



Have we avoided the Covid insolvency wave?

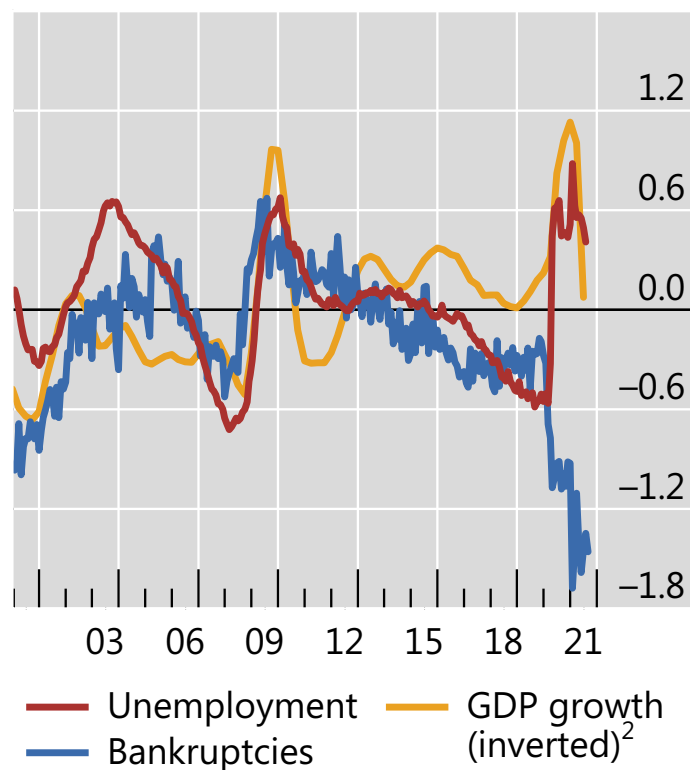
EBA Policy Research Workshop

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*The views expressed here are mine and not necessarily those of the Bank for International Settlements

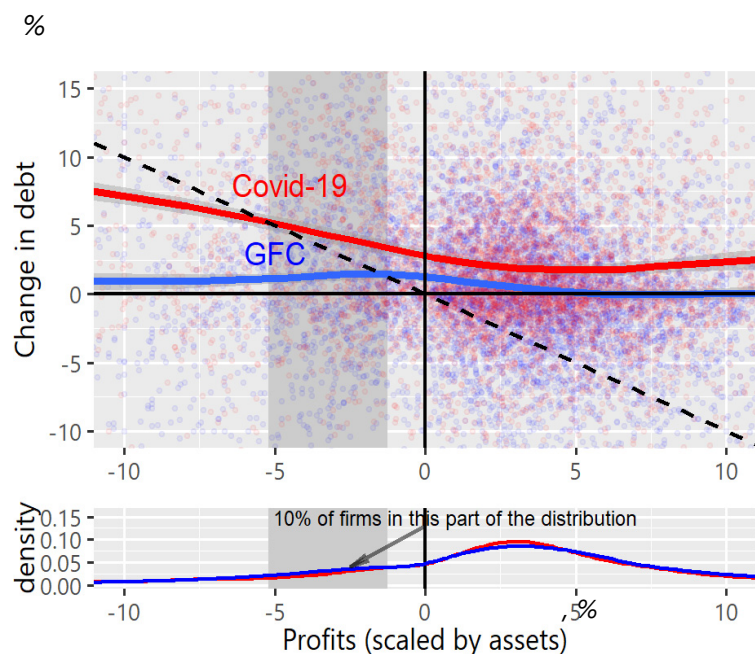
Covid-19 bankruptcy gap



- A “bankruptcy gap” has emerged between measures of activity and realised bankruptcies
- Bankruptcies are well below 2019 levels in many economies

Credit provision to loss making firms during Covid-19...

