

Smarter Decisions: The Consumer First Era

Understanding Co-Borrower Performance

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In this session, we'll review:

- What is the landscape of joint loans?
- How valuable are joint loans?
- How risky is a joint loan compared to an individual loan?
- What is our recommended best practice for assessing co-borrower risk?

Why care about co-borrower performance?

Because you care about increasing opportunities while reducing risk.



Different lenders may evaluate the risk of joint borrower credit facilities in different ways

- Should you take the lowest credit score?
- How about the highest credit score?
- Maybe it's better to average the applicants' credit scores?

TransUnion set out to establish a best practice when assessing the risk of joint applications



2018

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What is the landscape of joint loans?

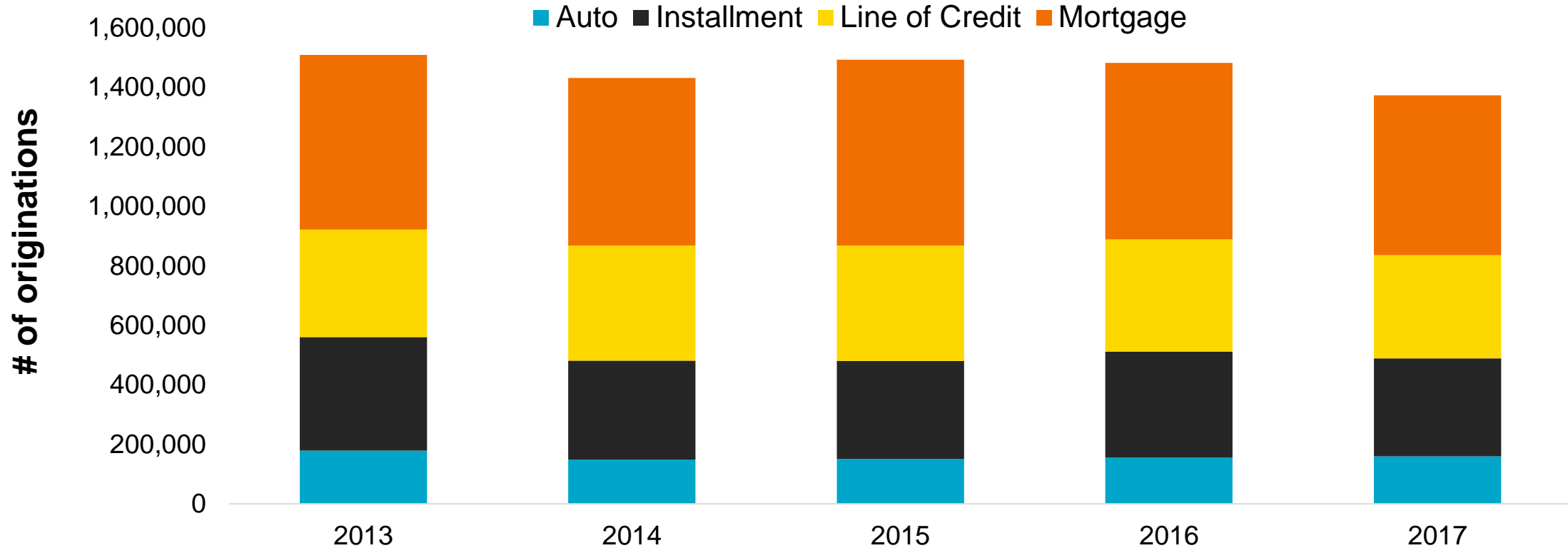
The type of borrower will depend on the product, and each joint situation will have unique circumstances

Auto and Line of Credit	Mortgage	Personal loans	Credit card
<p>Co-borrower Contractually liable</p>	<p>Co-borrower Contractually liable</p> <p>Guarantor Liable only if the primary defaults</p>	<p>Co-borrower Contractually liable</p> <p>Guarantor Liable only if the primary defaults</p>	<p>Co-borrower Contractually liable</p> <p>Authorized user No joint contractual liability is present</p>



Joint loan originations represent a significant portion of annual originations to lenders

Annual joint loan originations for key products



Joint loans as a % of all originations

26%

25%

24%

24%

23%



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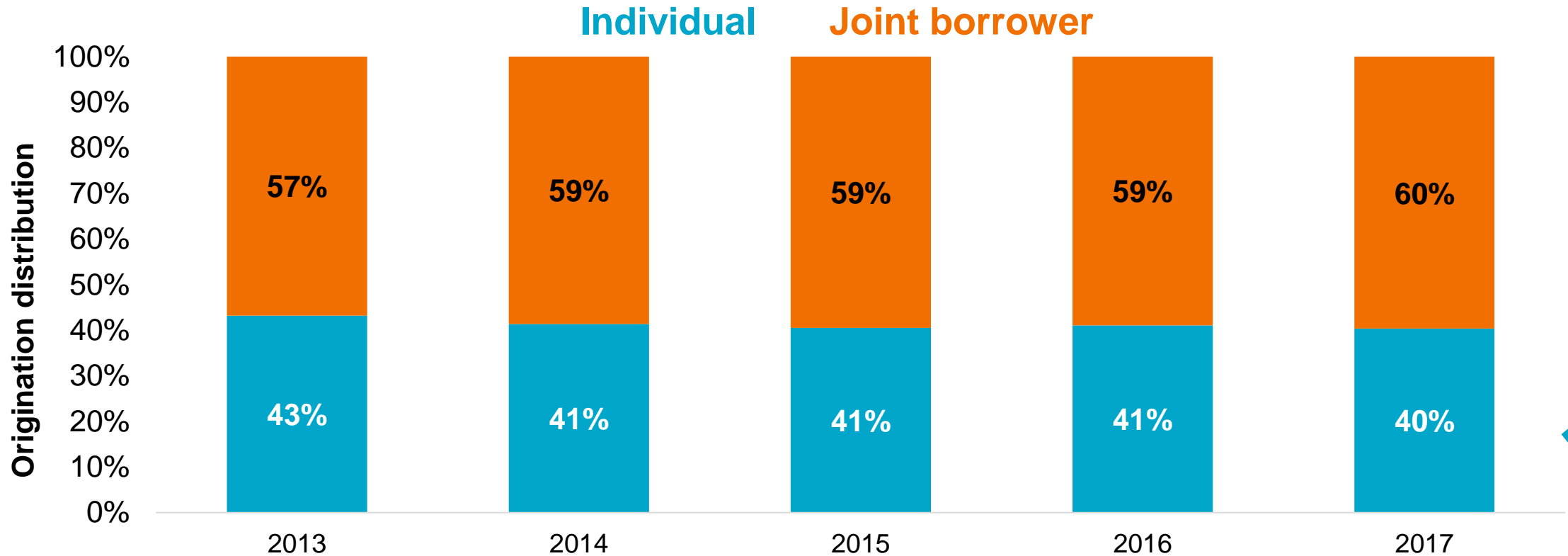
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How valuable are joint loans?

