

2018

TRANSUNION CANADA FINANCIAL SERVICES SUMMIT

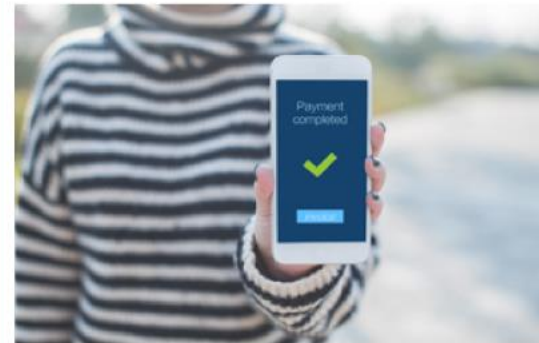
Smarter Decisions:
Innovation in the Consumer First Era

A Fresh Start: When Derogatory Information Falls Off the Credit File

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In this session, we'll review:

- Background of derogatory information on a credit file
- Impact on consumer credit scores after derogatory information disappears
- Credit demand and origination activity of consumers before and after derogatory information drops off
- Performance on newly originated loans compared to control population
- Practical applications for lenders

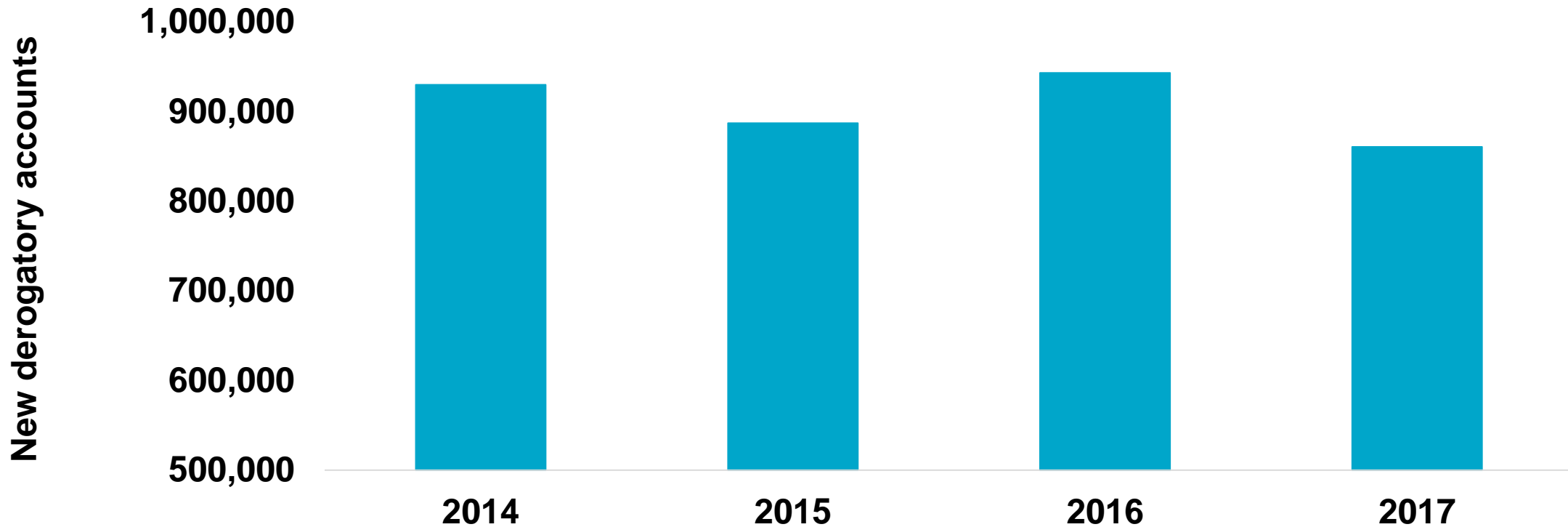
Derogatory information in this study is defined as one of the following events – bankruptcy, charge-off, collection, foreclosure, judgement and repossession.

Derogatory event history appears in the narrative in a consumer's credit file.



Over the past 4 years, an average of 904K derogatory events appear on consumers' credit files each year

Volume of new derogatory accounts



Provincial credit reporting legislation outlines the maximum period for reporting negative information. Most negative items must be removed from the credit report six or seven years from the first date of delinquency.

Exceptions include multiple bankruptcies which fall off after 14 years.



Lenders have raised questions around the impact on consumers as derogatory events drop off credit files

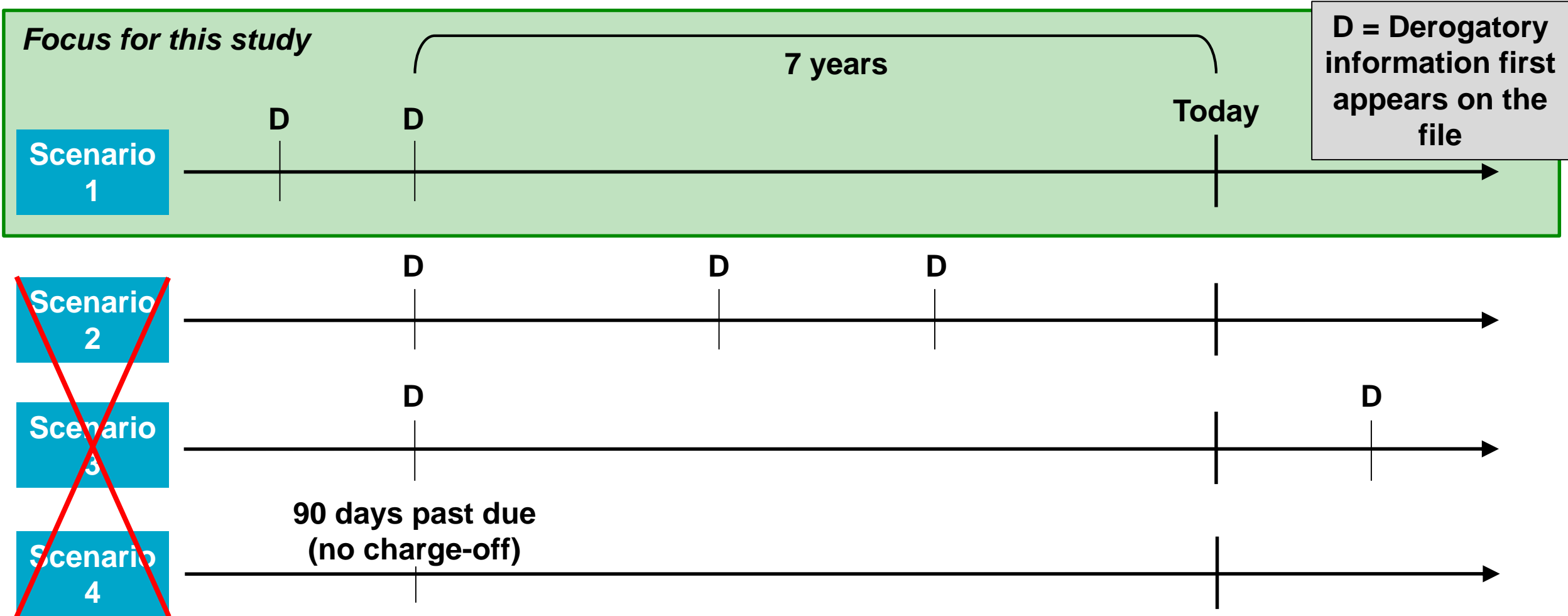
- Are credit scores impacted by the removal of these derogatory events?
- Does the presence and removal of derogatory events impact consumer demand for credit?
- Does the removal of derogatory events improve consumer access to credit?
- How do consumers perform on new accounts opened after derogatory events fall off?



