

Subprime Auto Credit: Navigating Risks on the Horizon

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Subprime Auto Credit: Should We Be Worried?

Rapid growth in auto lending since the Great Recession has stoked concerns about another credit bubble.

Fundamental questions need to be answered:

- » How much subprime credit has accumulated and where?
- » Is all subprime credit performance worsening?
- » Is performance being driven by the economy or risk layering?
- » How have falling residual values impacted credit losses?
- » What is the outlook for subprime auto credit?

Today's Speakers



Michael Vogan, Automobile Economist

Michael Vogan is an Automobile Economist in the Credit Analytics department at Moody's Analytics. Before joining Moody's Analytics, Michael was a research analyst at the Federal Reserve Bank of Philadelphia. He holds a master's degree in applied economics and econometrics from the University of Delaware and a bachelor's degree in economics from Bloomsburg University.

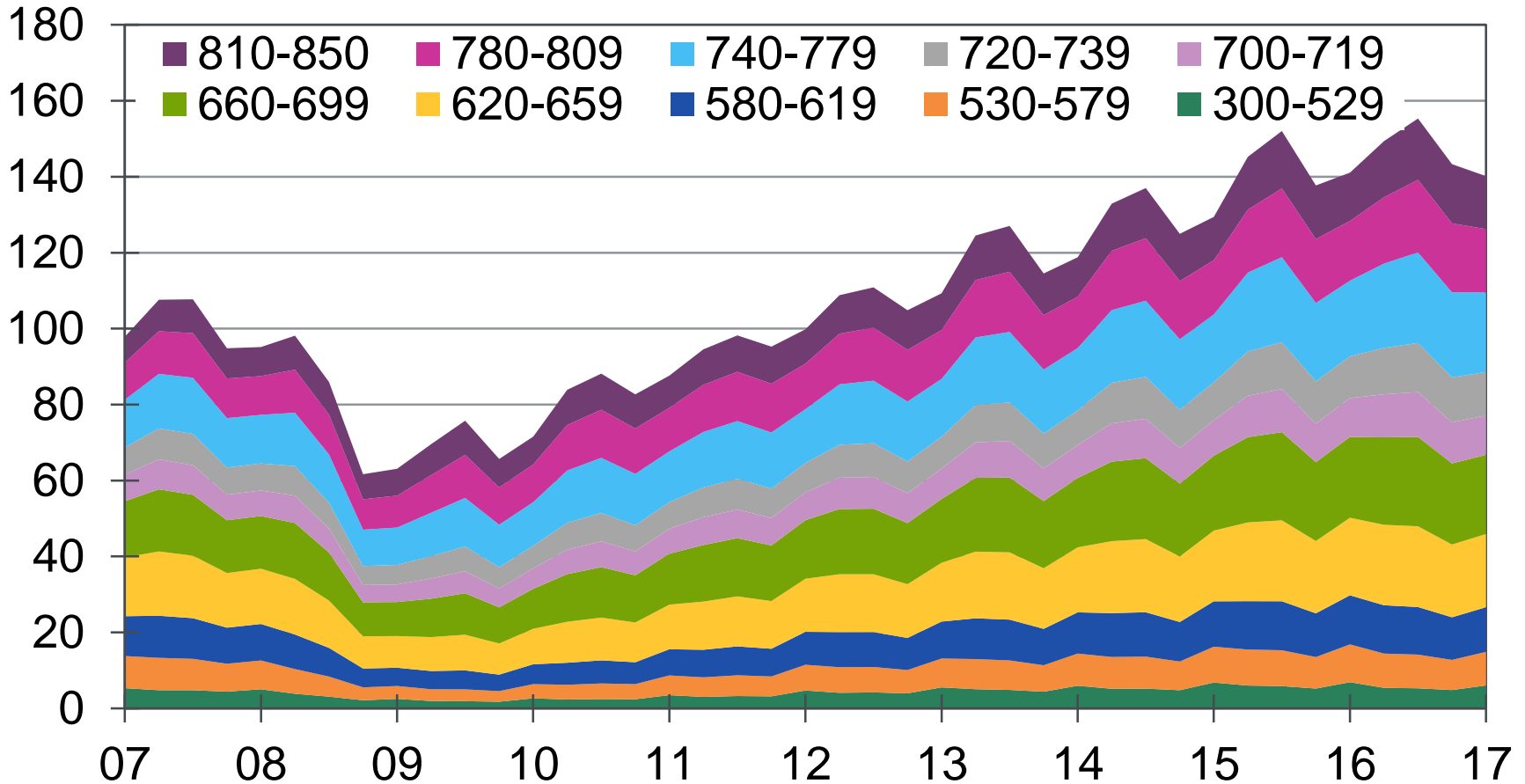


Alexander Lowy, Regional Account Associate

Alex Lowy is a Regional Account Associate at Moody's Analytics, focusing on the firm's auto analytics solution set. Alex helps support clients using the AutoCycle model, along with other tools to help manage auto-related exposures. Prior to this role, Alex was an economist on the Moody's team focusing on regional labor force dynamics and leading the international forecasting team. He has a B.A. in economics from Hamilton College.

Subprime Credit Flow on Par With Prerecession

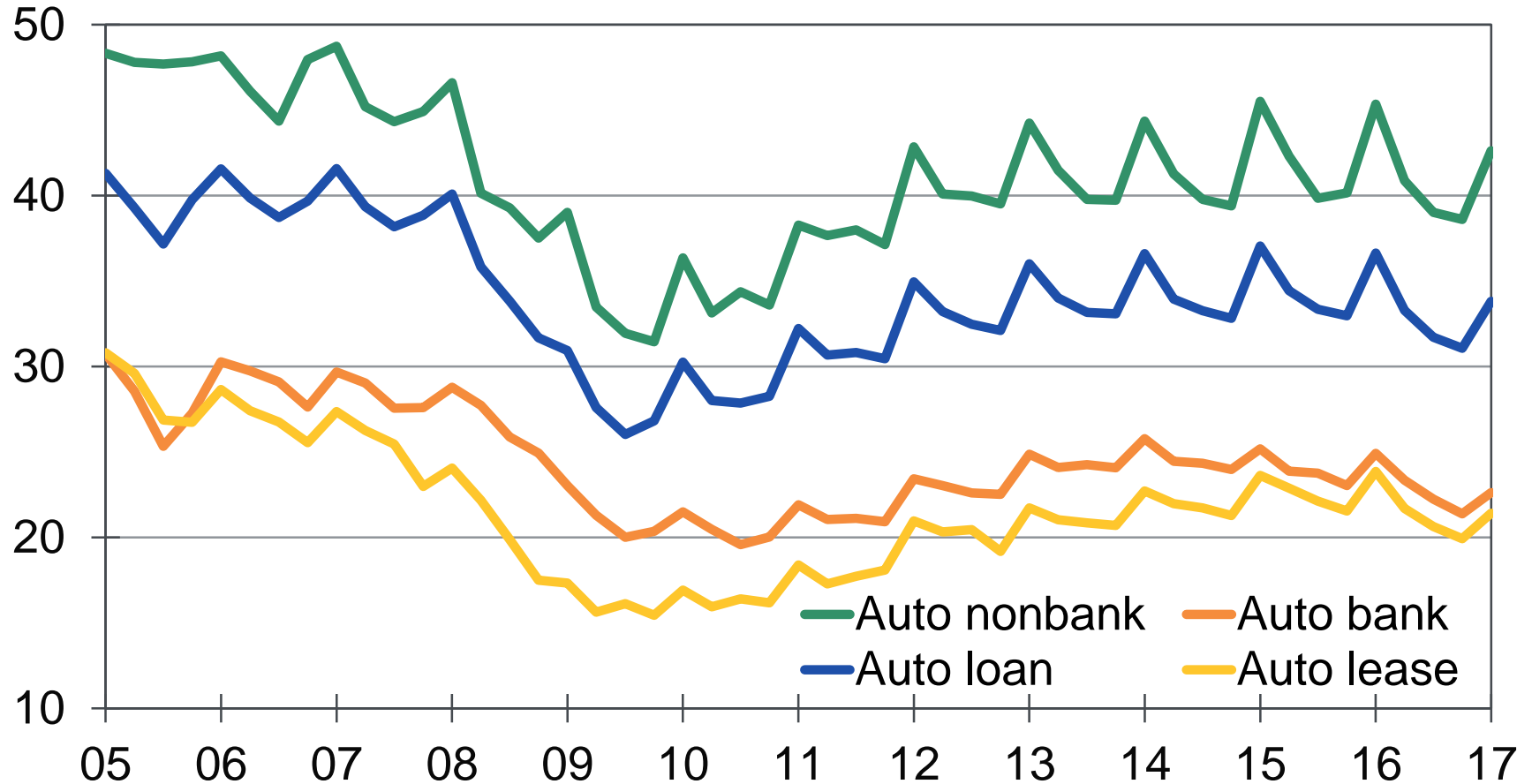
Auto origination volume by Vantage Score 3.0, \$ bil