Over half of mortgage originations are from joint borrowers

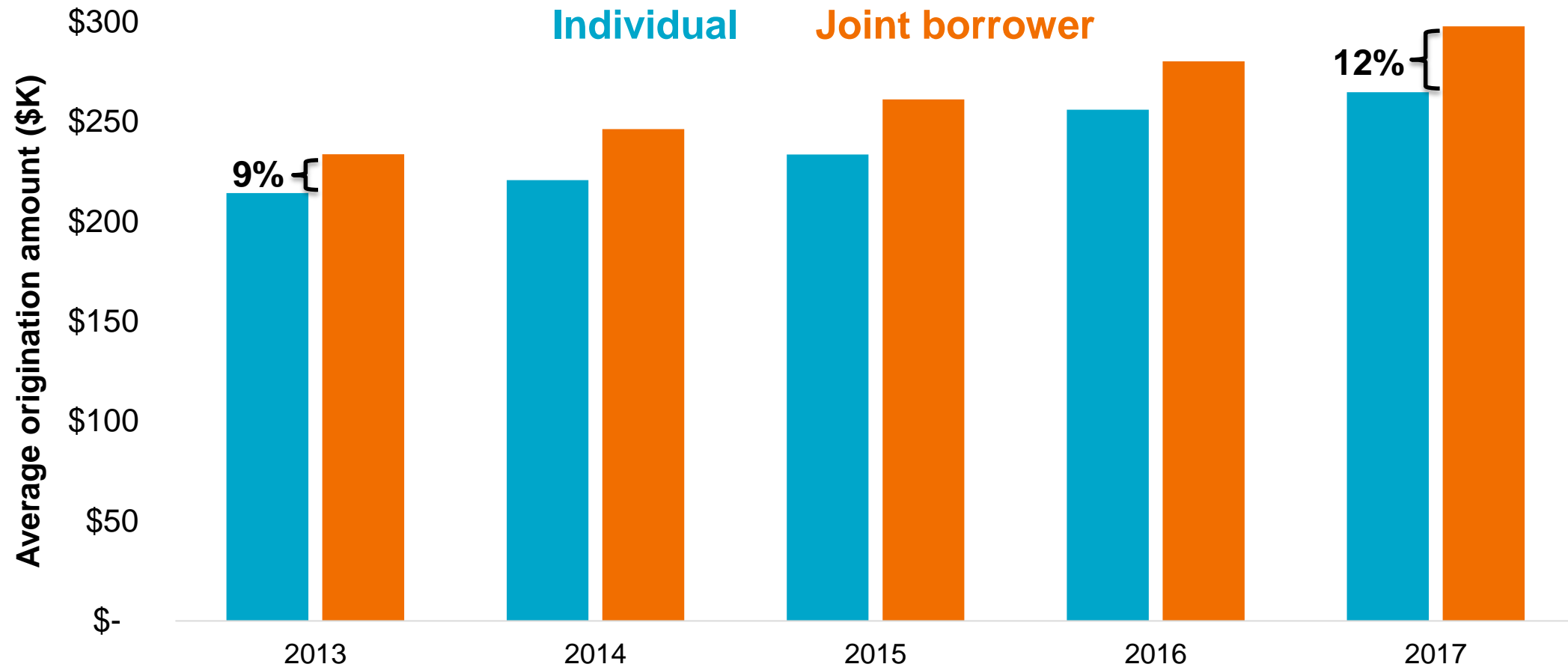
Distribution of mortgage originations by borrower type



Source: TransUnion consumer credit database

Origination amounts for joint loans continue to climb

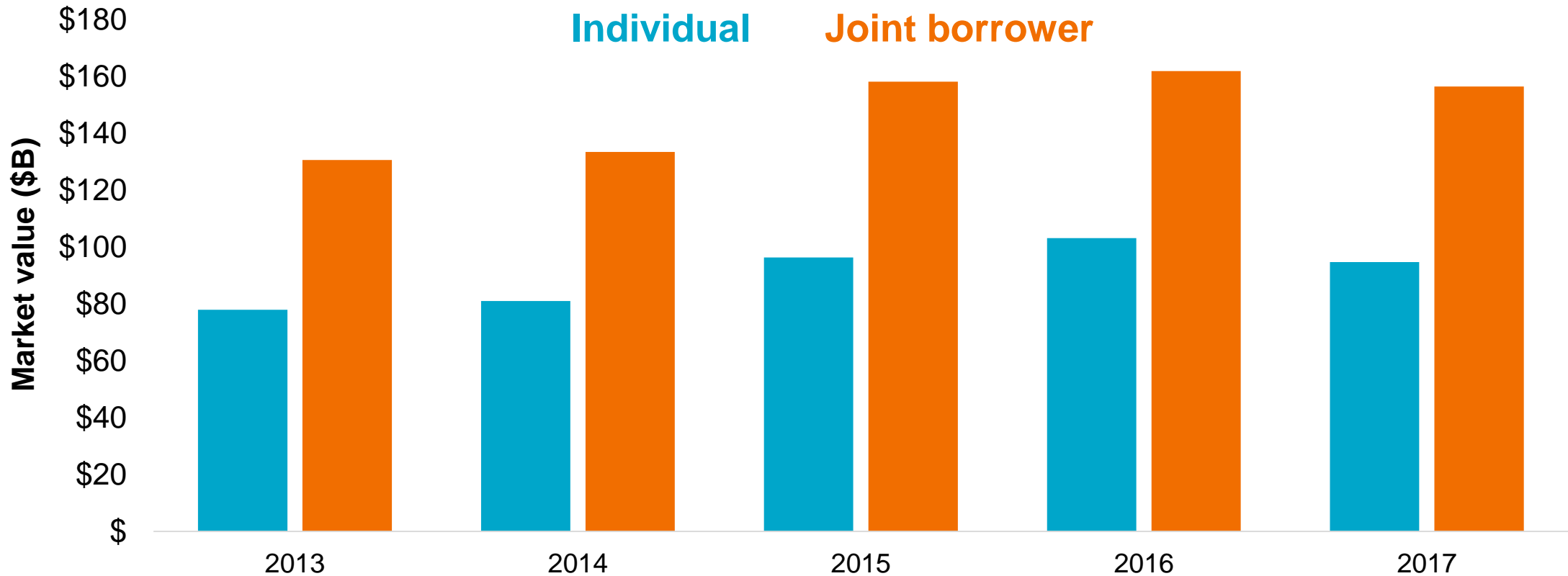
Average mortgage origination amount by borrower type