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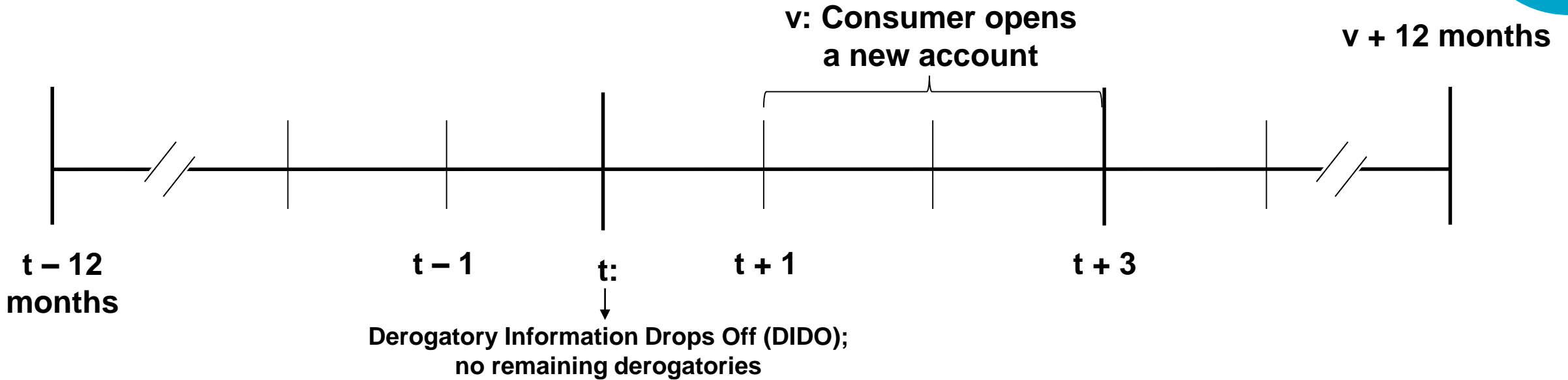
Research methodology

There are numerous scenarios for derogatory information dropping off the file. This study focuses on a straightforward scenario.



Derogatory information \in {bankruptcy, charge-off, collection, foreclosure, judgement, repossession}

We studied over 400K derogatory customers using a longitudinal sample spanning a 4-year period that reflects changing dynamics over time



Measured $t - 12$ to $t + 12$:
Inquiries by product
Originations by product

Measured at $t - 1$:
CreditVision "Pre-score"

t
2017 Mar
2016 Dec
2015 Sep
2014 Jun

Measured at t :
CreditVision "Post-score"

Measured at v :
Originations by product
CV Score at origination
Credit limit

Measured at $v + 12$:
Delinquencies by product

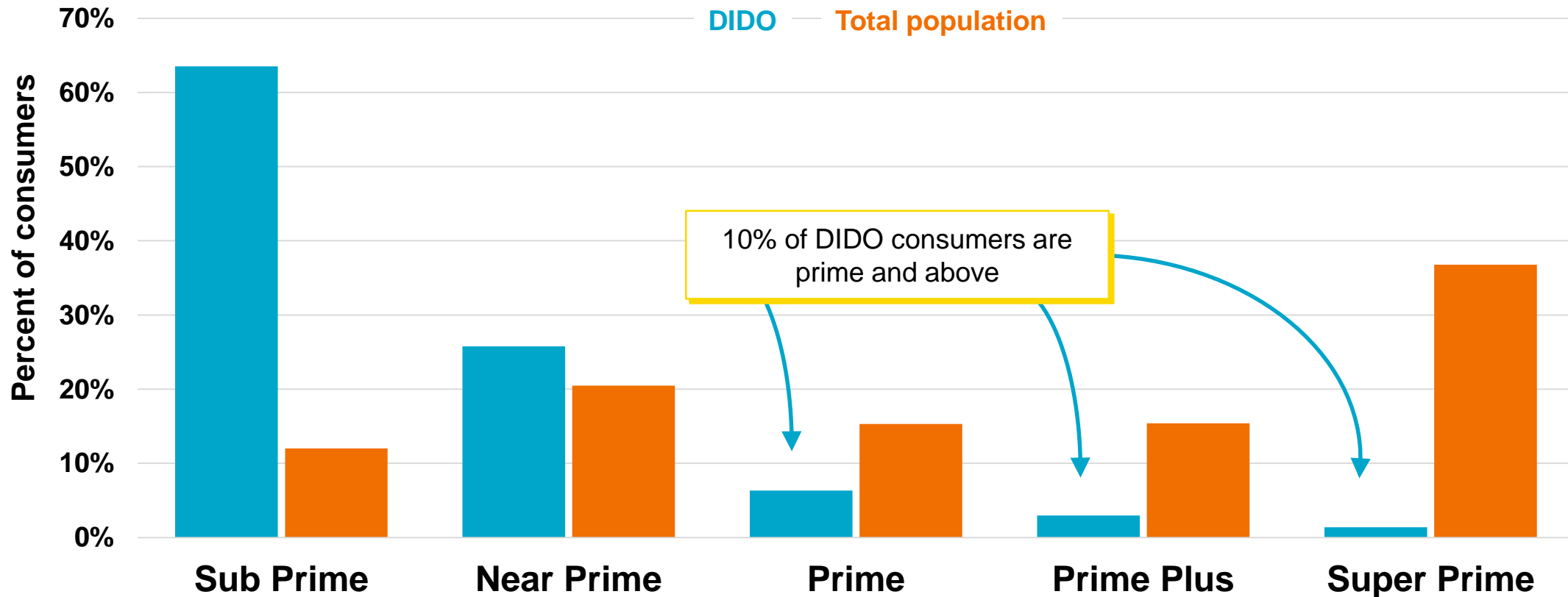
Test group: People who have derogatory narrative at $t - 1$ but not at t

Control group: People who do not have derogatory narrative at $t - 12$ through to t

The DIDO cohorts had a score distribution skewed to higher risk tiers



Risk distribution of DIDO group at time t-1 (pre-score)