Sources: Equifax, Moody's Analytics

Subprime Penetration Rate Is Unalarming

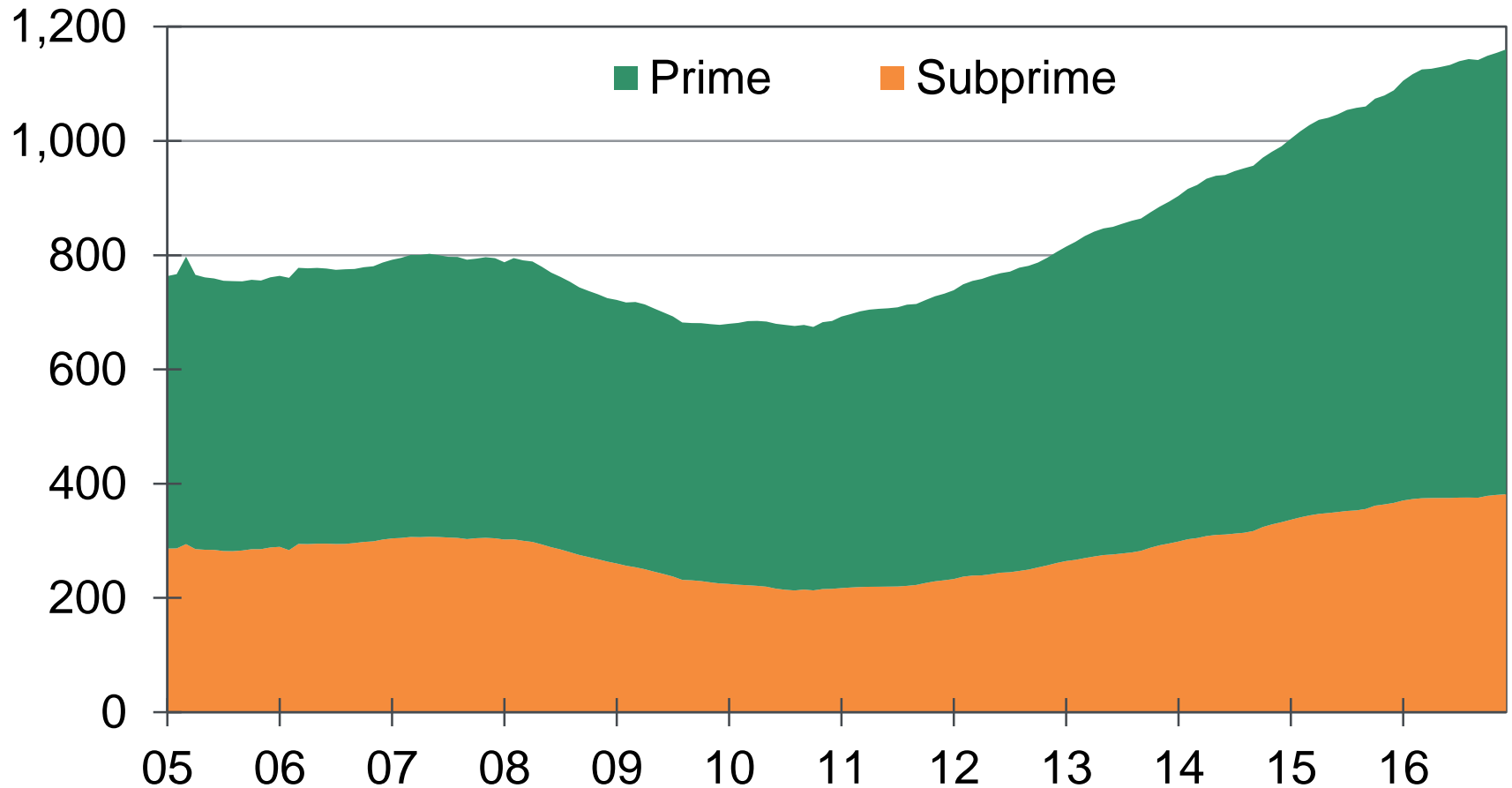
Loans and leases with risk score less than 660, % of origination \$



Sources: Equifax, Moody's Analytics

What Subprime Auto Bubble?

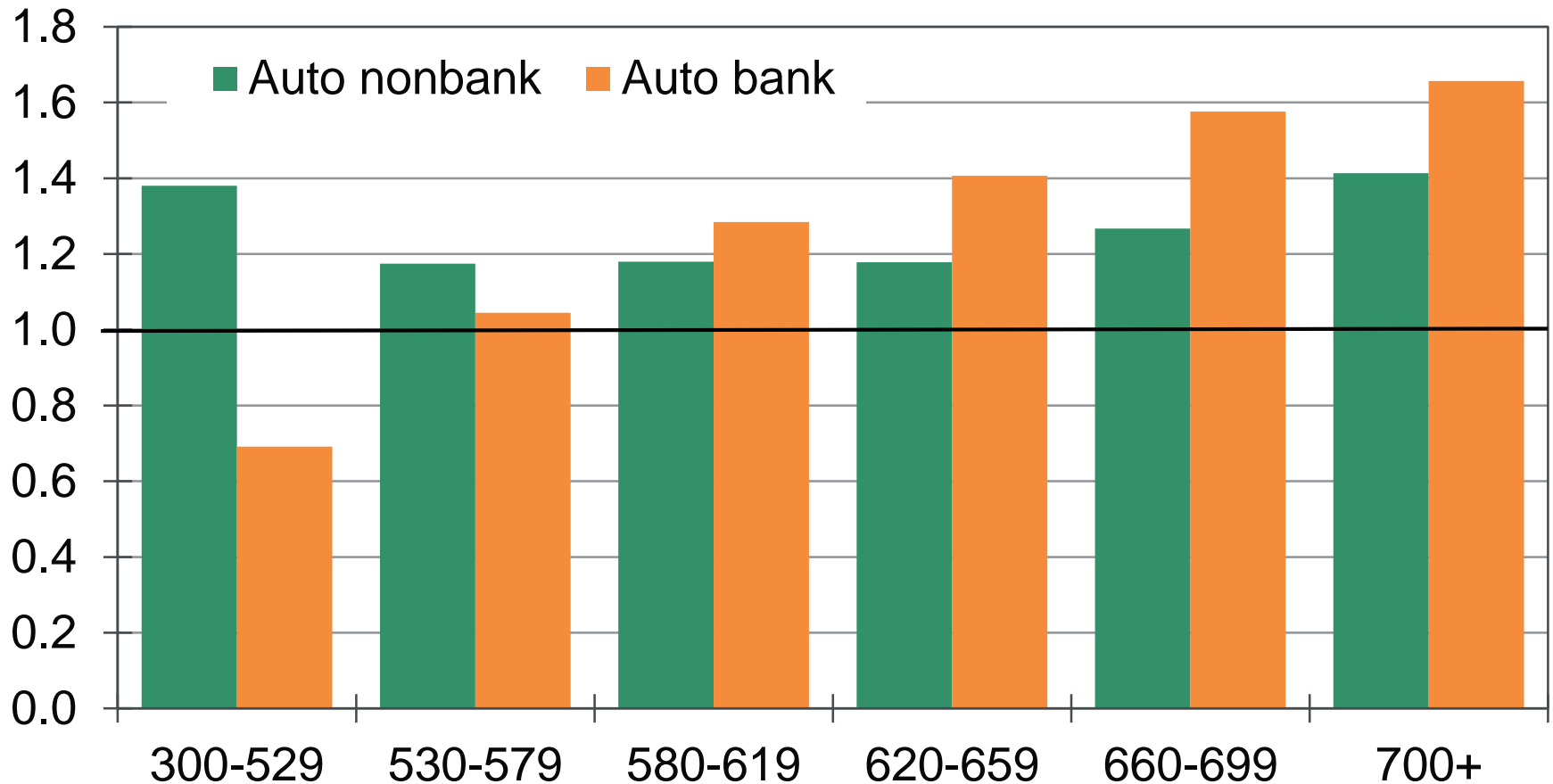
Outstanding balances on open auto accounts, \$ bil



Sources: Equifax, Moody's Analytics

Deep Subprime Auto Nonbank Has Surged

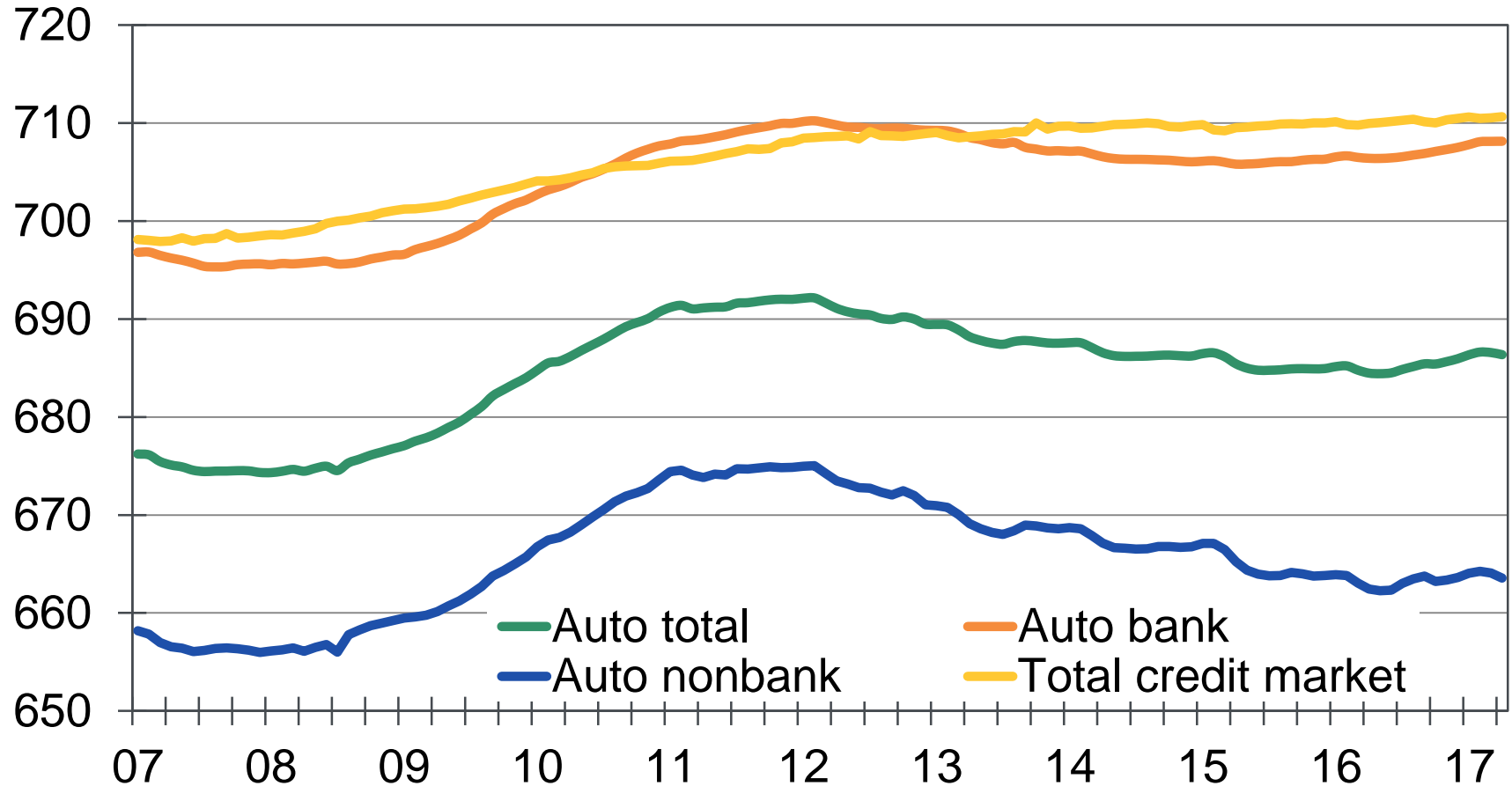
Ratio of Jun 2017 balances to prerecession peak, by risk score