Source: TransUnion consumer credit database

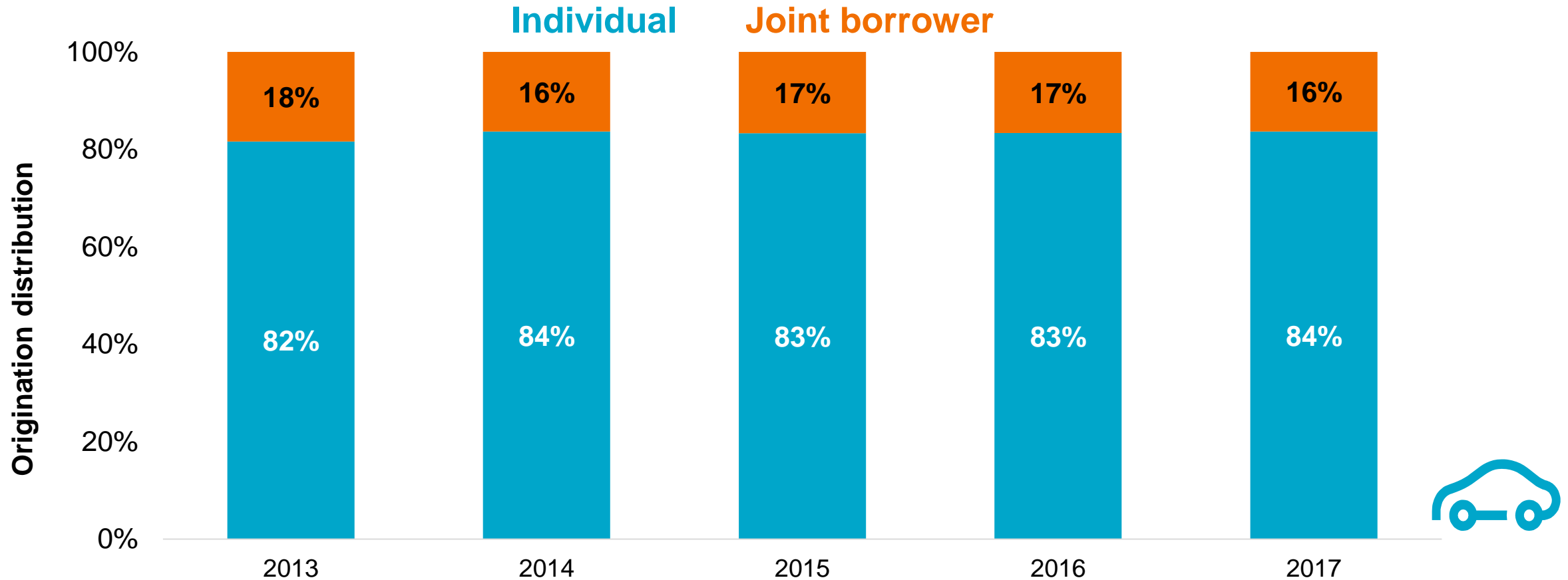
Joint mortgages are valuable; total market value is on average 60% higher compared to individual loans

Total market value of mortgages at origination by borrower type



The distribution of auto originations across borrower types is relatively stable

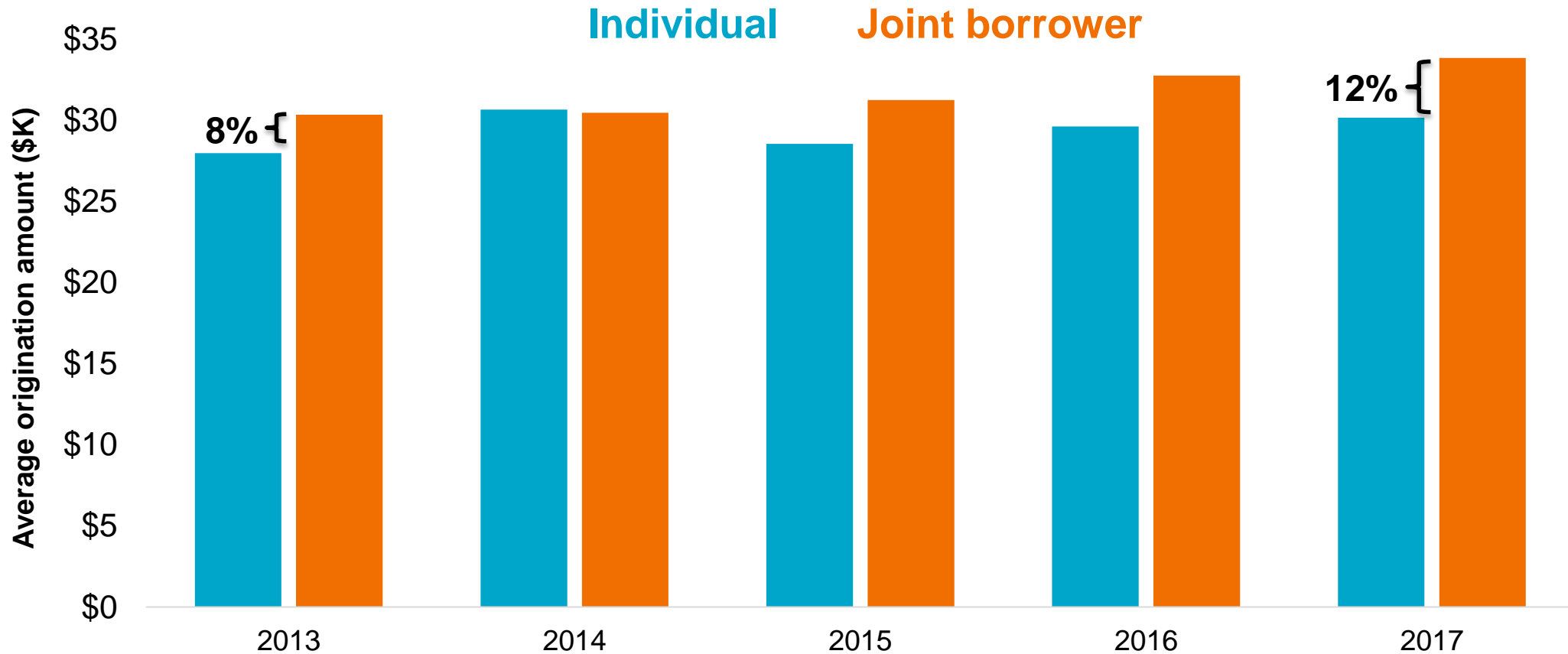
Distribution of auto originations by borrower type