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

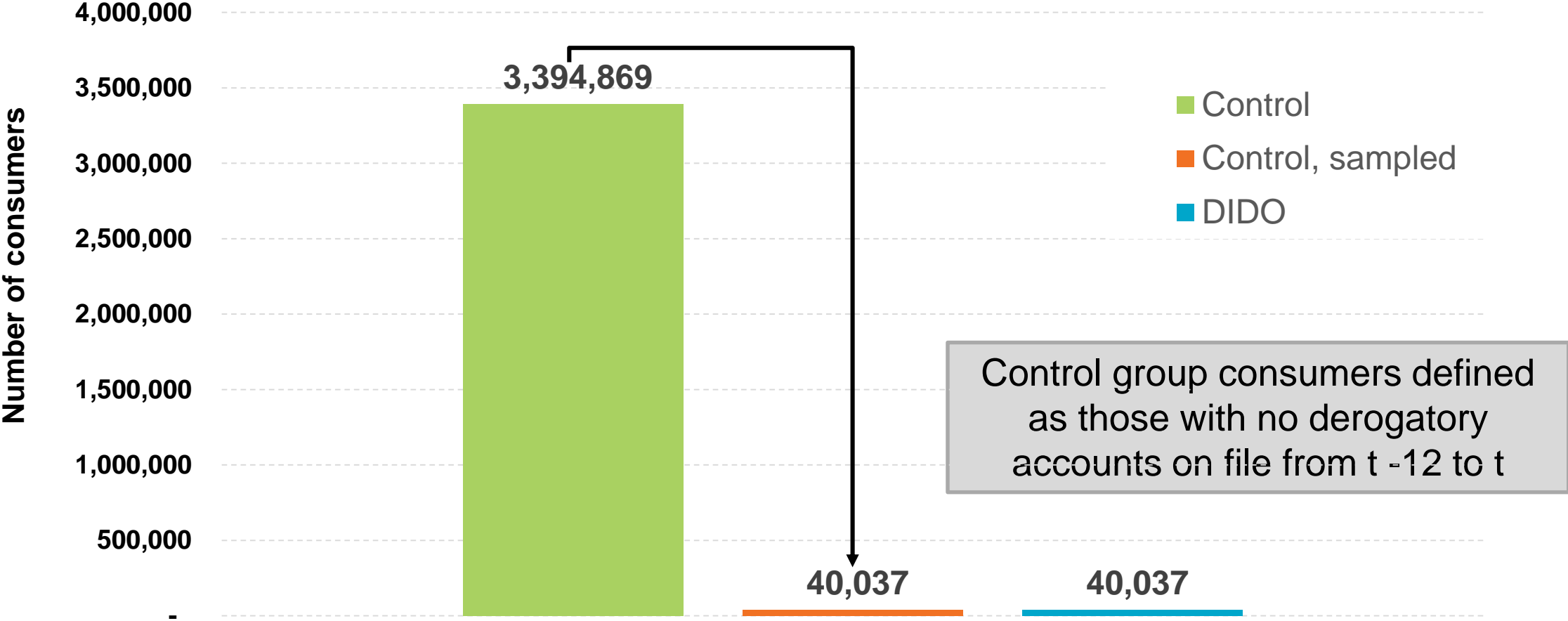
Source: TransUnion Canada consumer credit database

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We identified control groups at the same periods and used random sampling to align risk distributions to the DIDO cohorts



Example of sampling for the 2017 Q1-cohort subprime population





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How did consumer credit scores change after derogatory information dropped off their files?

DIDO consumers can see score improvement at the derog drop off, especially in higher risk tiers

Score migration comparison, pre-score to post-score

Score migration pre-score to post-score	Segment	Pre-score risk tier				
		Subprime	Near prime	Prime	Prime plus	Super prime
Better	DIDO	82%	63%	58%	63%	61%
	Control	9%	11%	20%	19%	12%
Same	DIDO	13%	19%	25%	22%	25%
	Control	85%	77%	55%	56%	65%
Worse	DIDO	5%	18%	17%	15%	14%
	Control	6%	12%	25%	25%	23%

Score migration based on +/- 10 points in CV Score

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

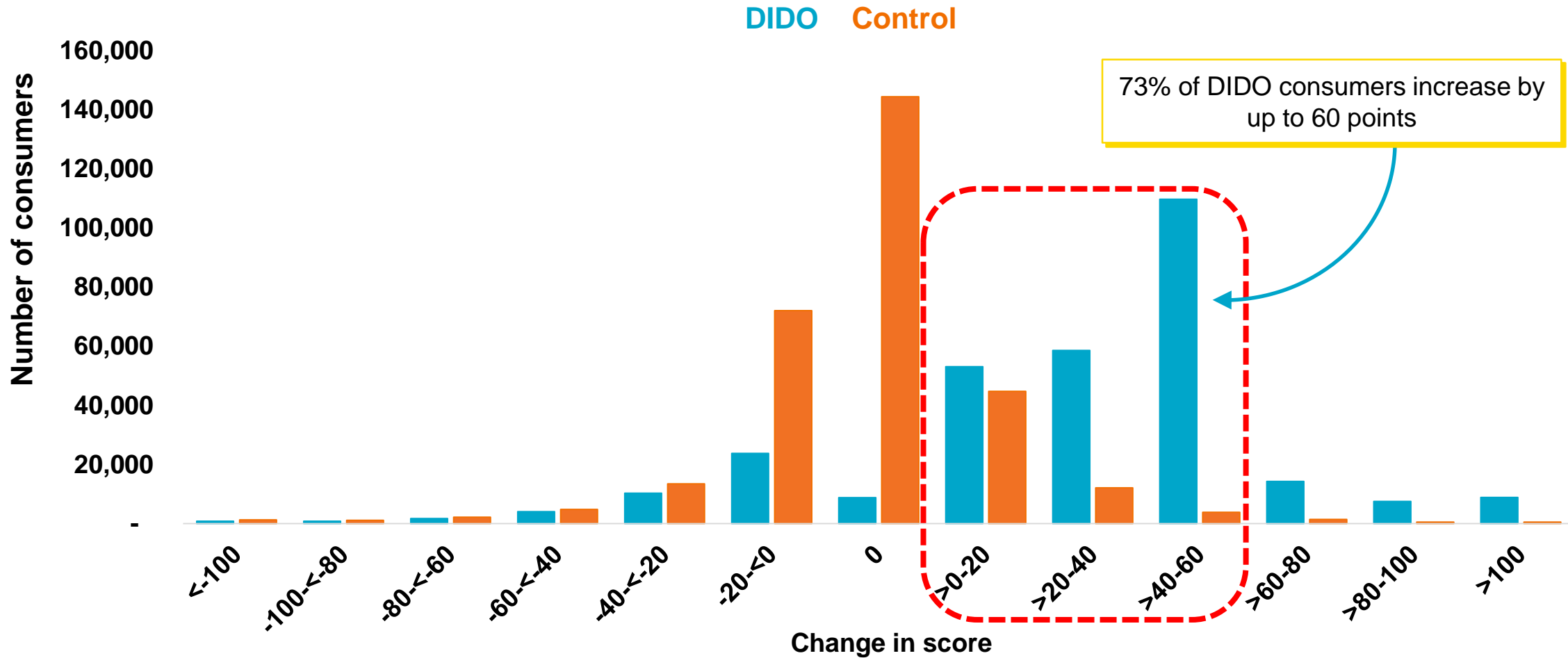
Source: TransUnion Canada consumer credit database