Sources: Equifax, Moody's Analytics

Auto Credit Cycle Slowly Turning

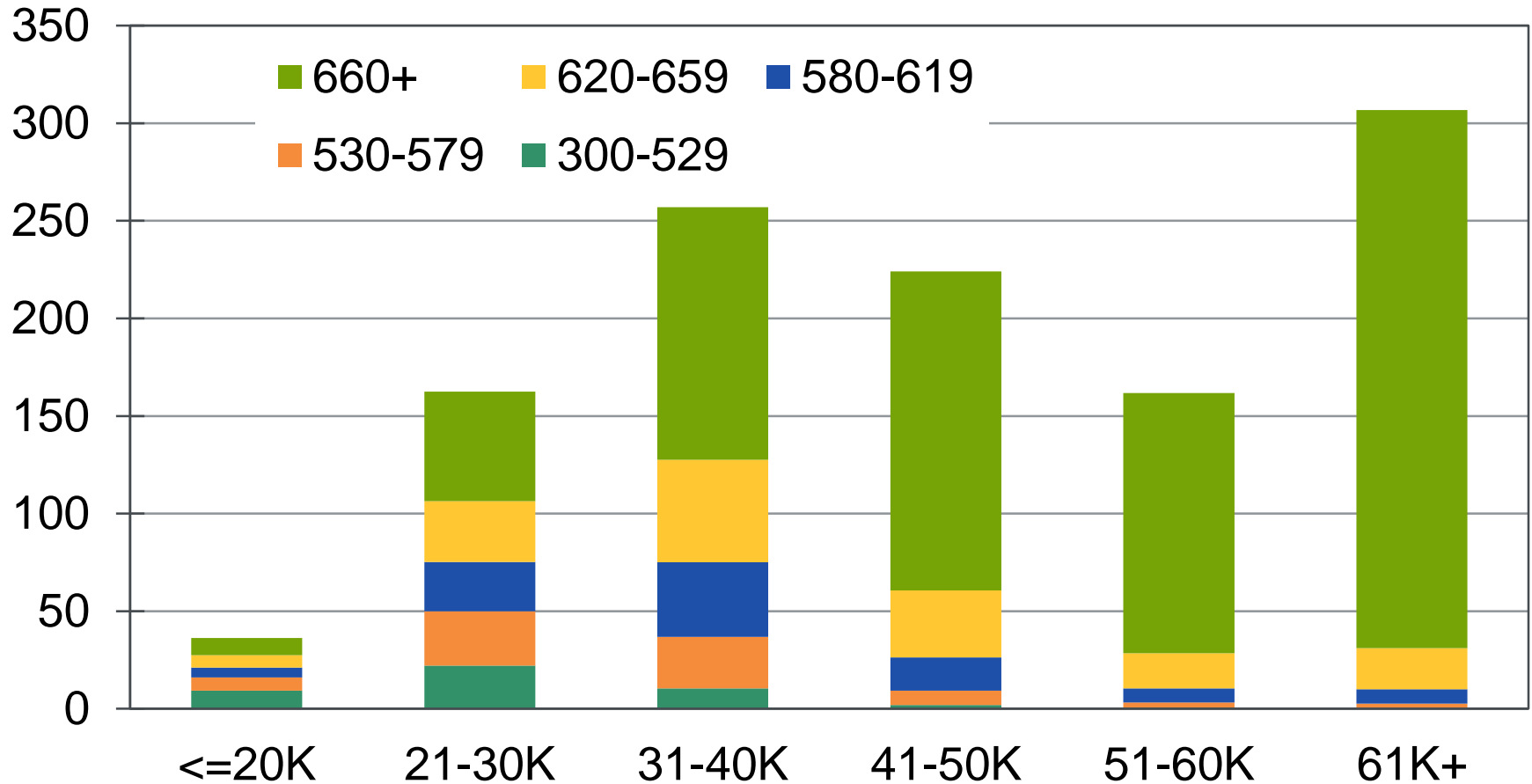
Avg origination risk score, calculated



Sources: Equifax, Moody's Analytics

Low-Income Borrowers Rely on Subprime Credit

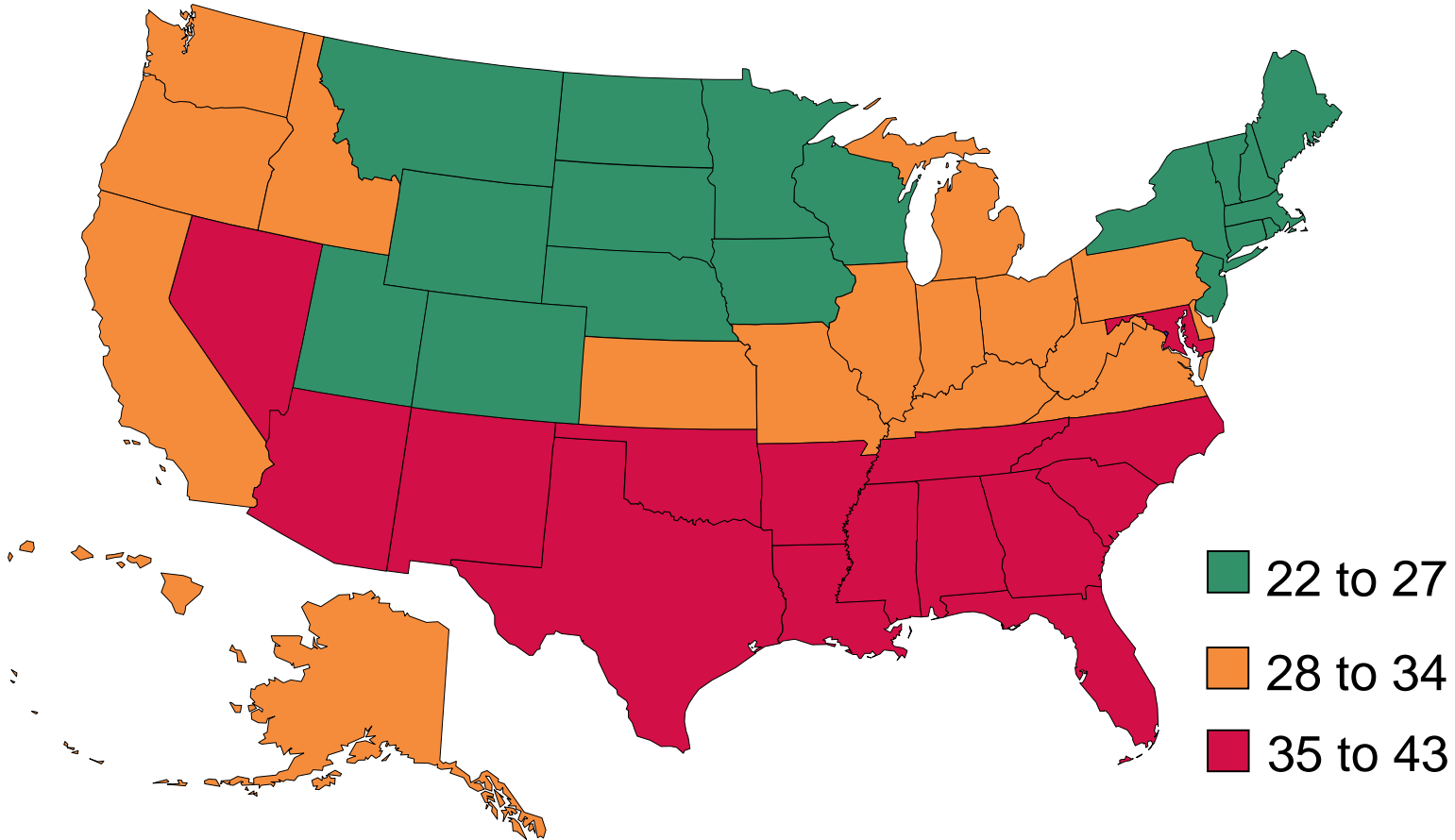
Outstanding bal., \$ bil., by orig. score and orig. income, Jun 2017