Source: TransUnion consumer credit database

Similar to mortgage, joint auto accounts are bigger

Average auto origination amount by borrower type

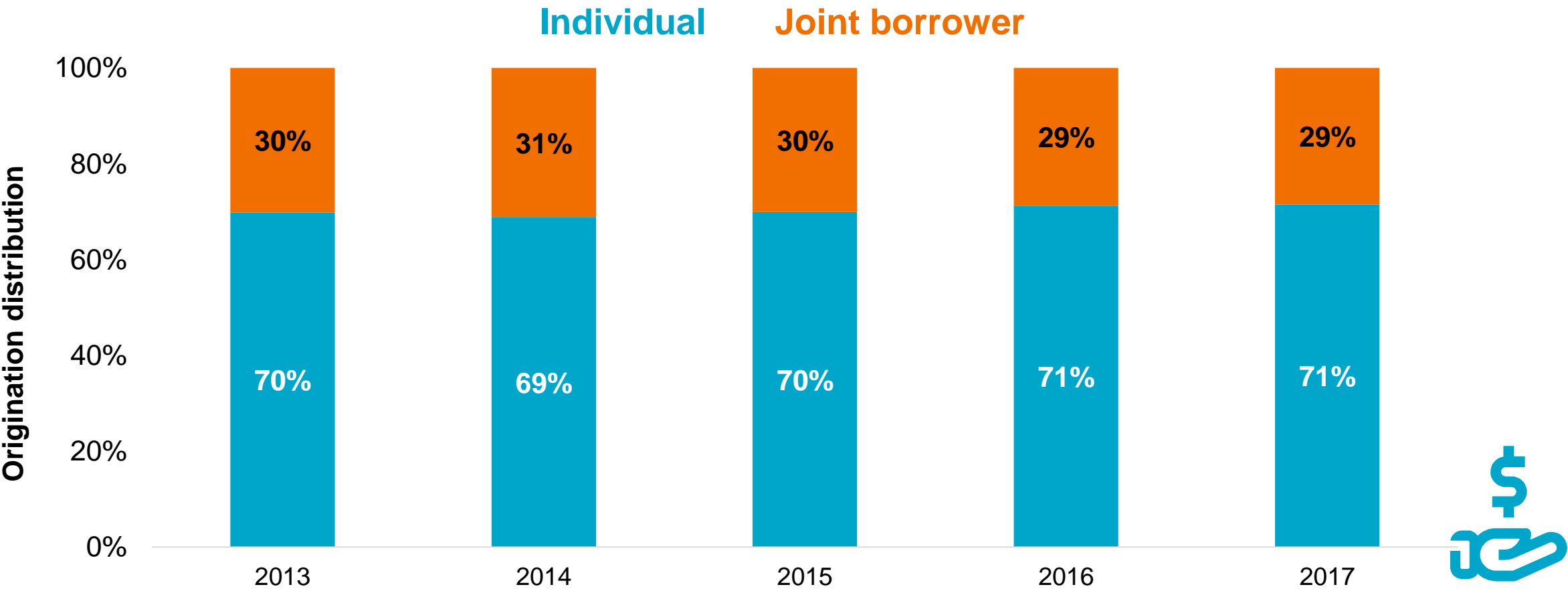


Source: TransUnion consumer credit database



Like other products, the co-borrower distribution of line of credit originations has been stable

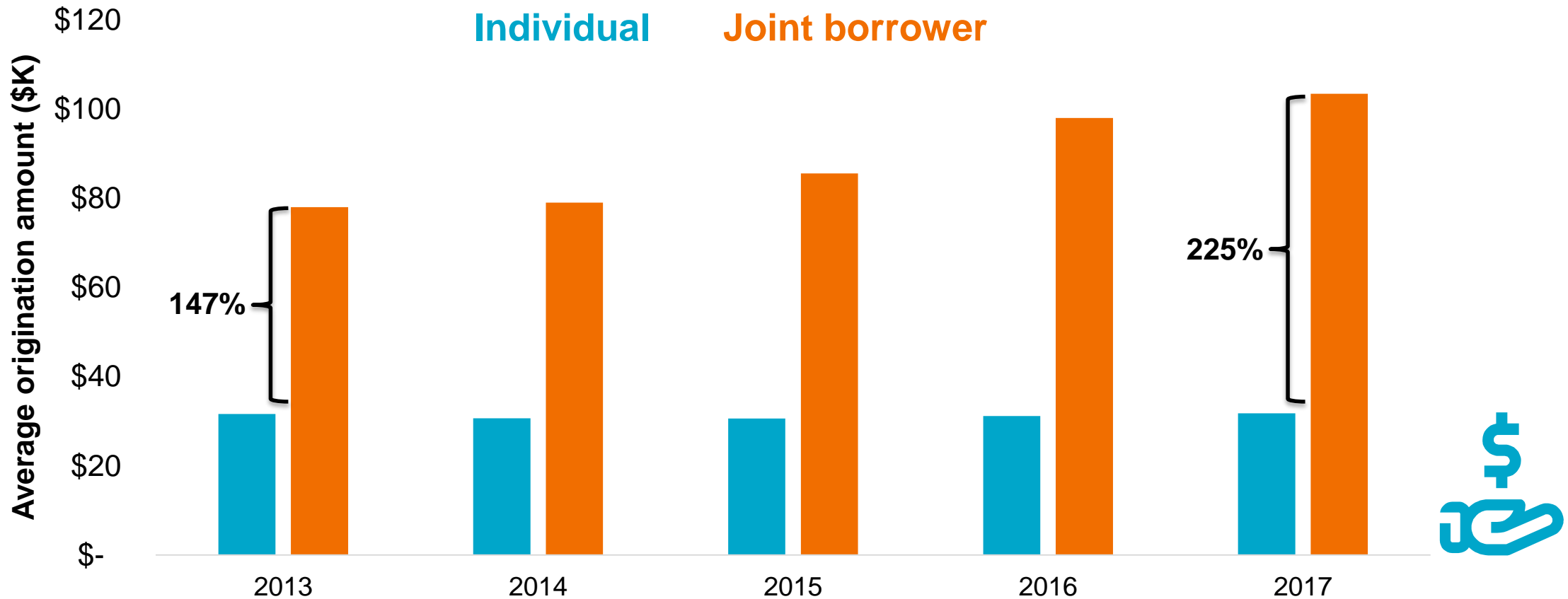
Distribution of line of credit originations by borrower type





Further proving joint borrower value, the gap in origination amounts is significantly larger

Average origination amount of lines of credit



Source: TransUnion consumer credit database

In summary:

- The landscape of joint lending has been growing and represents significant opportunity for lenders
- There is clear potential economic value to joint loans compared to individual loans
- Incorrect assessment of joint borrowers can lead to incorrect pricing or missed opportunity



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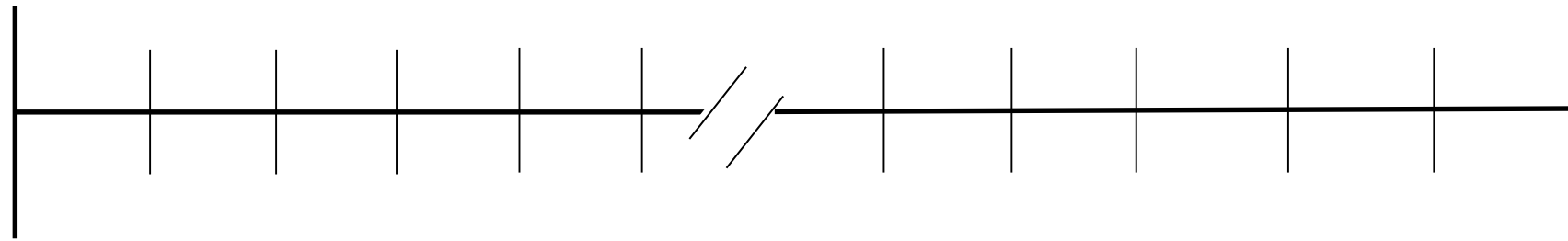
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Comparing joint borrower risk

Which is riskier, an individual or a joint application?

We studied 6.9 MM consumers who opened an auto, mortgage, personal loan or LOC in 2015



t

Product origination

t + 24 months

Metrics measured at t:

- Joint vs. individual
- Joint application type
- Consumer score(s)
- Product type

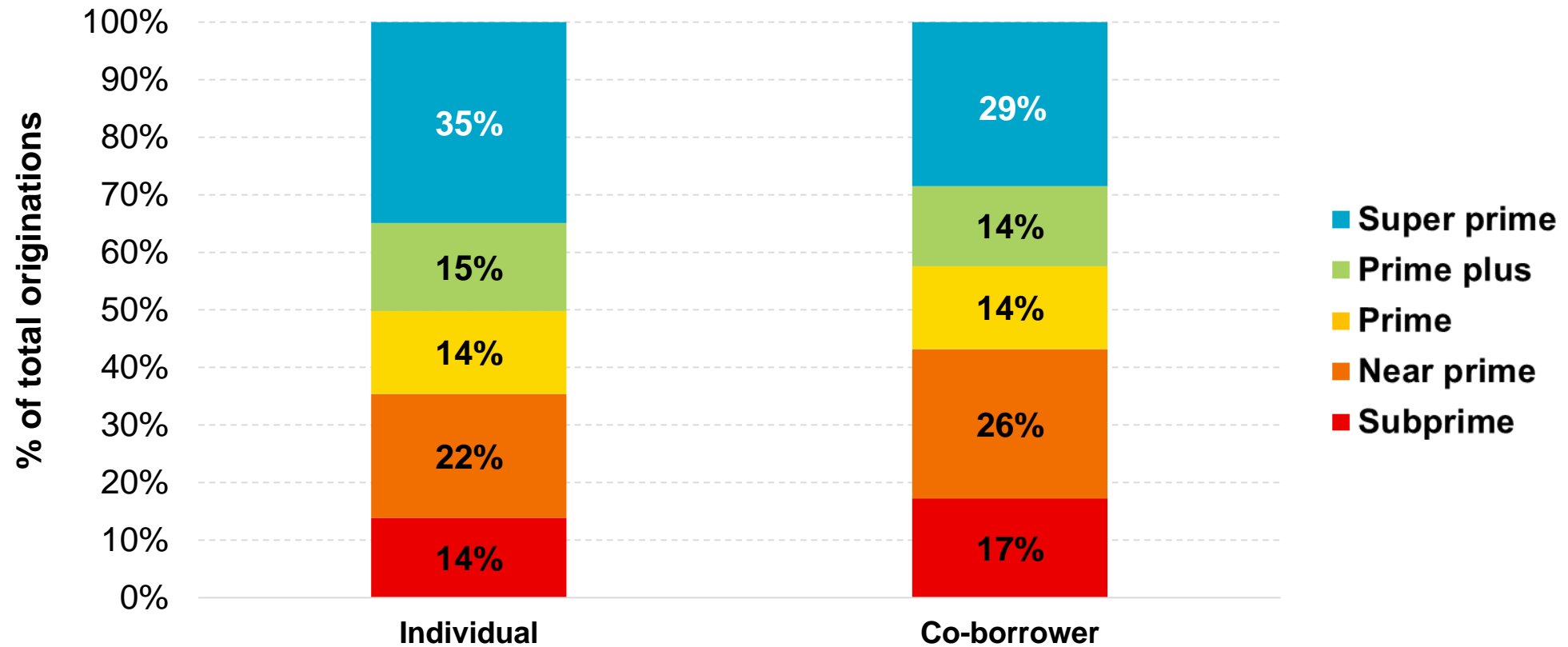
Metrics measured at t+24:

Delinquency rates of originated products



For auto loans, co-borrowers tend to have slightly higher risk compared to other borrower types

