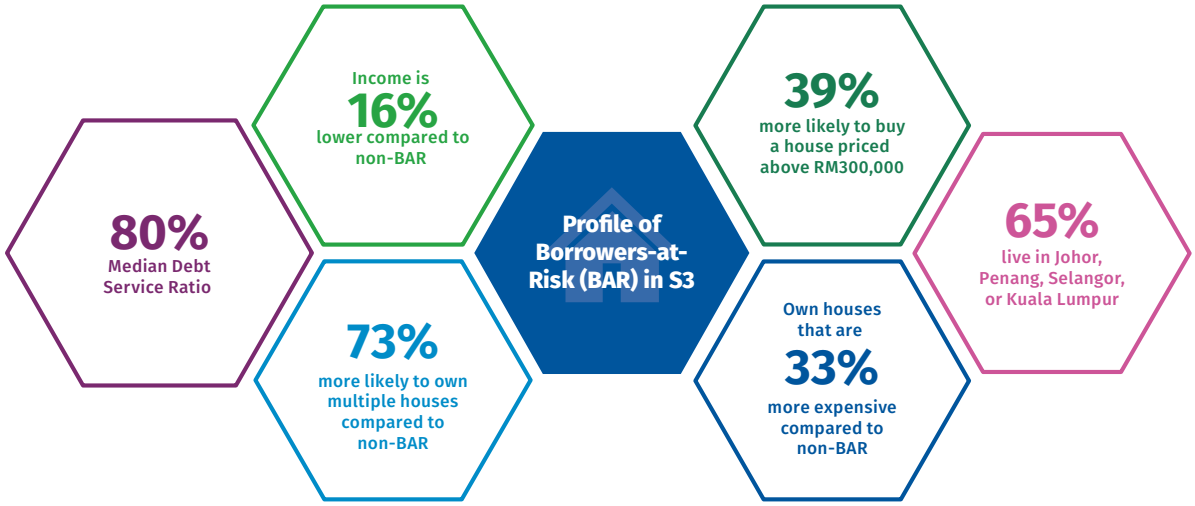
Source: Bank Negara Malaysia and Department of Statistics, Malaysia

[18] S3 mimics the Asian Financial Crisis, albeit with greater severity.

buffers. These borrowers tend to be highly indebted with a debt service ratio of close to 80% and are mainly from the middle-income group living in Kuala Lumpur, Selangor, Johor or Penang. In addition, they tend to borrow for the purchase of houses that on average, are priced at about 33% higher than houses purchased by borrowers who are not at risk. Borrowers with more than one housing loan are also seen to be at higher risk (Diagram 1.4).

The results affirm the ability of banks and most households to withstand even severe house price and income shocks. These results can be attributed to generally prudent loan affordability standards applied by banks when extending loans to households, and the strong levels of capitalisation maintained by Malaysian banks. Borrowers also have ample buffers before falling into negative equity given that the average outstanding LTV ratio is 57%. Together with the series of macroprudential measures implemented over the recent decade to rein in excessive credit risk, these conditions remain important to avert a potential build-up of financial risks.

Diagram 1.4: Profile of Borrowers-at-Risk for Scenario 3



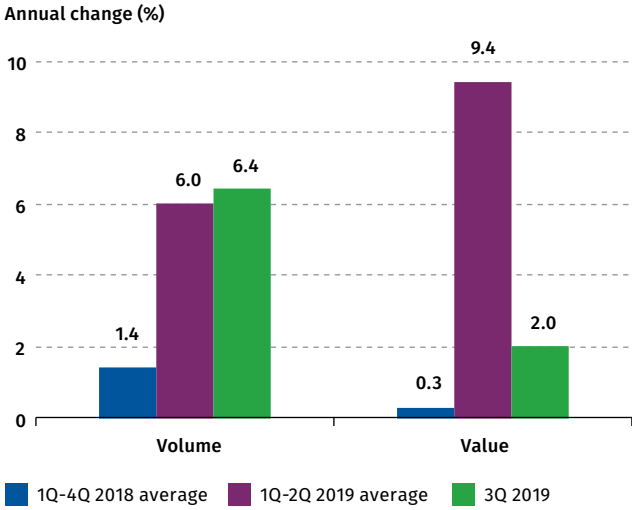
Source: Bank Negara Malaysia

Housing Market Activity Improved while Vulnerabilities Remain in Certain Segments of the Commercial Property Market

Malaysian house prices[19] continued to grow moderately in 3Q 2019, on the back of steady demand for affordable[20] high-rise properties. Housing market activity remained strong after a better outturn in the first half of 2019 (Chart 1.10) as a result of various initiatives introduced during the year by both the Government and private sector to support home ownership, including stamp duty exemptions as well as developers' discounts and rebates. For the year as a whole, housing market transactions are expected to register a stronger positive growth in volume terms.

Chart 1.10: Property Market – Housing Transactions

Sustained property market activity, with continued demand for affordable properties



Source: National Property Information Centre (NAPIC)

[19] As measured by the Malaysian House Price Index (MHPI).
[20] Houses priced below RM300,000.