Sources: Equifax, Moody's Analytics

Subprime Auto Lending Is a Southern Affair

Subprime % of outstanding balances, Jun 2017



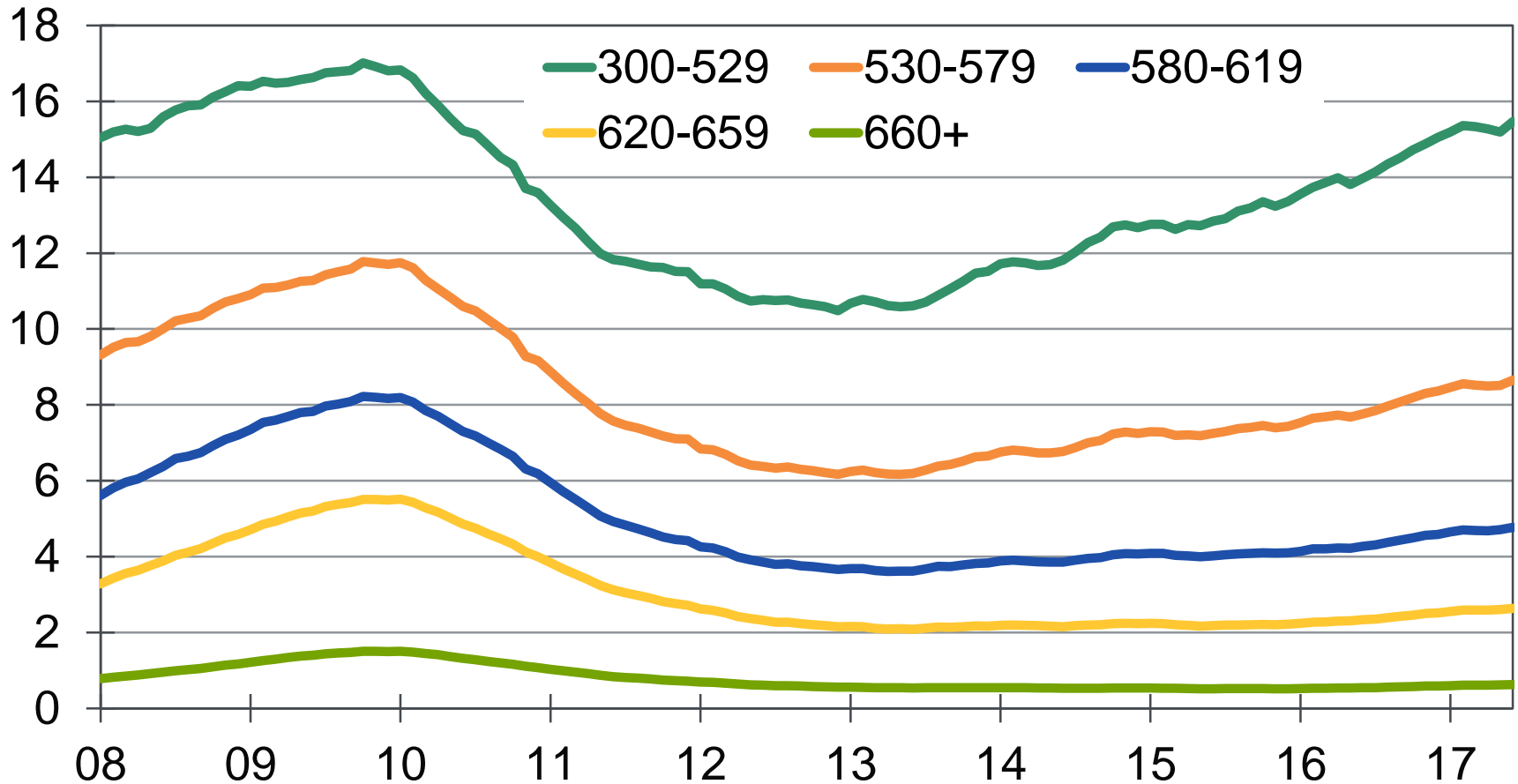
Sources: Equifax, Moody's Analytics

Auto Credit Markets in Natural Cycle

- » Overall, subprime auto lending growth is in line with the expected credit cycle.
- » Outstanding subprime auto balances pale in comparison to residential loans before the recession.
- » Deepest subprime lending has notably expanded in the nonbank auto space, reaching \$38.9 billion outstanding in June 2017.
- » Subprime loans are highly concentrated to low-income borrowers and the southern United States.

Deep Subprime Defaults Climbing Fast...

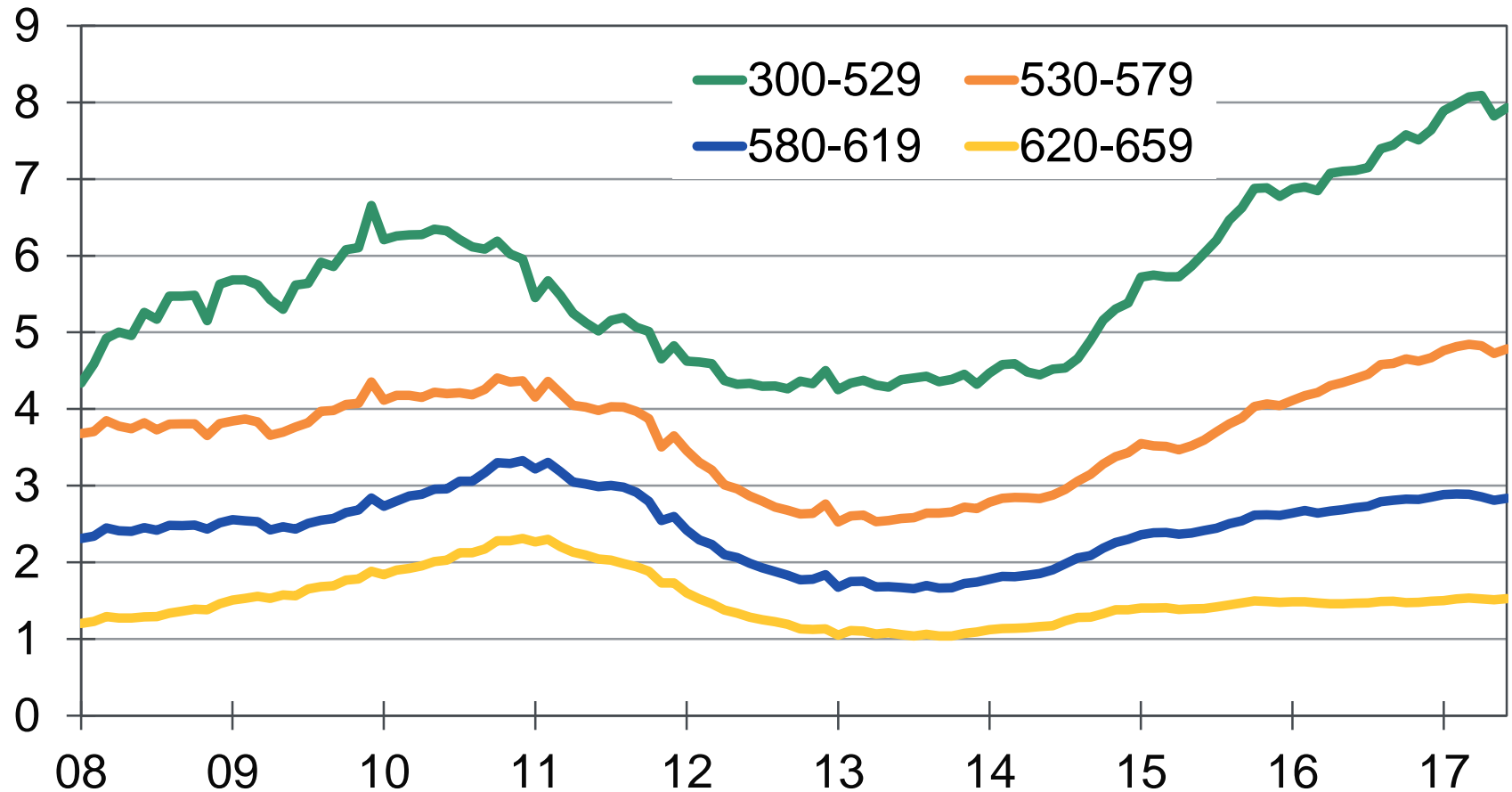
Auto default rate, % of \$ volume, 12-mo MAAR, by credit score