Auto originations by risk tier



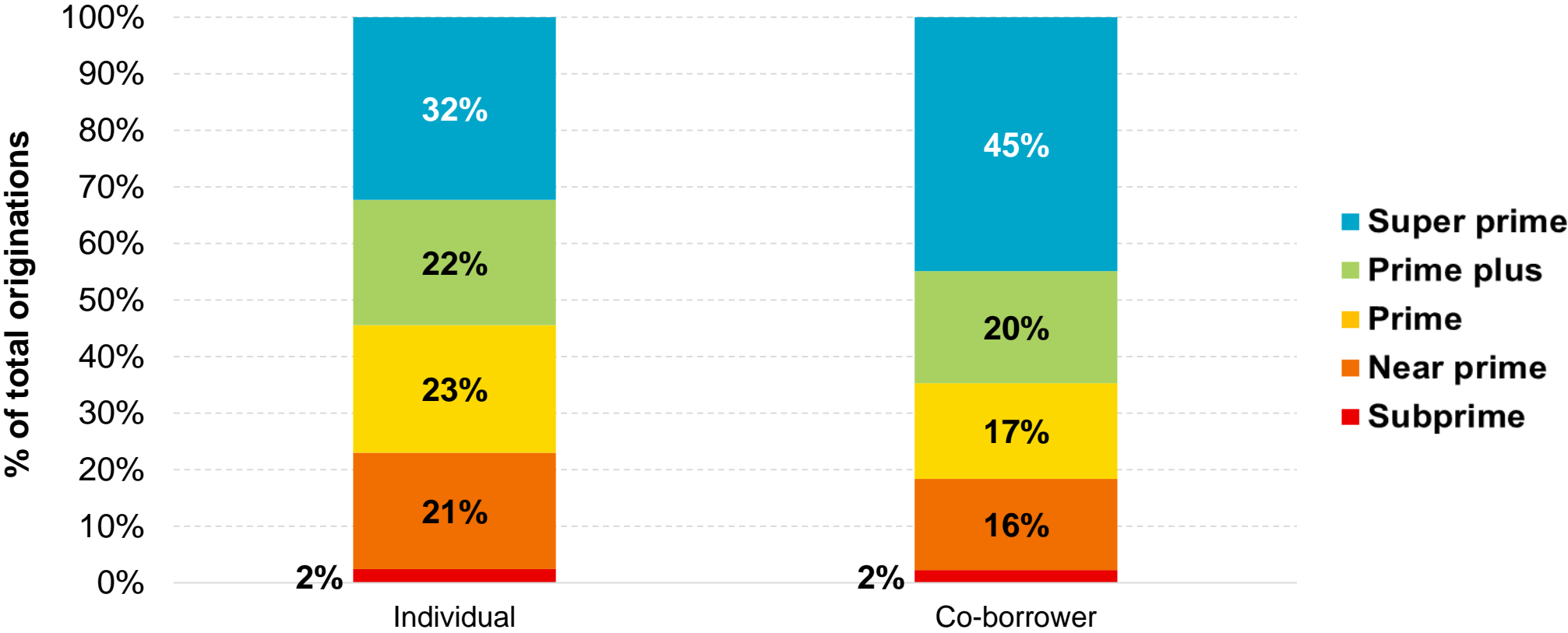
CreditVision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

Source: TransUnion consumer credit database



For lines of credit, the risk distribution is skewed to lower risk for joint loans

Line of credit origination by risk tier



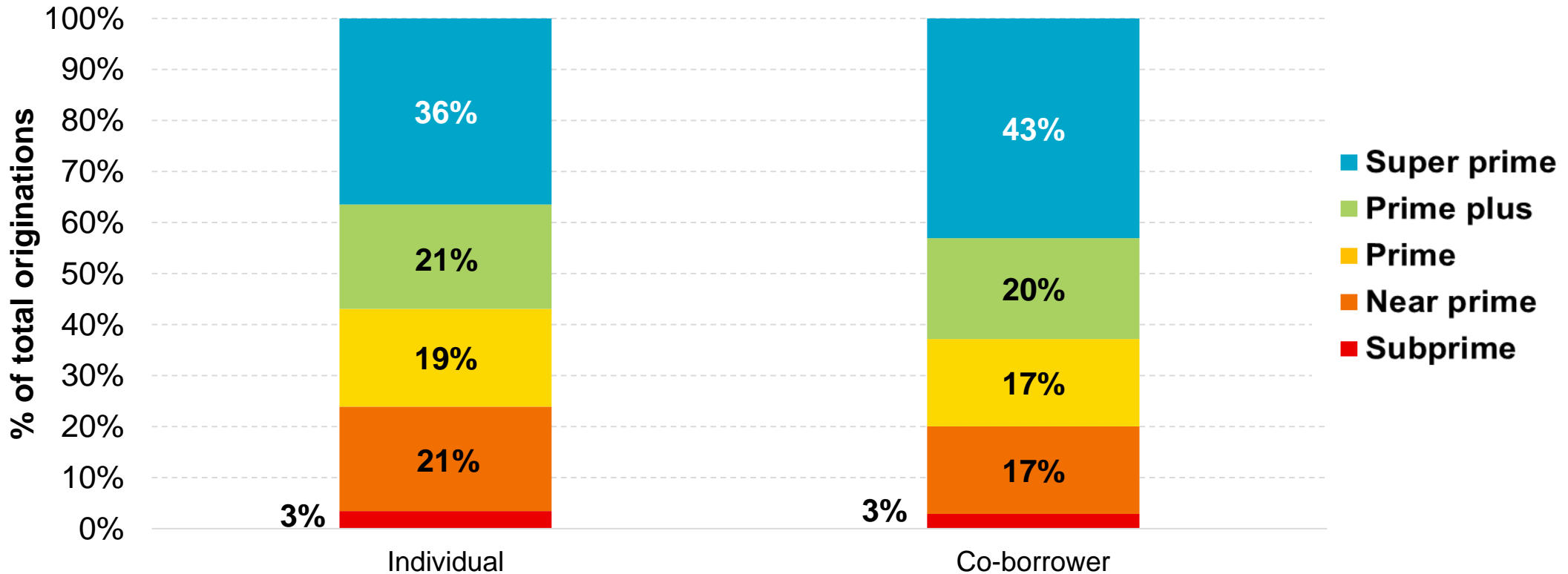
CreditVision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

Source: TransUnion consumer credit database



Similar to lines of credit, the risk distribution of mortgages is skewed to lower risk for joint loans