... significantly above GFC^{1,2}



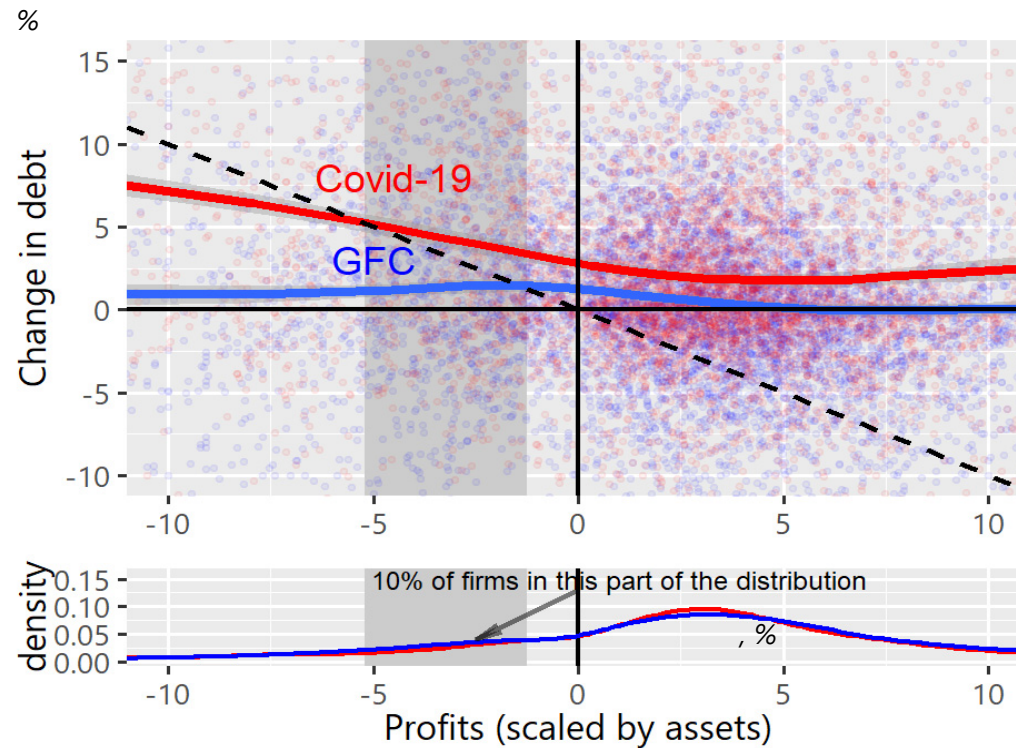
...significantly higher for Covid-19 affected sectors^{1,3}



¹ Both panels are based on public and private companies in all non-financial sectors (Consumer Discretionary, Consumer Staples, Energy, Healthcare, Industrials, InfoTech, Materials, Real Estate, Telecom and Utilities) on G20 countries and Spain. ² Covid-19: based on 39,932 companies, change between Q4 2019 and Q3 2020. GFC: based on 31,426 companies, change between Q3 2008 and Q1 2009. ³ Based on 39,932 companies. Covid-19 exposed sectors: Airlines, Hotel, Restaurants and Leisure, Entertainment, Textiles, apparel and luxury goods

Source: BIS Bulletin #40, March 2021 by Banerjee, Noss and Vidal Pastor

Credit provision to loss making firms during Covid-19 significantly above GFC¹



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Credit provision to loss making firms during Covid-19 significantly higher for Covid-19 affected sectors...¹