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DIDOs can experience a spike in their risk score during the period in which their derogatory events drop-off

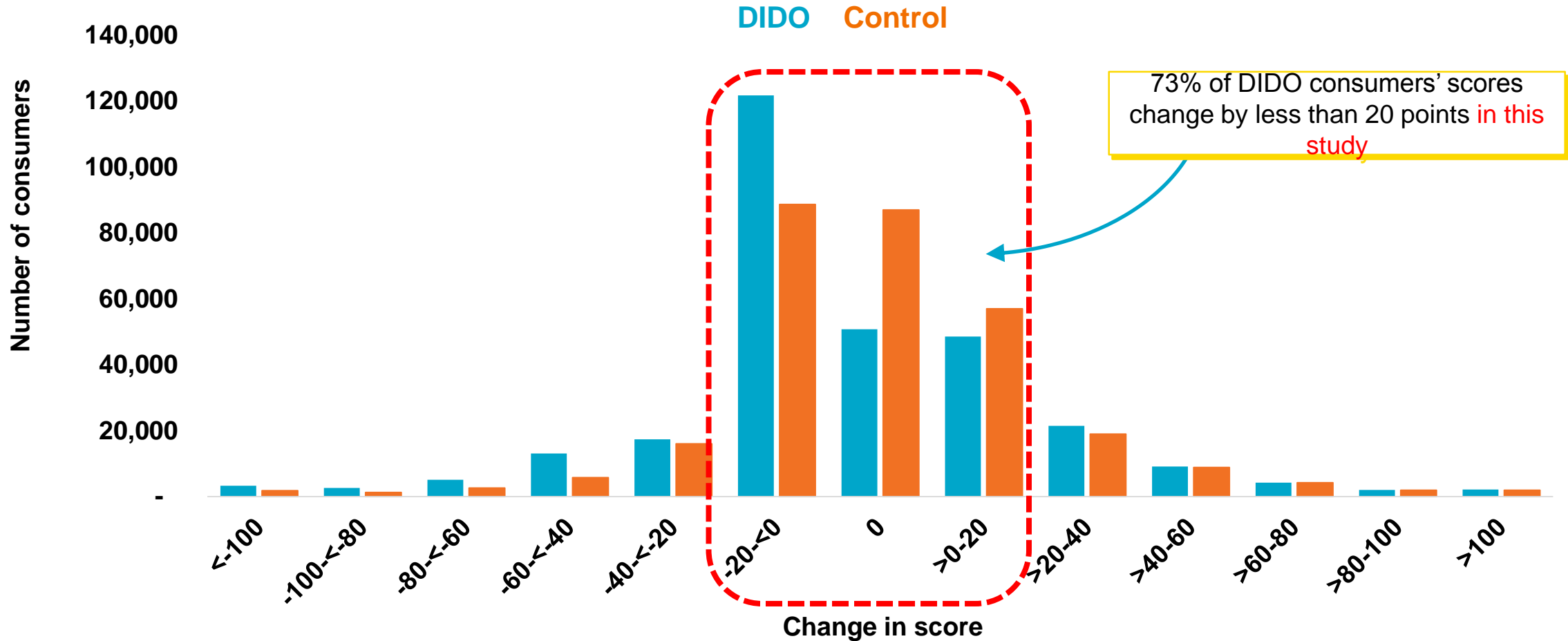


Number of consumers by change in score (t-1 to t+1)



After six months we saw scores stabilize for the DIDO group

Number of consumers by change in score – 6 months post DIDO



Source: TransUnion Canada consumer credit database

Scores remain stable after 12 months, although scores in DIDO lower risk tiers may be more likely to worsen vs. control



Score migration comparison, post-score to t+12

Score migration post-score to t+12	Segment	Post-score risk tier				
		Subprime	Near prime	Prime	Prime plus	Super prime
Better	DIDO	19%	27%	35%	33%	22%
	Control	19%	20%	44%	38%	24%
Same	DIDO	72%	43%	23%	25%	36%
	Control	74%	61%	25%	30%	43%
Worse	DIDO	9%	30%	42%	42%	42%
	Control	7%	19%	31%	32%	33%

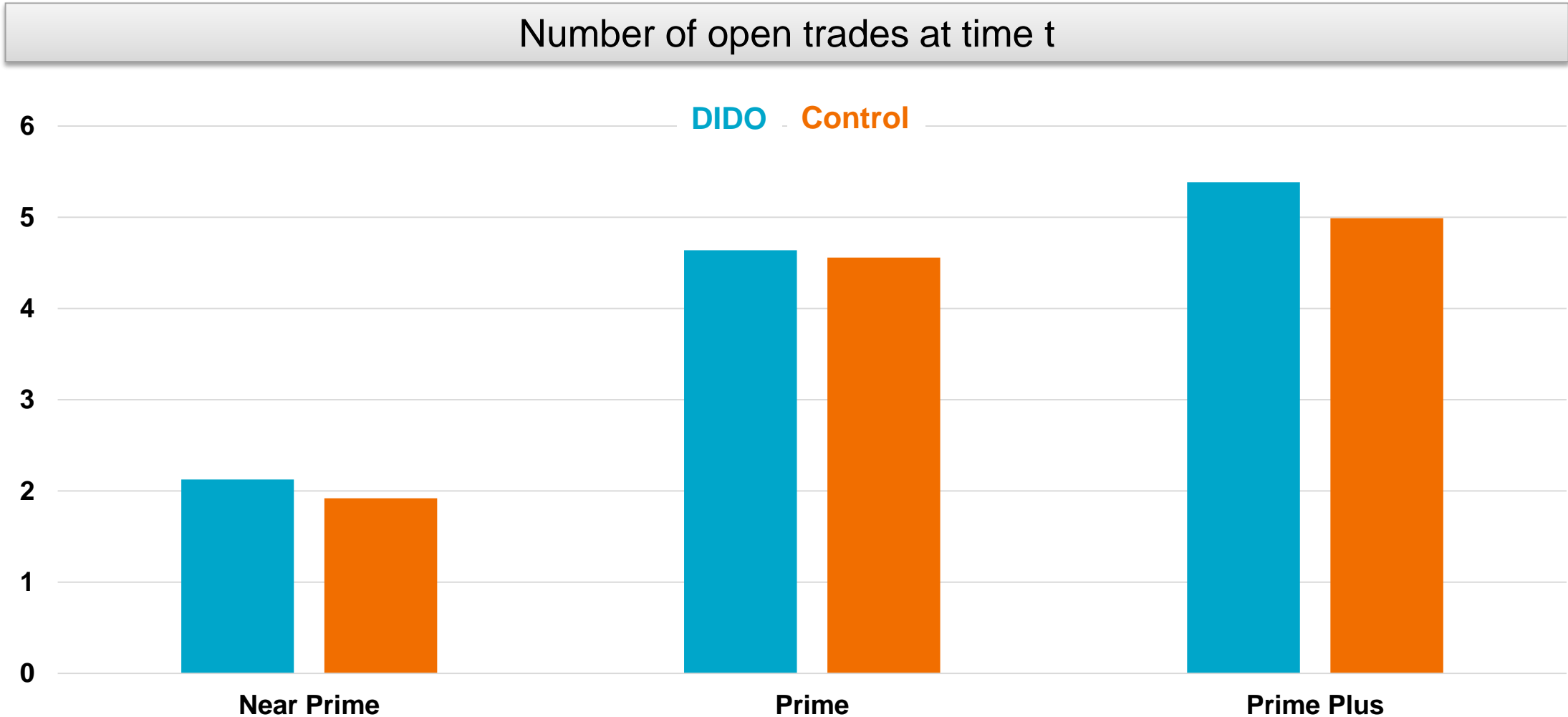
Credit Vision risk score: Subprime = 300-639; Near prime = 640-719; Prime = 720-759; Prime plus = 760-799; Super prime = 800+

What might explain these score migration trends?