Sources: Equifax, Moody's Analytics

...Especially in the Auto Nonbank Sector

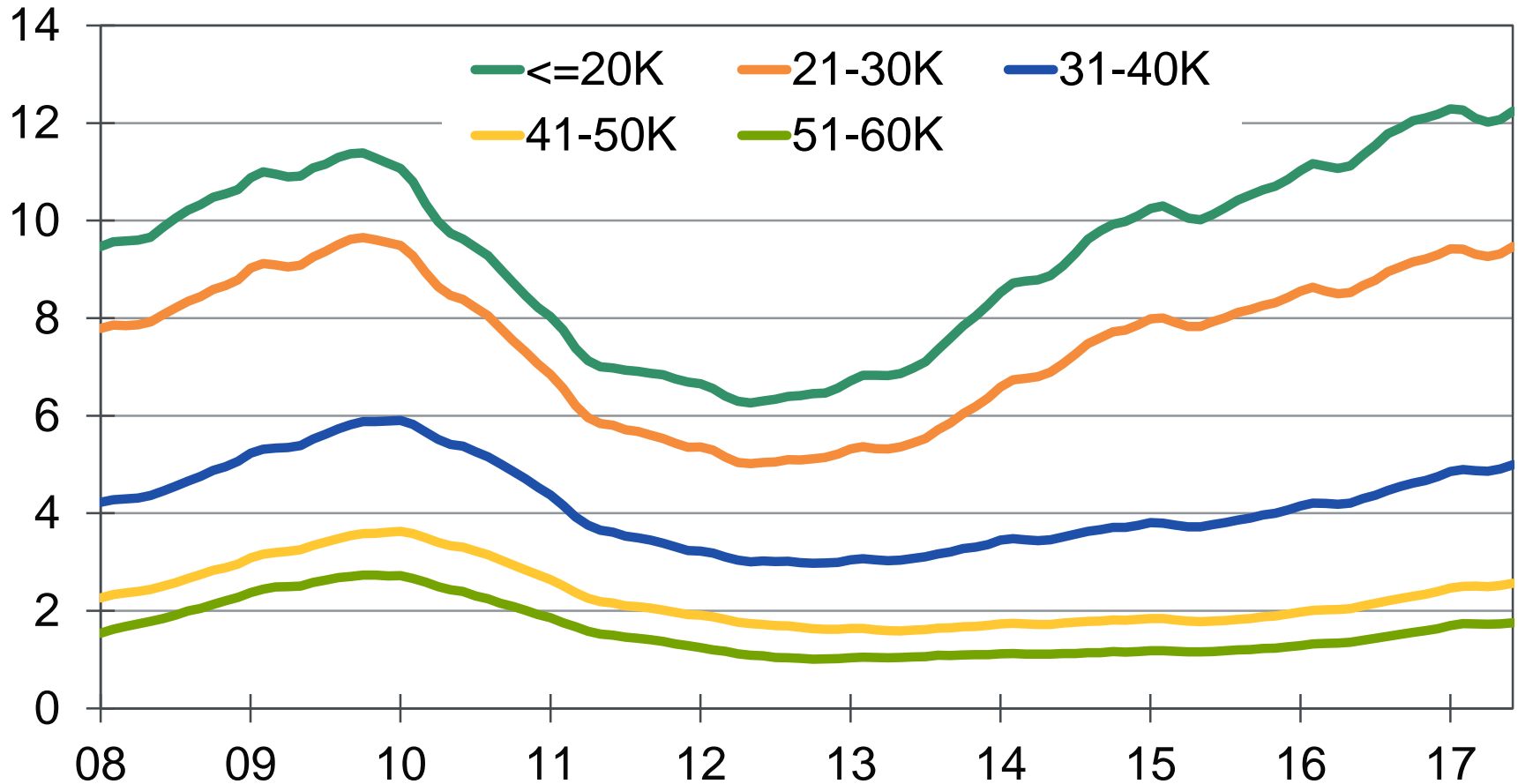
Auto nonbank/bank default rate spread, % of \$ vol., 12-mo MAAR



Sources: Equifax, Moody's Analytics

Layered Risks Are Concerning

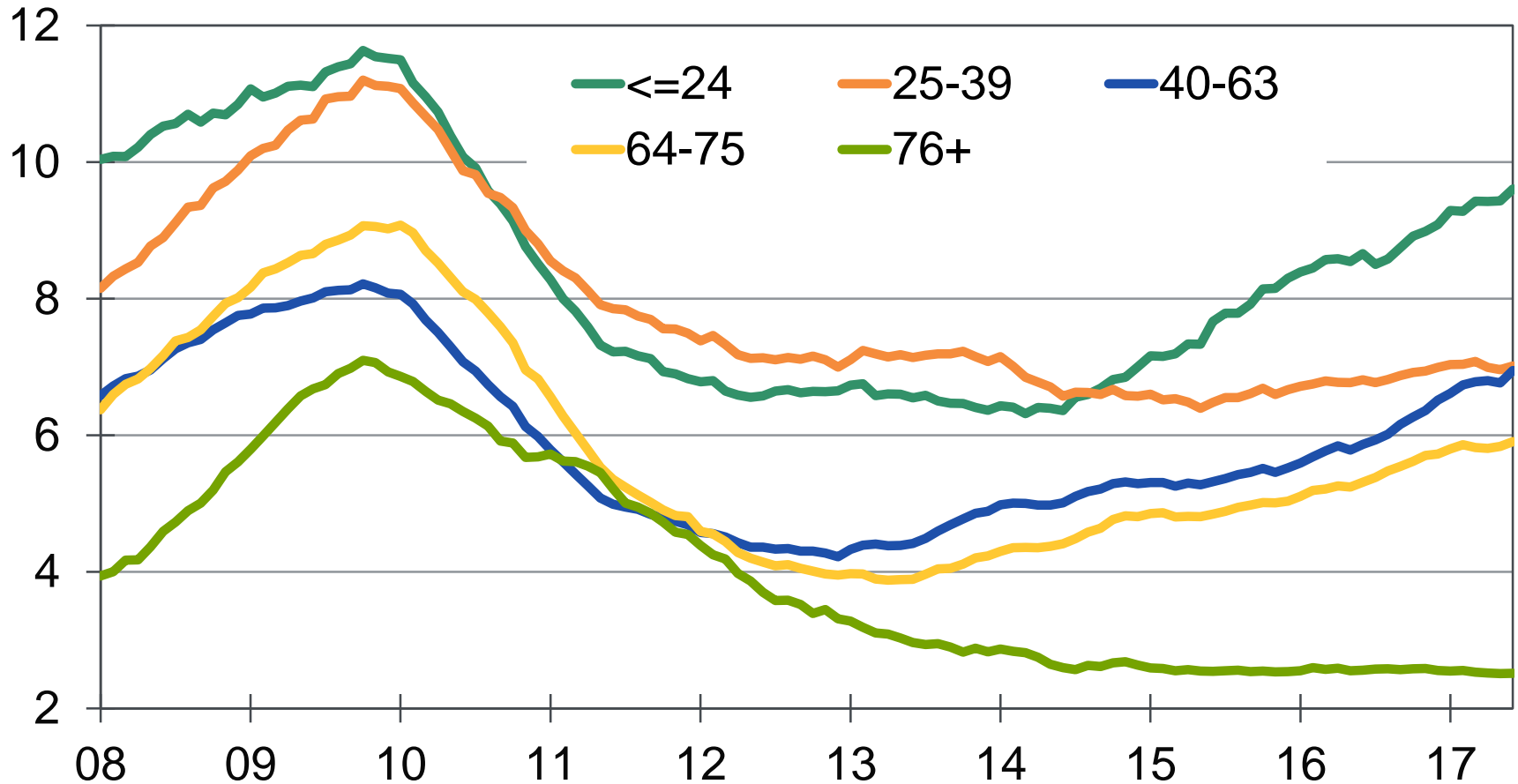
Subprime 90-day dlq. rate, % of \$ vol., 12-mo MAAR, by income



Sources: Equifax, Moody's Analytics

Short-Term Credit Has Highest Default Risk...

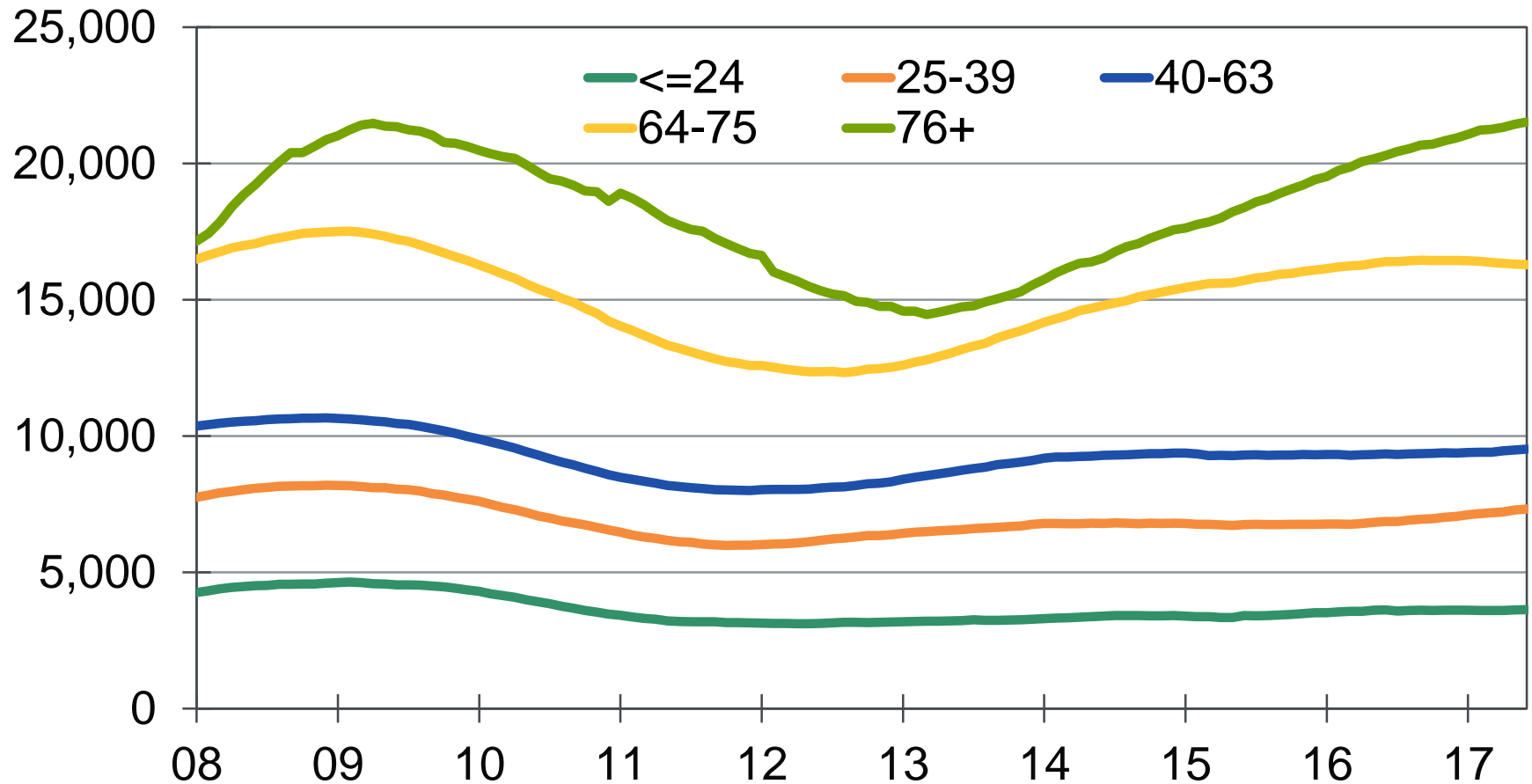
Subprime default rate, % of \$ vol, 12-mo MAAR, by term length, mo