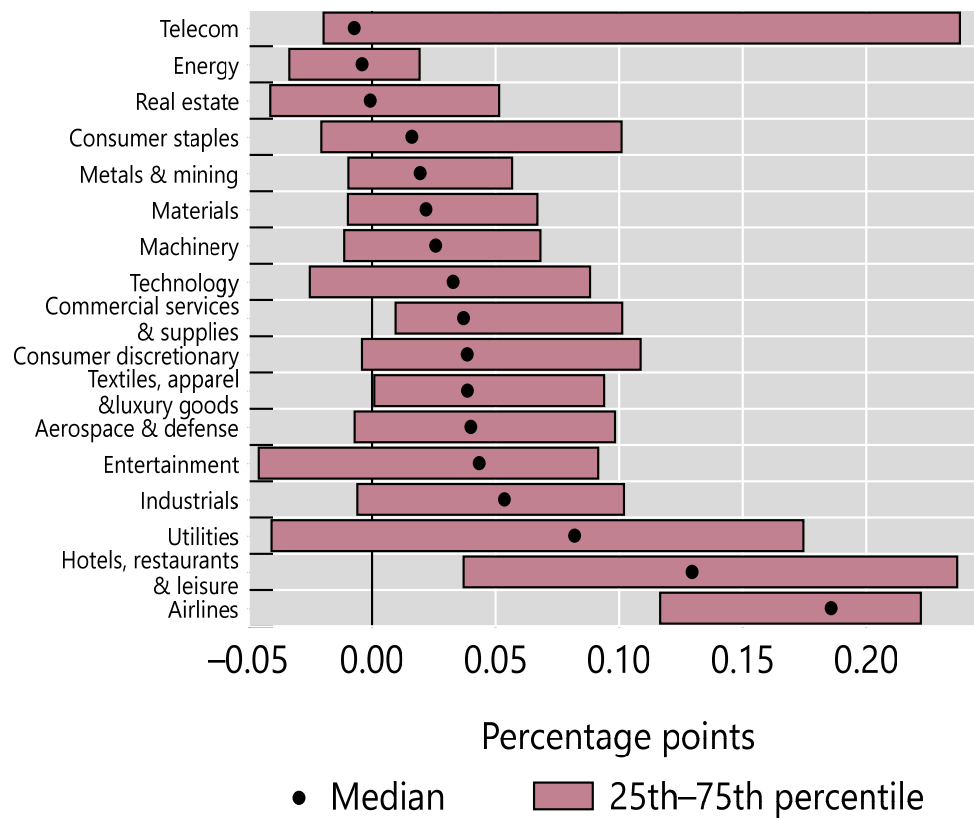
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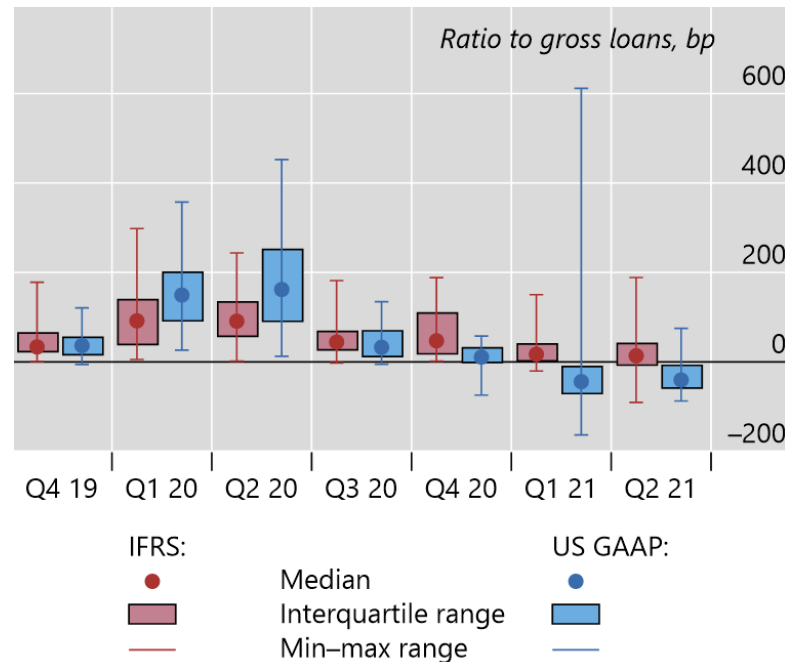
...resulting in large increases in debt for those sectors