Let's look at the broader credit profile of the DIDO group compared to the control group.



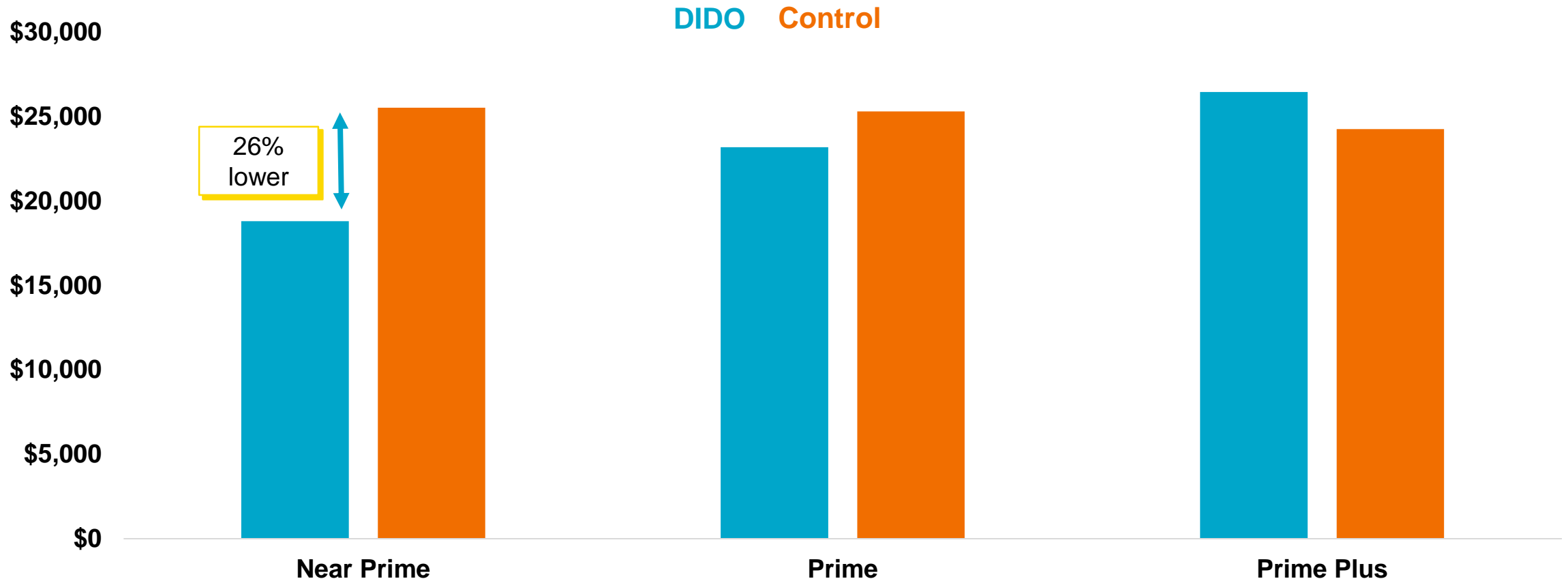
The DIDO group has slightly more open trades vs. control



Except for the prime plus and super prime tiers, the DIDO group can have lower non-mortgage balances



Average non-mortgage balances held by consumers as at time t



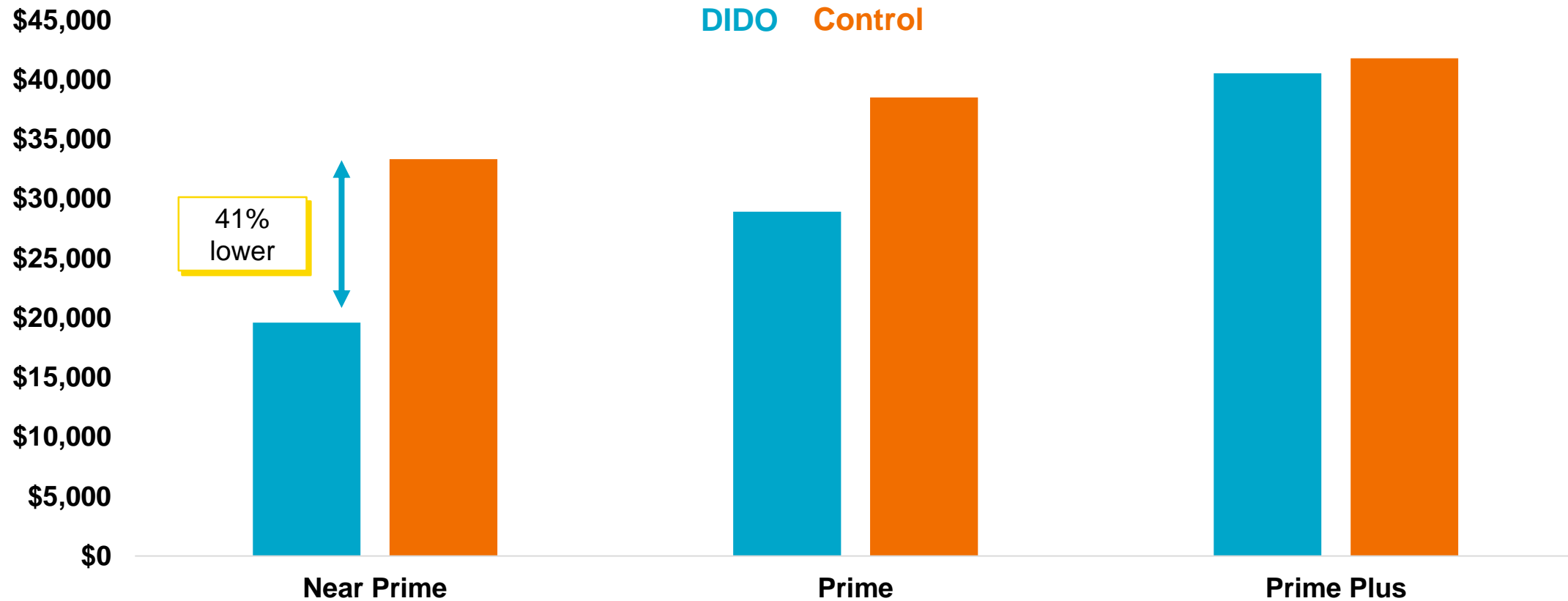
Source: TransUnion Canada consumer credit database

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



Lower credit lines extended to the DIDO group may be the reason for lower average non-mortgage balances vs. control

Average credit line exposure to consumers as at time t



Despite decent credit performance, the presence of derogatory information can hamper DIDO consumers from accessing credit



- DIDO consumers appeared to have slightly more open trades in most risk tiers. Despite this, overall balances and limits were lower, especially in higher risk tiers.
- We controlled for risk score, so lower limits may be the result of lender policy rules which exclude DIDO consumers from marketing campaigns and apply more stringent lending criteria.
- Despite improved credit scores, the DIDO group had lower credit limits in almost all risk tiers, which may be a due to lender policy rules.