Sources: Equifax, Moody's Analytics

...But Long-Term Gross Losses Rising

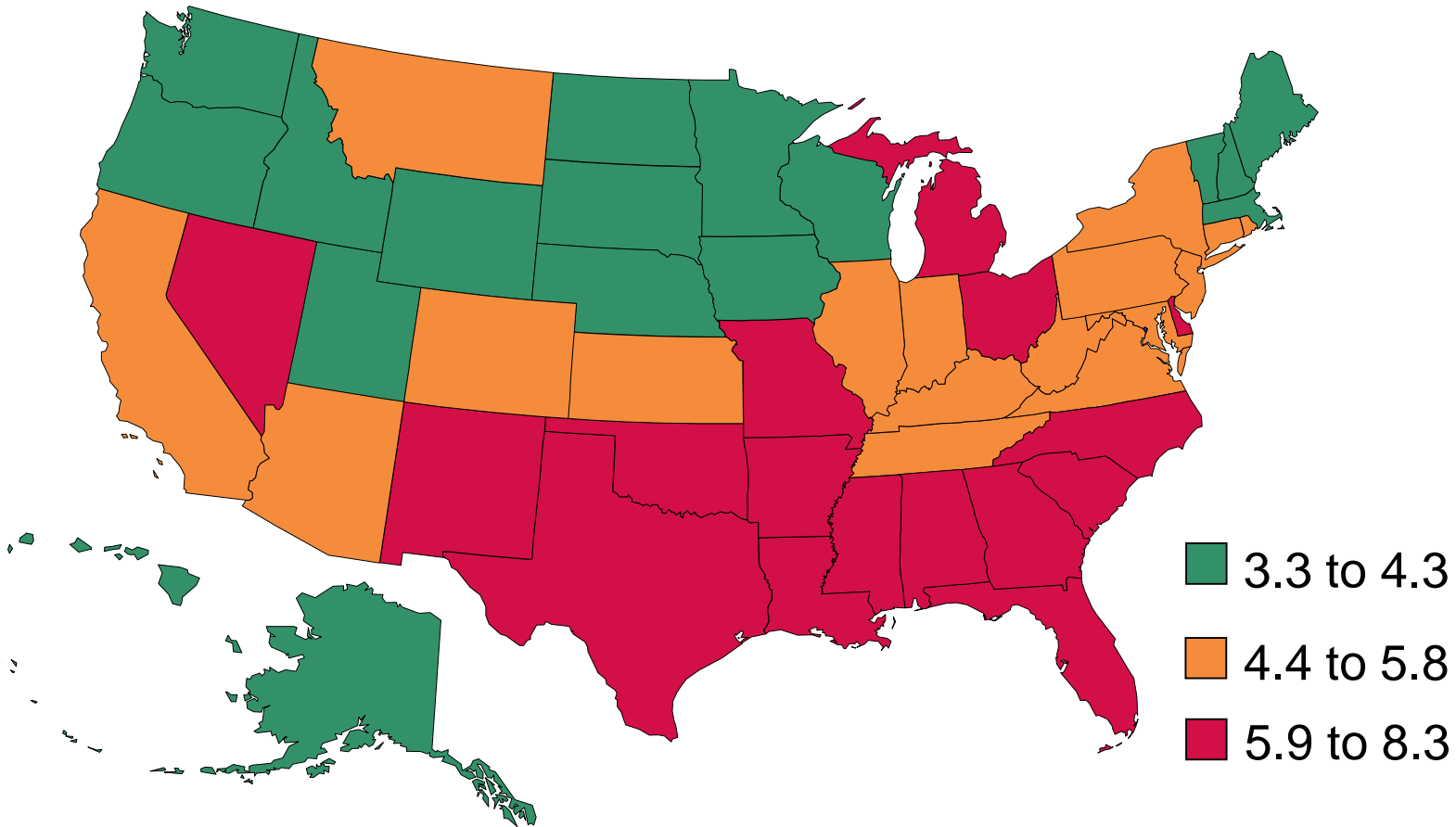
Avg subprime default amount, \$, 12-mo MA, by term length, mo



Sources: Equifax, Moody's Analytics

Subprime Borrowers Default Most in the South

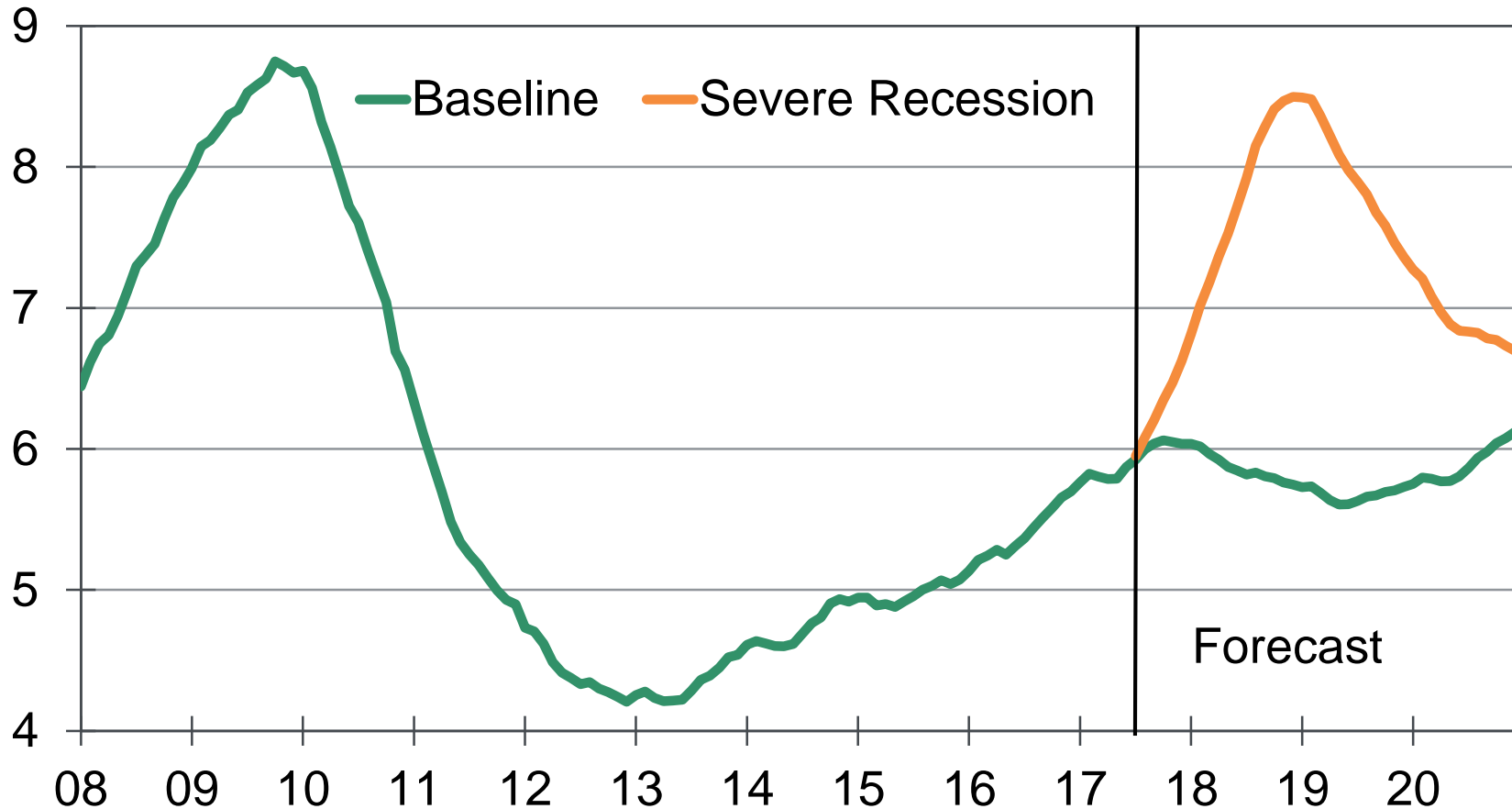
Subprime annualized default rate, % of \$ volume, Jun 2017