Increase in debt to assets, in loss making firms

Between Q4 2019 and Q3 2020



Both the level and dispersion of provisions increased in 2020^{1, 2}

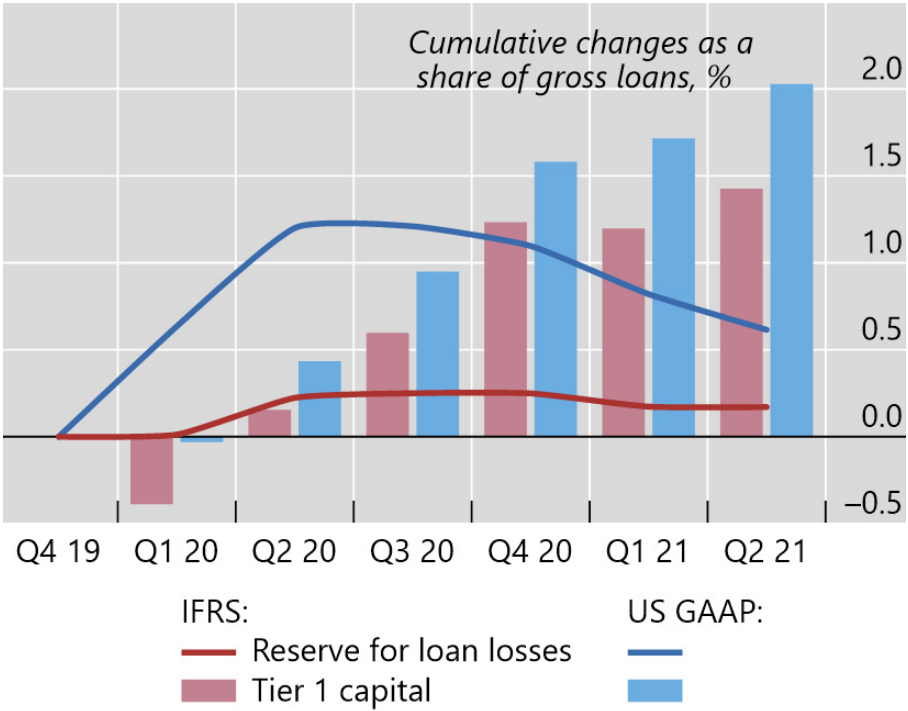


The sample includes 57 large, internationally active banks (of which 42 are IFRS and 15 US GAAP). Banks under the US GAAP framework make use of lifetime credit risk in determining provisions, while under the IFRS framework banks apply one-year credit risk for most loans.

¹ Annualised figures. ² Does not include the effect US GAAP banks applying ECL provisioning to existing loans in 2020Q1.

Source: BIS Quarterly Review, March 2021 (Araujo and Cohen)

Cumulative changes in Tier 1 capital and reserve for loan losses



The sample includes 57 large, internationally active banks (of which 42 are IFRS and 15 US GAAP).

Source: Bloomberg.