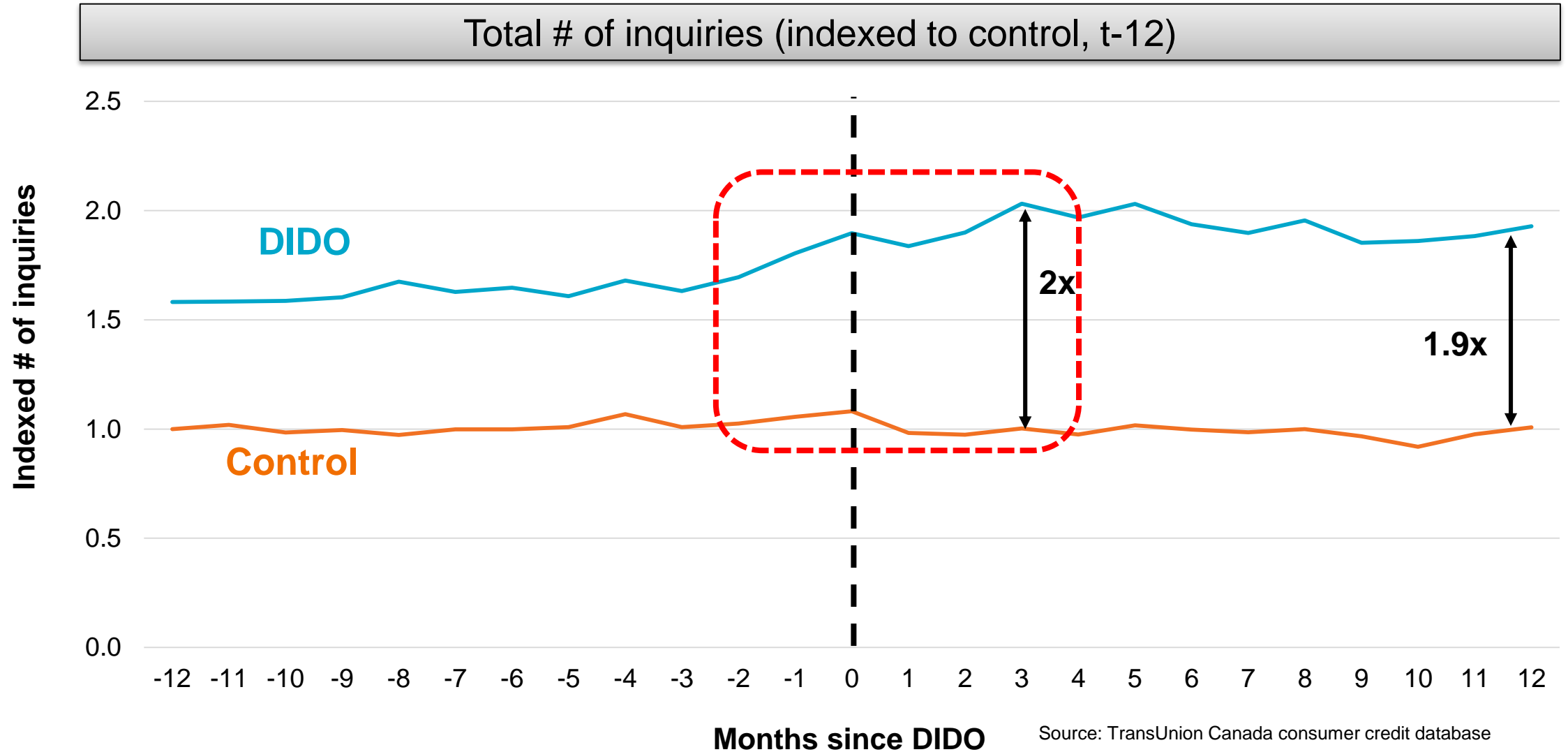
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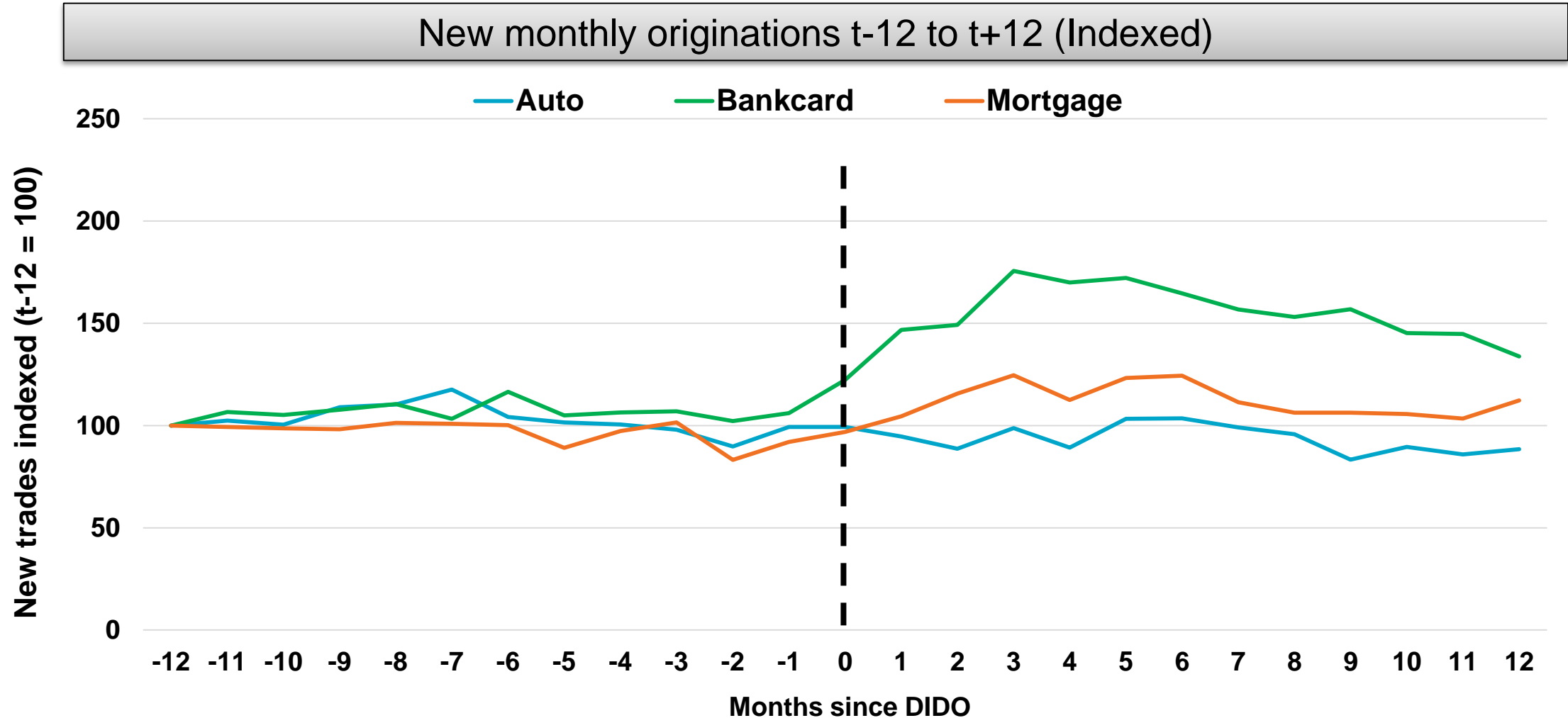
What is the credit activity of consumers before and after their derogatory events fall off?