Mortgage origination by risk tier

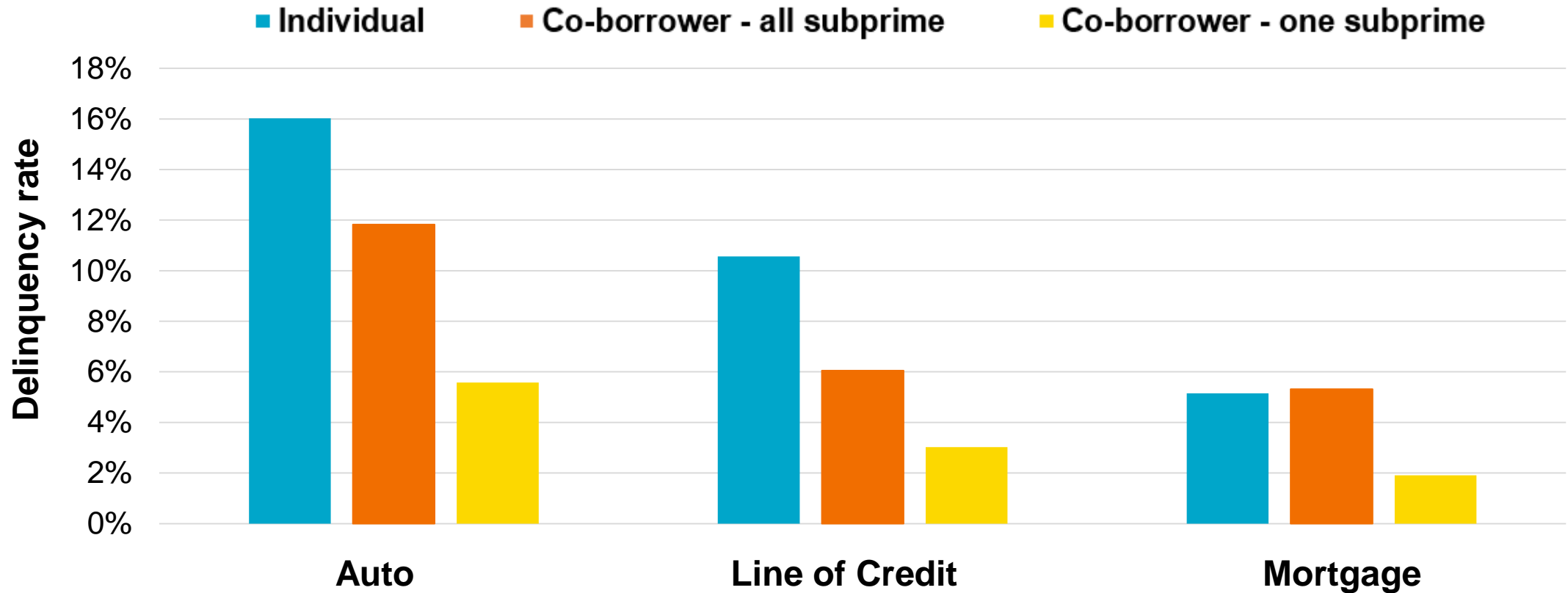


CreditVision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

Source: TransUnion consumer credit database

Joint performance cannot be predicted based upon individual behavior alone

Subprime delinquency rate within 24 months – 60 or more days past due

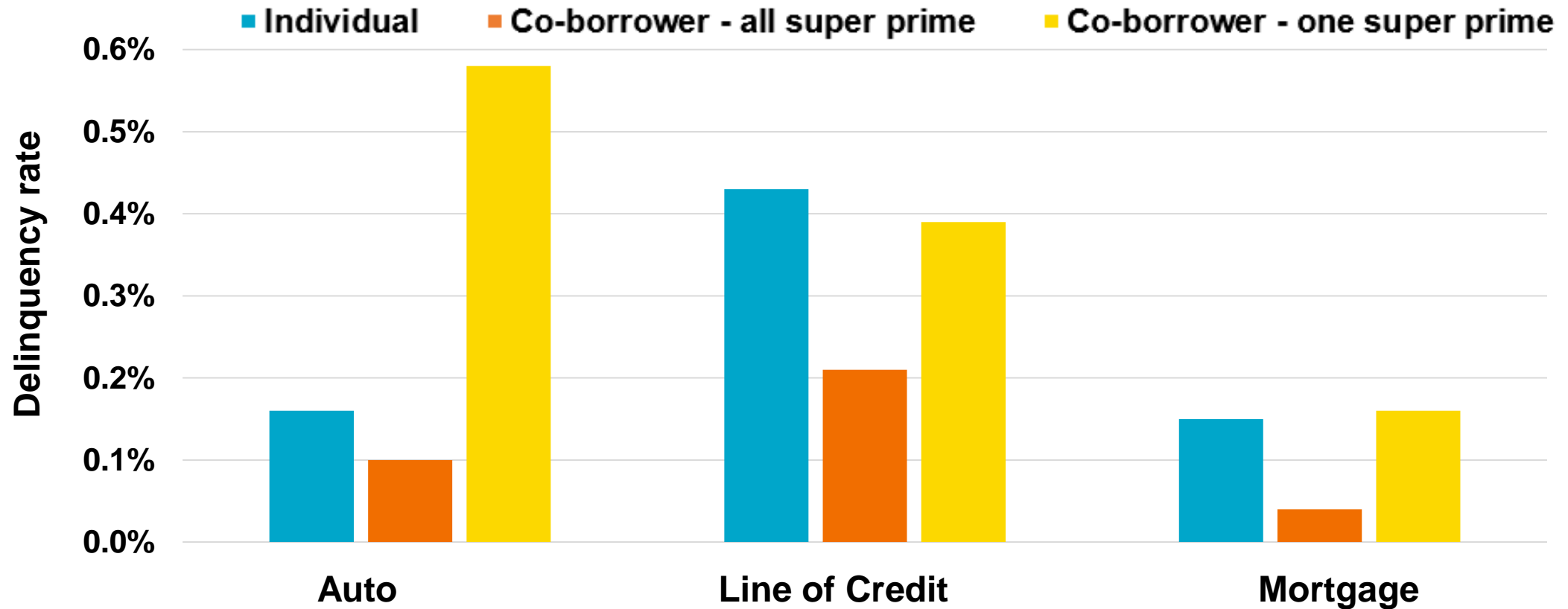


CreditVision risk score: Subprime = 300-639

Source: TransUnion consumer credit database

Even super prime consumers do not behave as expected

Super prime delinquency rate within 24 months – 60 or more days past due



CreditVision risk score: Super prime = 800+

Source: TransUnion consumer credit database



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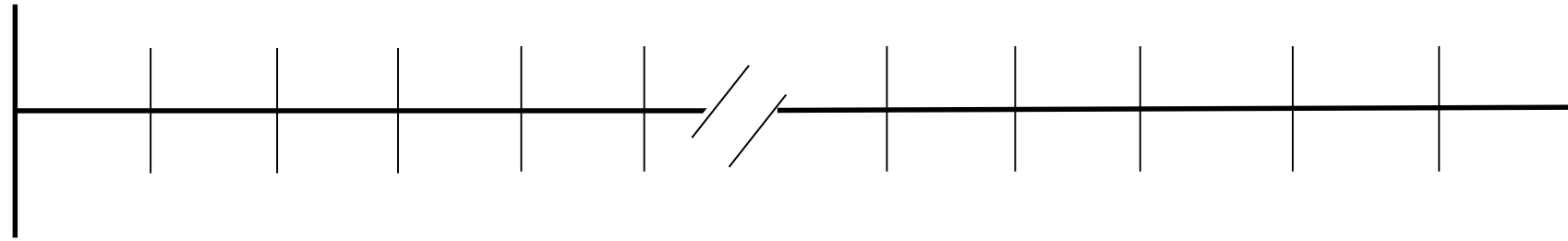
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Co-borrower lending best practices

How should co-borrower risk be assessed?