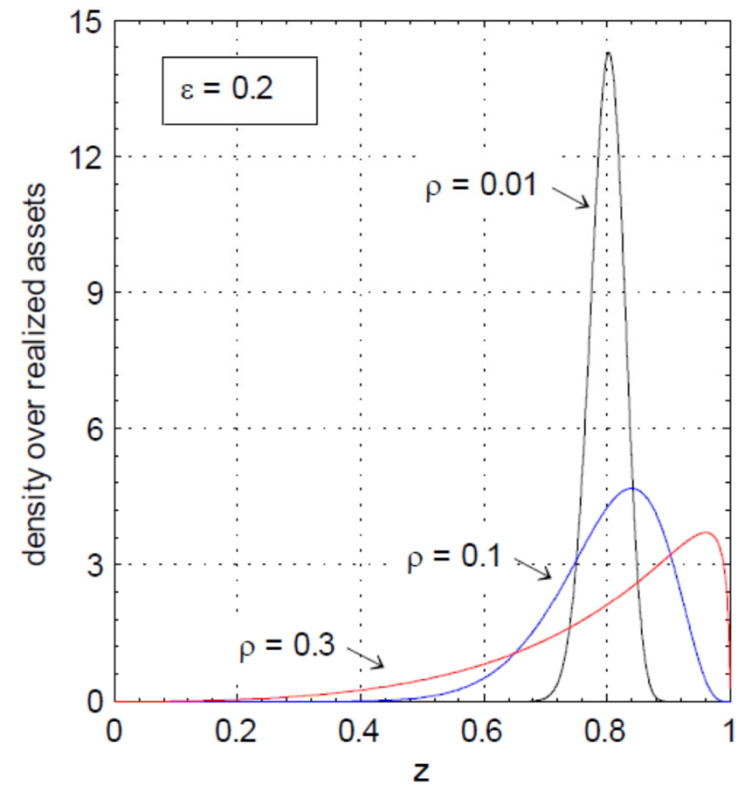
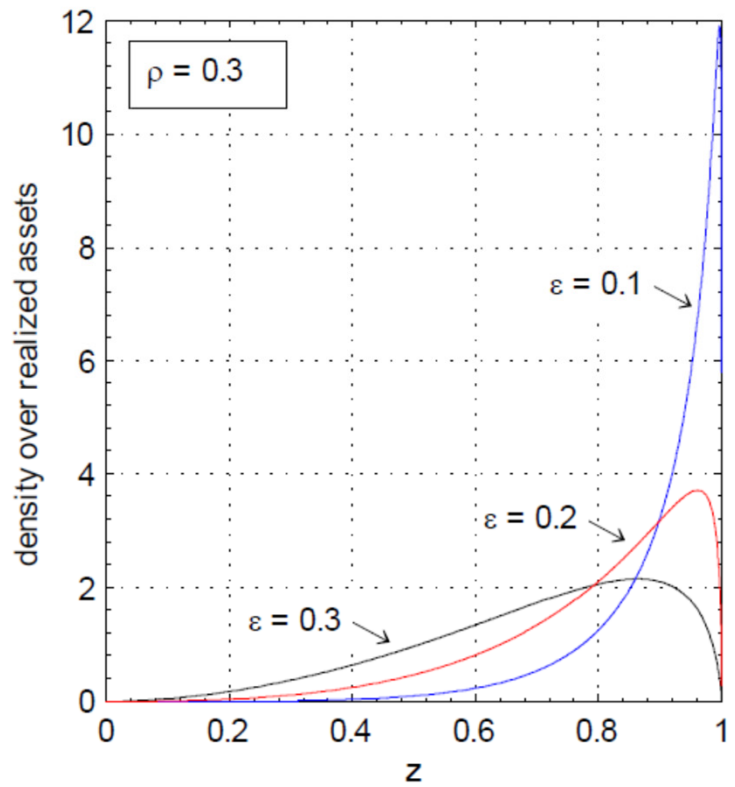
Vasicek (2002) one factor model of credit risk:
multi-loan version of Merton (1974) where standard normal random variable driving default is:

$$Z_i = Y\sqrt{\rho} + X_i\sqrt{1-\rho}$$

where Y, X_1, X_2, \dots are **mutually independent standard normal** random variables.

- Y is the “common factor”, such as the state of the economic cycle.
- X_i is the pure idiosyncratic element in firm i 's project
- ρ is the correlation coefficient between Z_i and Z_j for $i \neq j$.

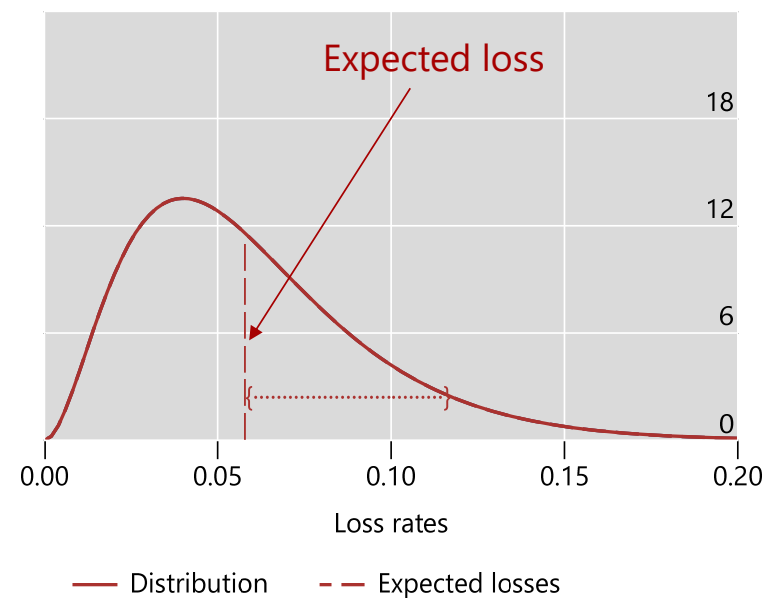
Outcome density in Vasicek one factor model