DIDO consumers are more active in applying for new credit products



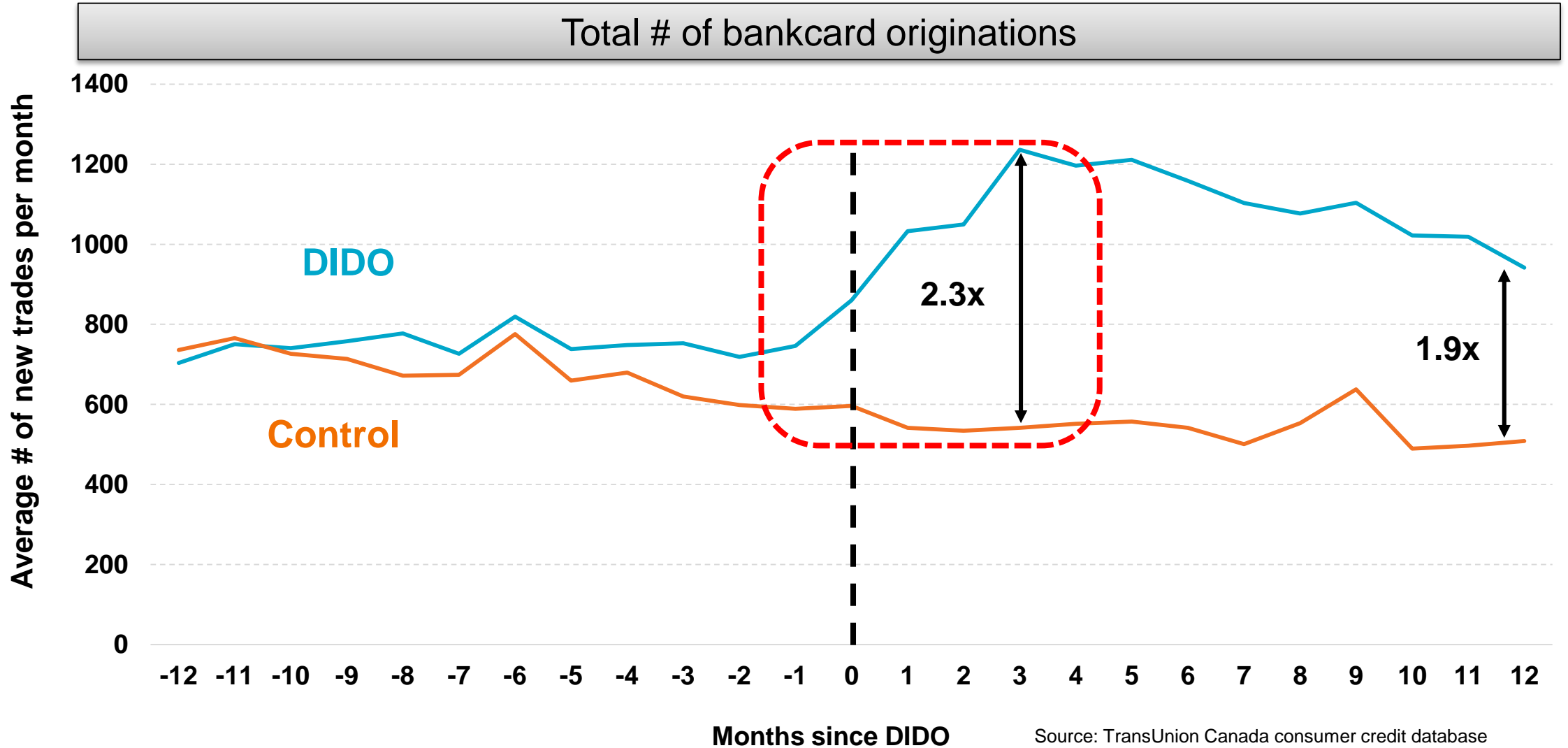
Source: TransUnion Canada consumer credit database

DIDO consumers had increased originations after the derog drops off



Source: TransUnion Canada consumer credit database

DIDO consumers were more than twice as likely to open a credit card within three months after the derog information dropped off



Source: TransUnion Canada consumer credit database

DIDO consumers appear to have higher demand for credit; however, they were generally not able to access new credit at the same levels as control until after the derog drop-off date.

Lender policy rules appear to be impacting DIDO consumer credit access.

Is this conservatism warranted?



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How do consumers perform on newly originated loans after the derogatory event falls off?

DIDO consumers can perform worse vs. control in many cases, but the actual differences may be narrower than anticipated



Account-level delinquency on newly opened accounts, measured at 12 months on book

Risk tier at origination	Bankcard (90+ DPD)	
	Control	DIDO
Prime plus	0.87%	0.58%
Prime	1.30%	2.54%
Near prime	3.92%	4.59%

Installment (60 DPD)	
Control	DIDO
0.27%	0.86%
0.16%	1.51%
2.29%	3.83%

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

Source: TransUnion Canada consumer credit database

Potential reasons for these performance differences

- **Past experience** – Consumers who have previously experienced a major derogatory event may be less concerned with the implications of doing so again
- **Constrained financial flexibility** – Lower access to revolving credit prior to the DIDO date could reduce consumers' capacity to pay if they experience financial hardships

This study suggests that consumers with a derogatory event about to drop off their credit file may be more credit-active and potentially more likely to respond to new credit offers. This can make them an attractive segment from a marketing perspective.

How can lenders safely approach these consumers while attempting to limit exposure to higher delinquency rates?