Sources: Equifax, Moody's Analytics

Default Rates Expected to Moderate

Subprime default rate, % of \$, 12-mo MAAR



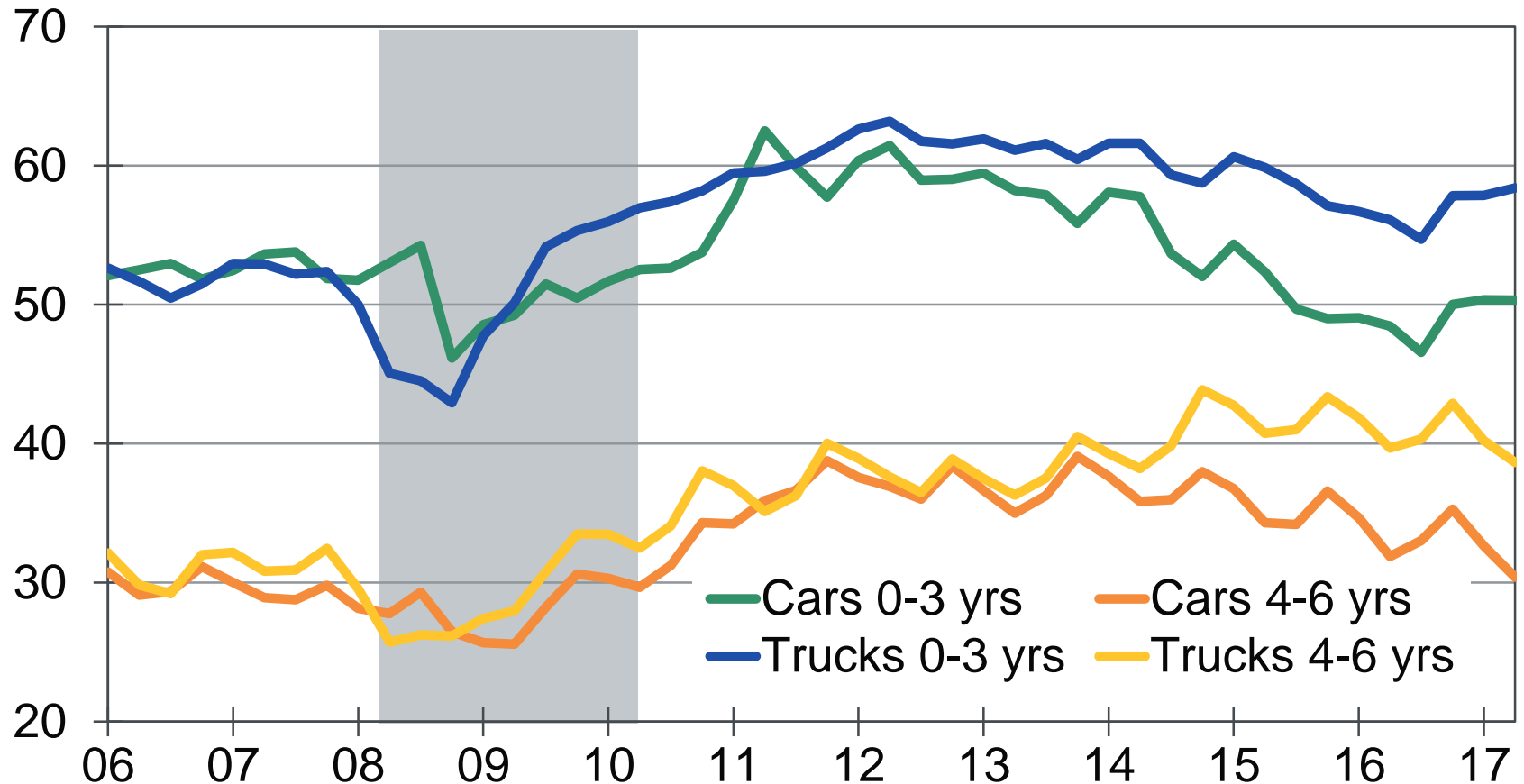
Sources: Equifax, Moody's Analytics

Subprime Borrowers Are Struggling to Pay

- » Subprime auto defaults are rising, reaching \$1.8 billion in June 2017, making up about 80% of all defaults in the market.
- » Performance on deep subprime credit is rapidly deteriorating towards historic levels, particularly for loans originated by nonbanks.
- » Payment problems appear to be a function of underwriting policy.
- » The “trade-in treadmill” has increased loan-to-value ratios and average gross losses on longer-term credit.

No Love for Sedans and Subcompacts

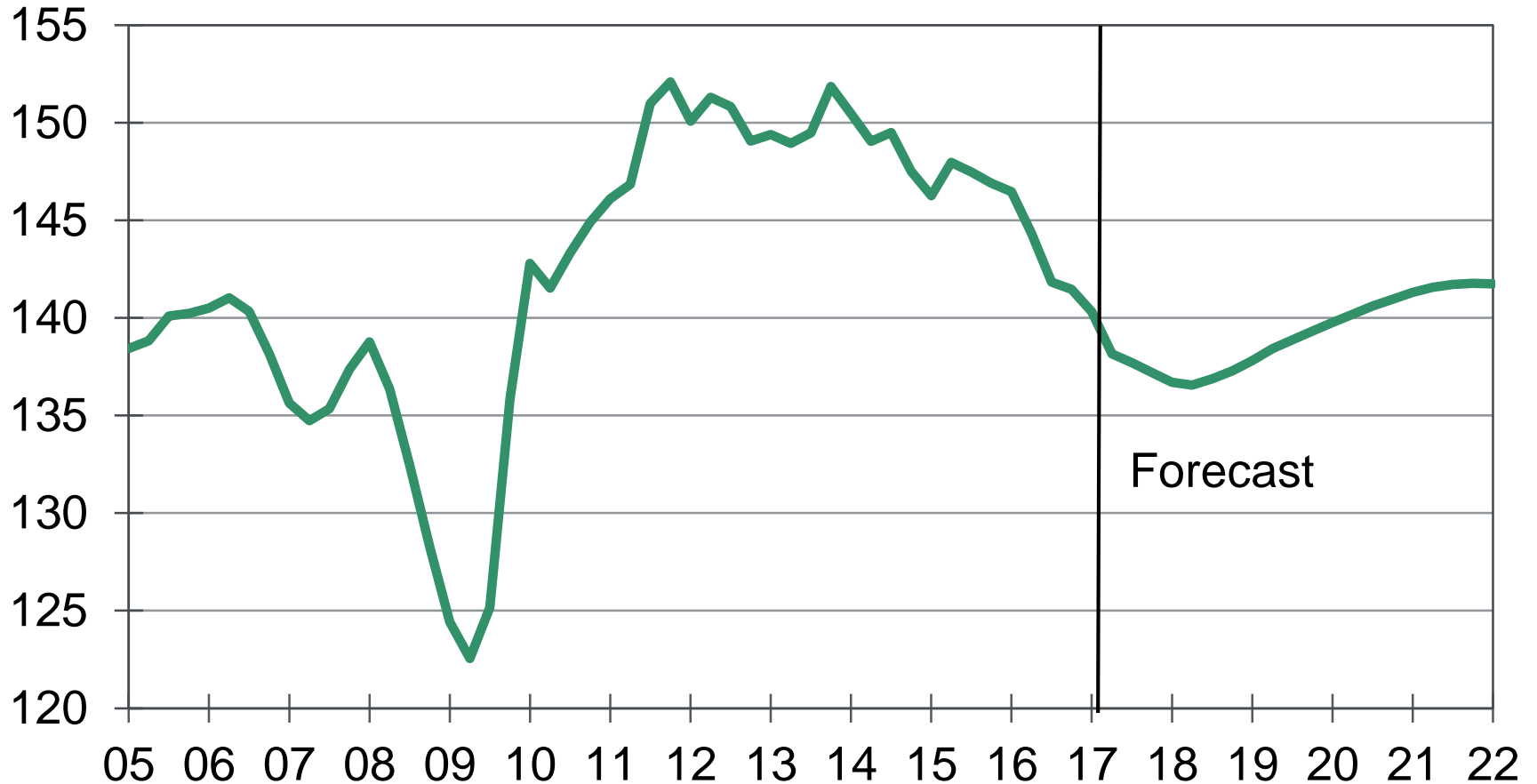
Sale-weighted avg price-to-MSRP ratio by qtr by sale age, %



Sources: NADA, Moody's Analytics

Residual Values to Fall Further, but Not for Long

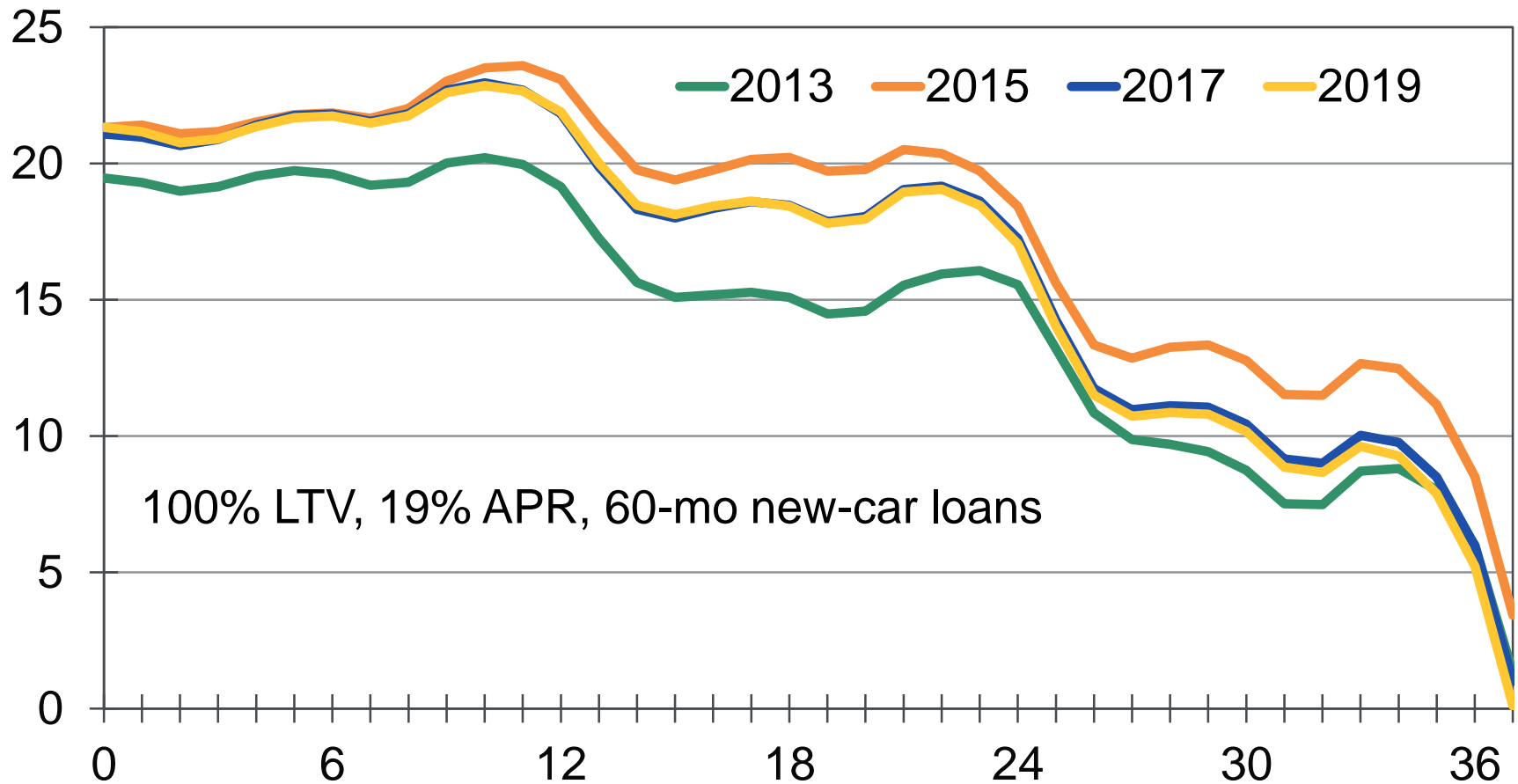
Used car and truck CPI, 1982-84=100



Sources: BLS, Moody's Analytics

Residual Value Risk to Ease for Cars...