The loss distribution: expected and unexpected losses

- *Expected losses*
 - Mean of distribution
 - Expected losses drives banks' provisioning

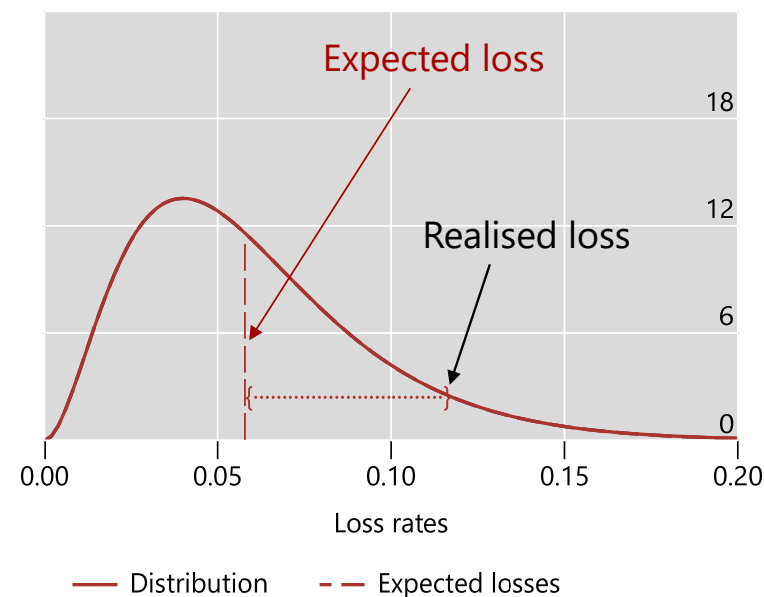
Expected and unexpected losses



Two key aspects of the loss distribution: expected and unexpected losses

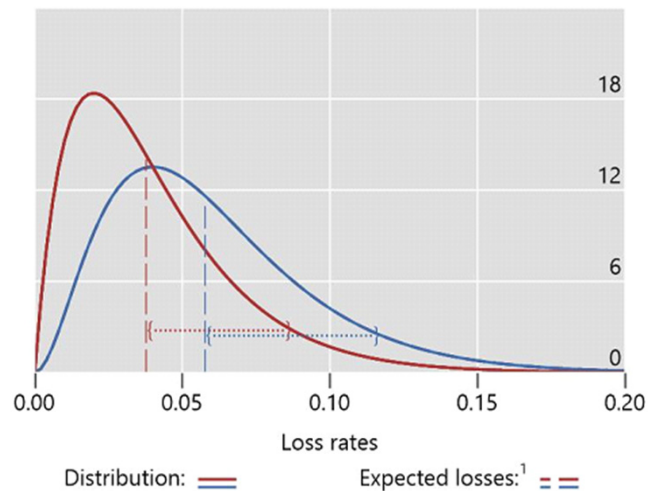
- *Expected losses*
 - Mean of distribution
 - Expected losses drives banks' provisioning
- *Unexpected losses*
- Eventual loss rate could deviate substantially
 - Even if the forecast reflects all relevant information
- Greater dispersion in distribution of losses
 - Higher likelihood of a large wedge between realised and expected losses
- Bank capital is there to absorb these *unexpected losses*