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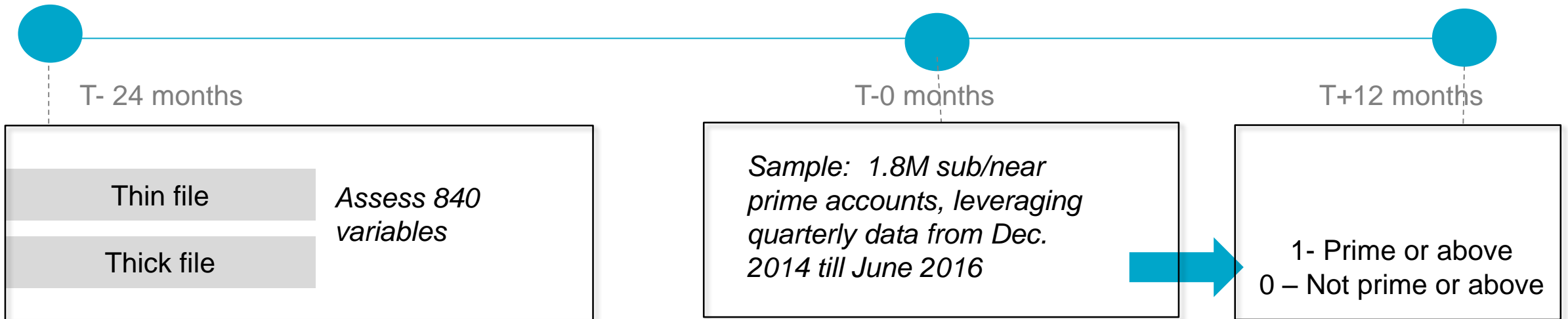
Is there a way for us to confidently select non-prime consumers who may be Prime or better in the future?

Combining DIDO triggers with a forward-looking model to assess future risk migration can target opportunities with more precision



Observation

Performance



Is there anything in their credit data today that will help tell us who they could be tomorrow?

Combining DIDO triggers with a model to assess future risk migration can target optimal opportunities with more precision



Lower propensity → Higher propensity

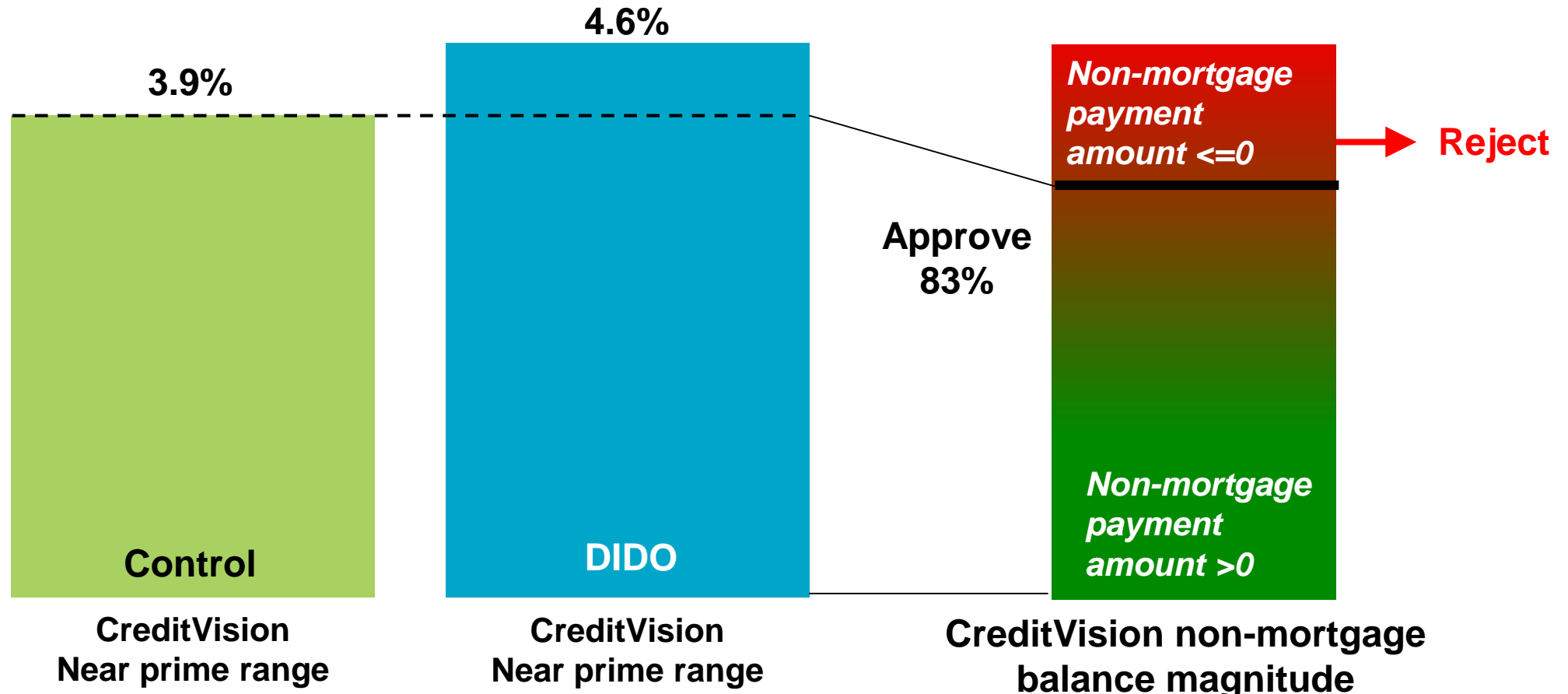
		Propensity to move to prime or above (Quintiles)					
		1	2	3	4	5	
Higher risk ↓ Lower risk	Below prime CreditVision score (Quintiles)	1	1%	1%	2%	3%	9%
	2	1%	3%	0%	2%	9%	
	3	1%	3%	0%	4%	8%	
	4	2%	3%	5%	8%	13%	
	5		1%	5%	9%	30%	

Below Prime defined as <719 CreditVision risk score

Alternatively, CreditVision algorithms can analyze high-risk consumers to exclude while maintaining target bad rates



90+ DPD on newly opened, near prime, credit cards (12 months on book)



CreditVision risk ranges: Near prime = 640-719

Source: TransUnion Canada consumer credit database

Lenders may not often revisit or change policy rules once they're in place. This can be an opportunity.



Current situation	Potential opportunity
Long list of policy rules that evolved over time	Simplify approval processes through streamlined set of policy rules
Policy rules are overlapping	Ensure alignment of policy rules aimed at discrete areas of risk
Risk score cutoffs would likely have caught most of the 'bads' that policy rules identified	Eliminate policy rules redundant with risk scores (or each other)
Policy rule thresholds have not been updated since being established	Assess and modify policy rule thresholds to reflect current operating environment

TransUnion can provide strategy and analytics to assist lenders with assessing and updating their policy rules.

In summary:

- Credit scores are generally positively impacted when derogatory events drop off the credit file
- DIDO consumers appear to have lower levels of credit participation than control consumers prior to the derog dropping off
 - We believe lender policy rules may be a primary driver.
 - Lenders who have not revisited their current policy rules should consider doing so. We can provide analytics to help!
- DIDO consumers are generally more likely to seek new credit and open new accounts, both before and after the derogatory event falls off
- Performance on new accounts suggests DIDO consumers aren't always higher-risk and lenders can effectively manage this risk using many of the advanced credit evaluation tools available

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