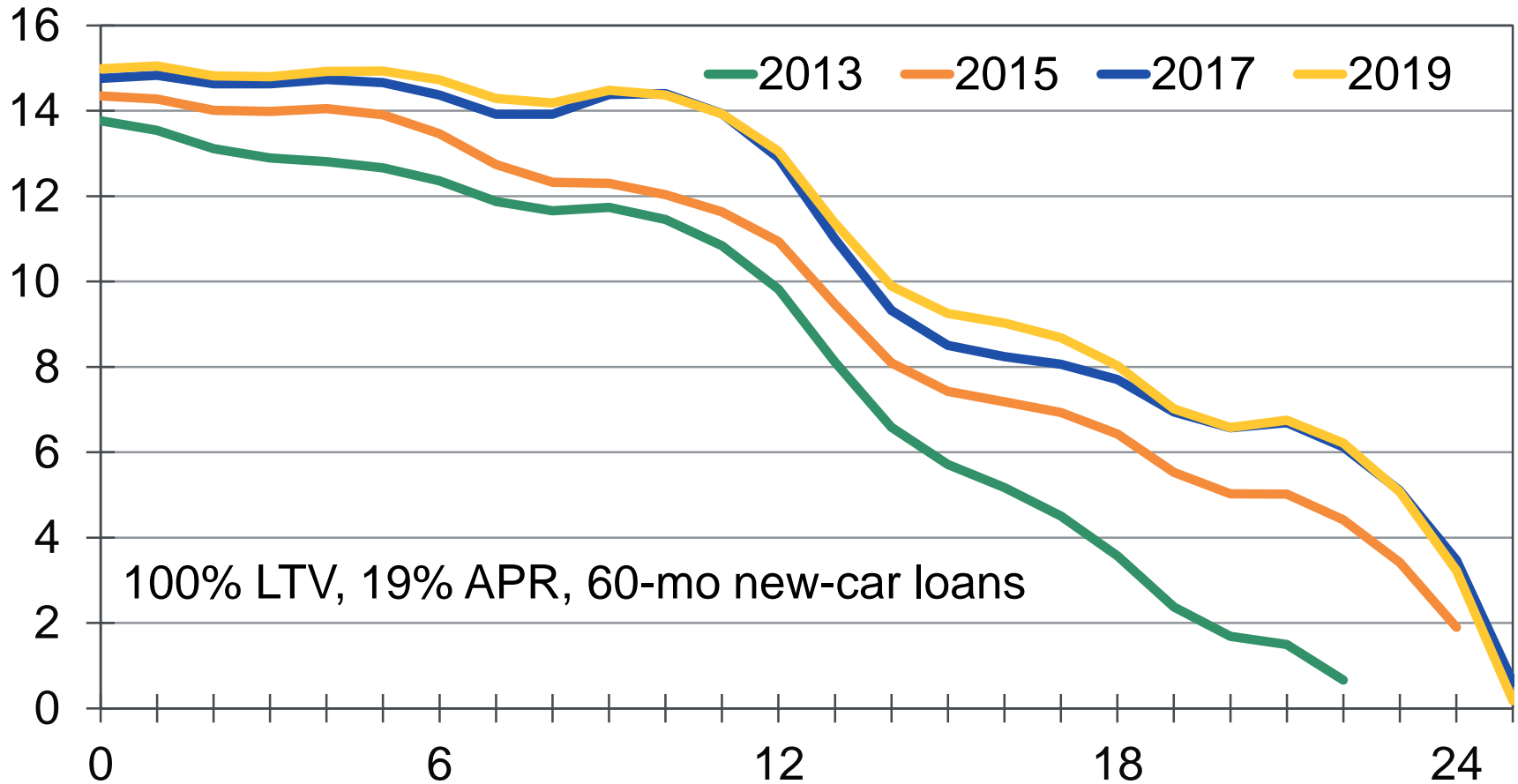
Subprime Toyota Camry LGD %, by model yr and loan age



Source: Moody's Analytics AutoCycle

...But Intensify for Trucks and SUVs

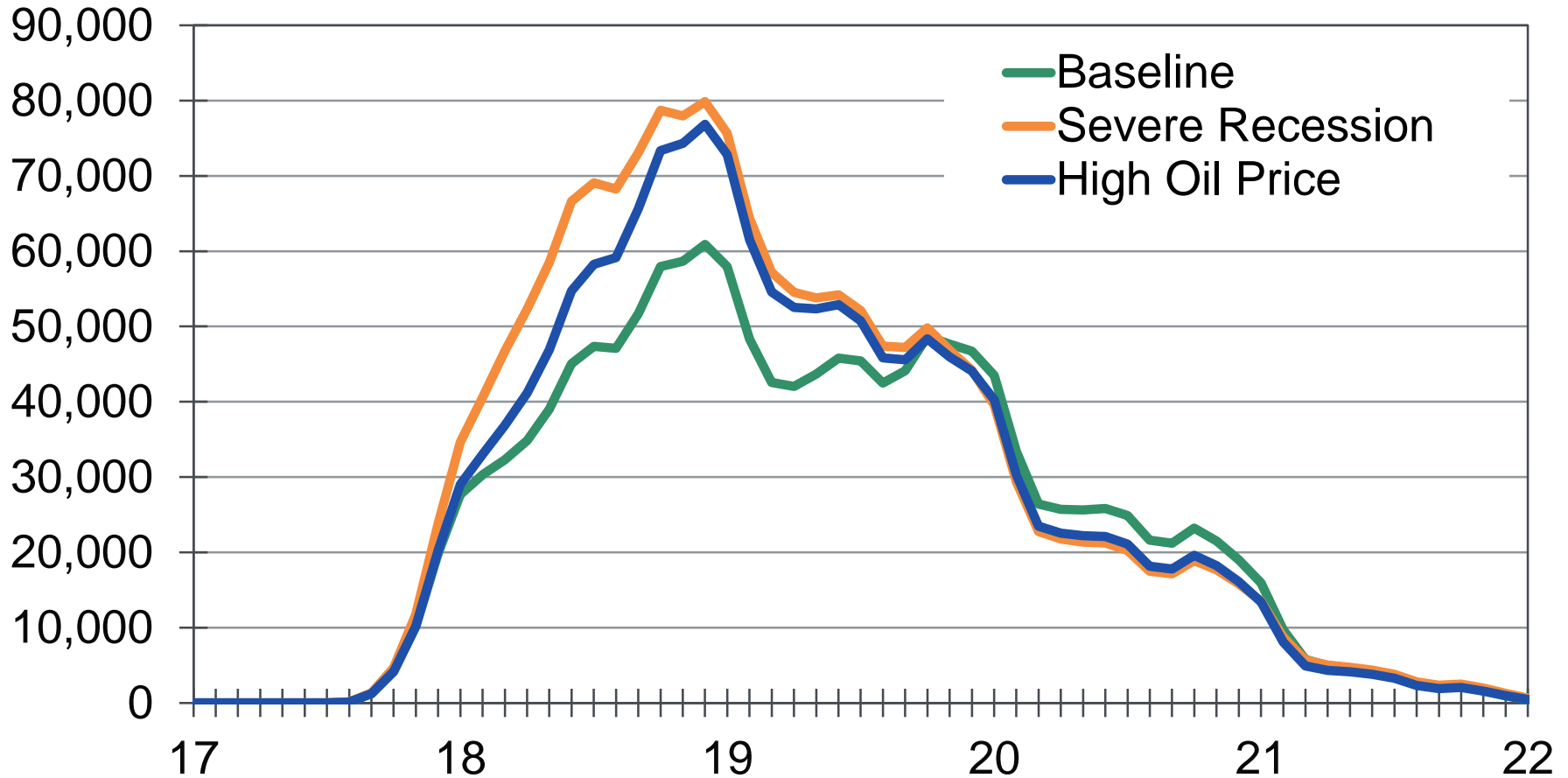
Subprime Toyota Tacoma LGD %, by model yr and loan age



Source: Moody's Analytics AutoCycle

Losses Sensitive to Residual Value Shocks

Example Jul 2017 subprime vintage expected losses, \$



Sources: Equifax, Moody's Analytics AutoCycle

Residual Value Weakness Amplifies Losses

- » Declining used car prices have amplified subprime auto losses, especially in the sedan and subcompact segments.
- » Downward price pressure expected to ease for sedans and subcompacts but increase for trucks and SUVs.
- » Future losses are highly sensitive to residual value shocks.

Summary

- » Auto lending is following a natural and expected credit cycle.
- » Subprime performance will get better as credit tightens.
- » Nonbank auto financiers are facing the highest loss rates when lending to low-income, subprime borrowers.
- » Credit performance problems appear to be associated with poorly underwritten loans, rather than stressful economic conditions.
- » Residual value pressures should begin to abate but will likely increase for trucks and SUVs.

Q&A

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