Expected and unexpected losses

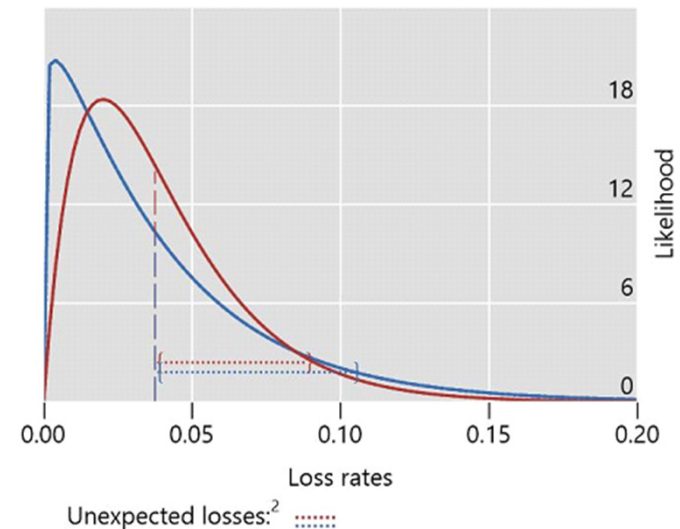


Monitoring changes in the loss distribution

Expected and unexpected losses changing in sync



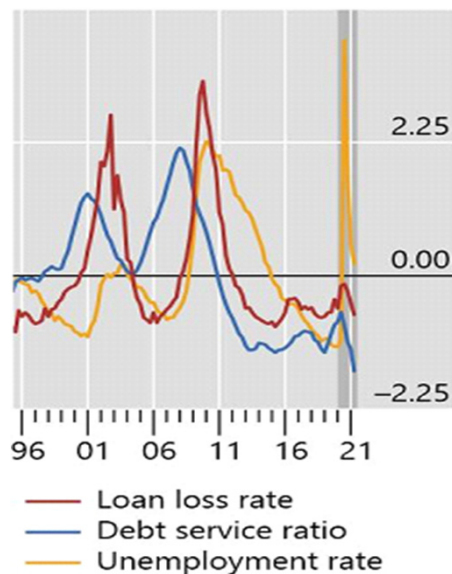
Decoupling of expected and unexpected losses



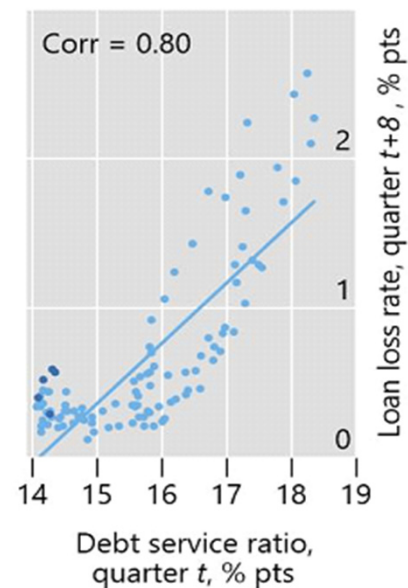
- To assess loss-absorbing resources:
 - Supervisors and risk managers need to monitor changes in the loss distribution
- Temptation to infer *unexpected losses* from forecasts of *expected losses*
 - Latter is typically easier to forecast
- Decoupling – fair description of the current environment?