We studied 6.9 million consumers who opened an auto, installment line of credit or mortgage in 2015



t

Product origination

t + 24 months

Metrics measured at t:

- Joint vs. individual
- Joint application type
- Consumer score(s)
- Product type

Metrics measured at t+24:

Delinquency rates of originated products



Delinquency mapping

Joint delinquency was mapped to equivalent individual observed delinquency



We developed a co-borrower score equivalency matrix for auto loans

■ Subprime
 ■ Near prime
 ■ Prime
 ■ Prime plus
 ■ Super prime

Lowest co-borrower score

		Lowest co-borrower score									
		500-530	531-560	561-590	591-639	640-670	671-700	701-719	720-759	760-799	800+
Highest co-borrower score	800+										
	760-799										
	720-759										
	701-719										
	671-700										
	640-670										
	591-639										
	561-590										
	531-560										
	500-530										

CreditVision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

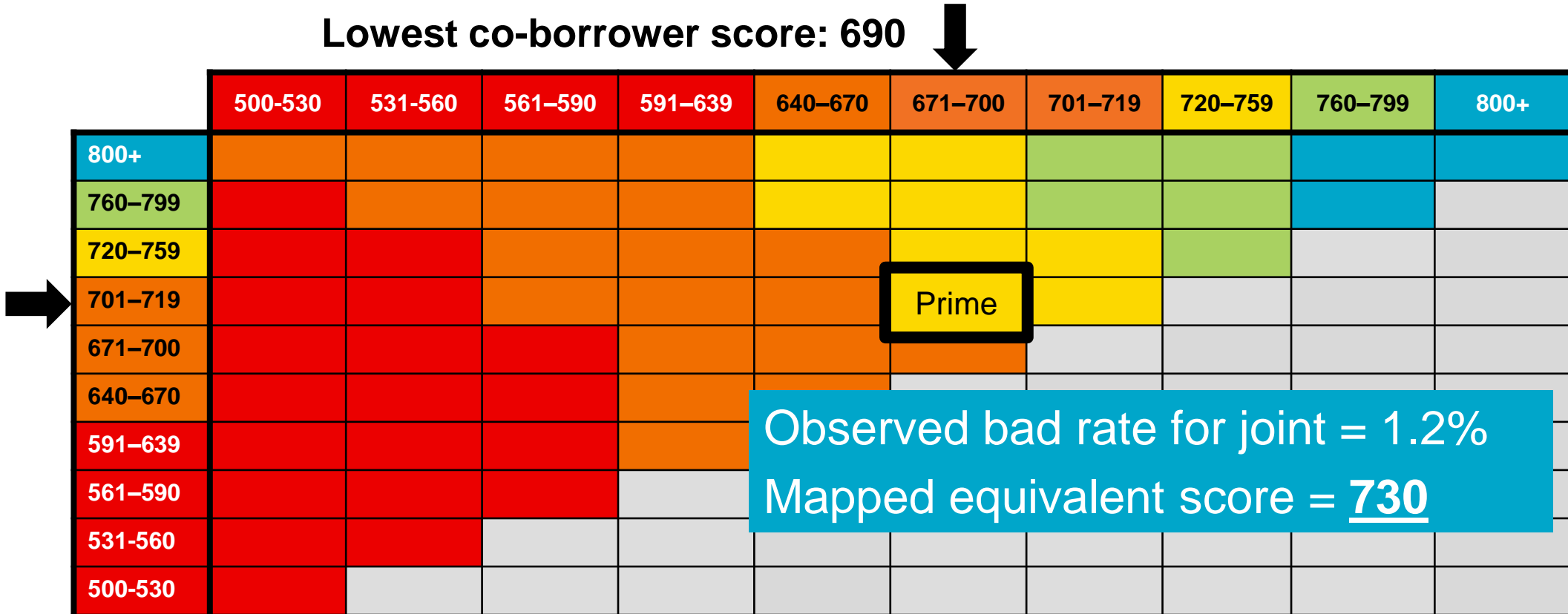
Source: TransUnion consumer credit database

Case one: What will the auto co-borrower scorecard predict for two near prime borrowers?

■ Subprime
 ■ Near prime
 ■ Prime
 ■ Prime plus
 ■ Super prime

Lowest co-borrower score: 690 ↓

Highest co-borrower score: 710 →



CreditVision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

Source: TransUnion consumer credit database

How might this co-borrower situation typically be handled?



Scenario 1

Decision and price using highest score

Joint highest score = 710

Expected bad rate at individual score = 1.8%

Risk consumers walking from deal

Scenario 2

Decision and price using lowest score

Joint lowest score = 690

Expected bad rate at individual score = 2.9%

Might not make risk cut-off

Scenario 3

Decision and price using average score

Joint average score = 700

Expected bad rate at individual score = 2.3%

Incorrect loan amount

Case two: What will the auto co-borrower scorecard predict for a subprime and a prime?

■ Subprime
 ■ Near prime
 ■ Prime
 ■ Prime plus
 ■ Super prime

↓ Lowest co-borrower score: 590

Highest co-borrower score: 730

	500-530	531-560	561-590	591-639	640-670	671-700	701-719	720-759	760-799	800+
800+										
760-799										
720-759			Near Prime							
701-719										
671-700										
640-670										
591-639										
561-590										
531-560										
500-530										

Observed bad rate for joint = 1.6%
 Mapped equivalent score = 715

CreditVision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

Source: TransUnion consumer credit database

How might this co-borrower situation typically be handled?



Scenario 1

Decision and price using highest score

Joint highest score = 730

Expected bad rate at individual score = 1.2%

Pricing might be off for relative risk

Scenario 2

Decision and price using lowest score

Joint lowest score = 590

Expected bad rate at individual score = 18.5%

Consumers miss risk cut-off

Scenario 3

Decision and price using average score

Joint average score = 660

Expected bad rate at individual score = 5.7%

Incorrect loan amount

Source: TransUnion consumer credit database

We performed the same exercise for mortgages with similar results

■ Subprime
 ■ Near prime
 ■ Prime
 ■ Prime plus
 ■ Super prime

Lowest co-borrower score

		Lowest co-borrower score									
		500-530	531-560	561-590	591-639	640-670	671-700	701-719	720-759	760-799	800+
Highest co-borrower score	800+										
	760-799										
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	561-590										
	531-560										
	500-530										

CreditVision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

Source: TransUnion consumer credit database

In conclusion:

- To maximize opportunity and minimize risk, co-borrowers should not be averaged – their joint performance should be benchmarked against individual borrower performance
- TransUnion’s recommended best practice differs based upon product type, and of course will differ across individual portfolios
- The market for joint borrowers is large and provides significant dollar value to lenders
- TransUnion’s recommended best practice provides a quantitatively sound and consistent method to capture the joint loan opportunity