Indicator of expected losses

DSR and loan loss rates



DSR forecasts *expected losses*



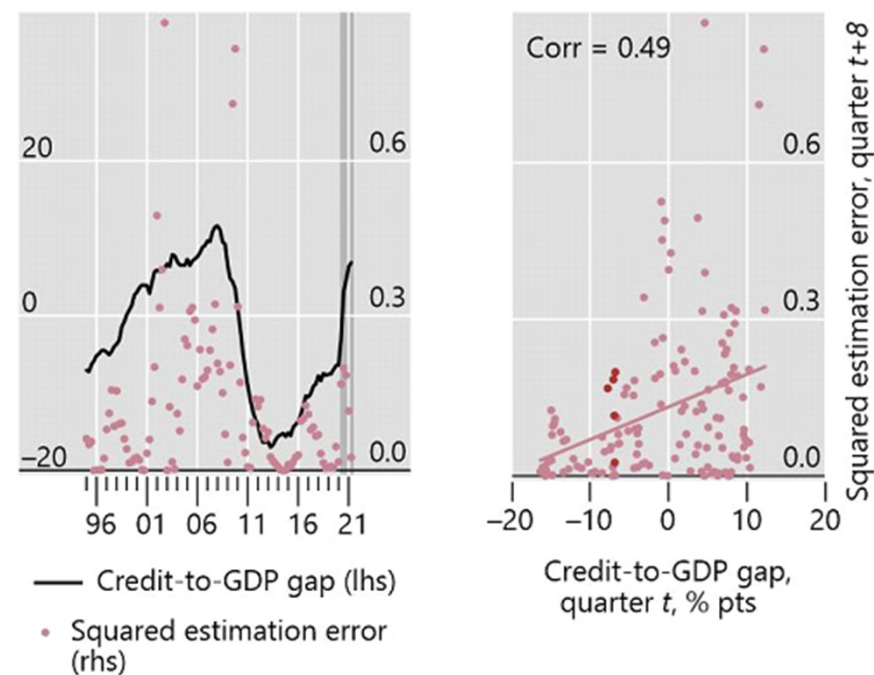
- Private non-financial sector's debt service ratio (DSR)
 - Captures cash flow strains
 - Used to model firm failures (eg Gourinchas et al (2020))
 - Good indicator of historical *expected losses*
- But DSR predicated on sustained access to credit markets
 - Maybe a poor indicator of *unexpected losses*

Source: BIS Bulletin #46, August 2021 (Tarashev and Juselius)

Indicator of unexpected losses

- Credit-to-GDP gap
 - Forecasts extreme events, such as banking crises
 - May better capture potential creditor retrenchment, eg when deterioration in underwriting standards comes to the fore.
 - Good indicator of historical *unexpected losses*

Credit-to-GDP gap and loan loss forecast errors

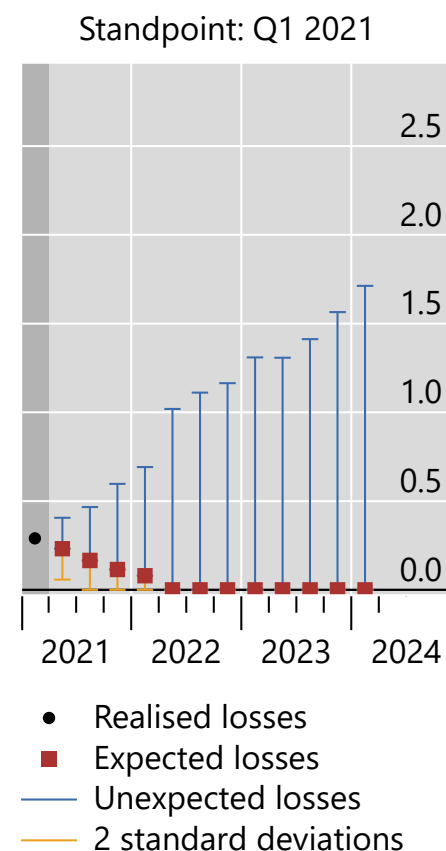


Source: BIS Bulletin #46, August 2021 (Tarashev and Juselius)

Real-time forecasts of expected and unexpected losses - Covid

- Regularity between expected and unexpected losses appears to have decoupled during the Covid pandemic
- *Expected losses* low
 - Low interest rates and support to incomes etc kept DSRs low
- *Unexpected loss* risk remains elevated
 - But below the peak realised losses of 2.5% during the GFC

Quarterly loss rates, in per cent



Source: BIS Bulletin #46, August 2021 (Tarashev and Juselius)

Summing up

- A “bankruptcy gap” has emerged between measures of activity and realised bankruptcies
- Facilitated by ample credit to non-financial corporates
- Increased debt vulnerabilities
- Outlook for losses appears highly uncertain
 - Expected losses appear to be contained
 - But heightened risk of large unexpected losses
- Adequate capital for unexpected loss

References

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