

BUY:  
UPST

Current Price:  
\$170

Target Price:  
\$218

Upside:  
28%

## Upstart Holdings Inc. (NASDAQ: UPST)

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Sector Head: Travis Maguire

Lead Analyst: Adrian Ng

December 5<sup>th</sup>, 2021

# Company Overview

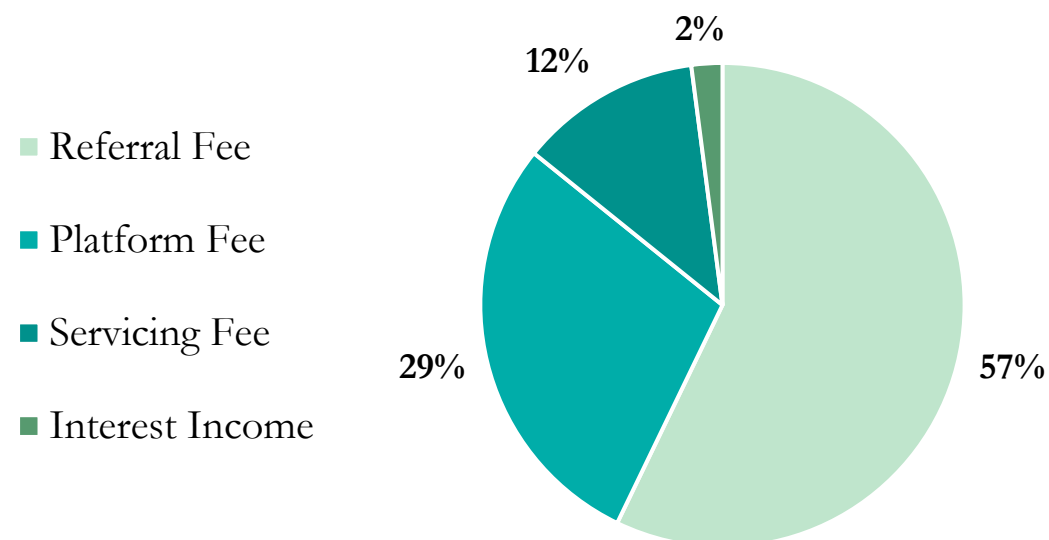
## Description

Upstart is a leading AI powered lending platform designed to improve access to affordable credit for consumers

Uses machine learning and non-conventional variables to provide more superior loan products with improved economics

Delivers AI models to banks partners to predict the cash flow for every month of a loan in the form of a cloud application

## Revenue Segments



## Management Team



**Dave Girouard**

Co-Founder & CEO  
Ex-Google  
Enterprise President



**Paul Gu**

Co-Founder & Product & Data Science  
Ex-D.E. Shaw  
Group Risk Analysis



**Anna Counselman**

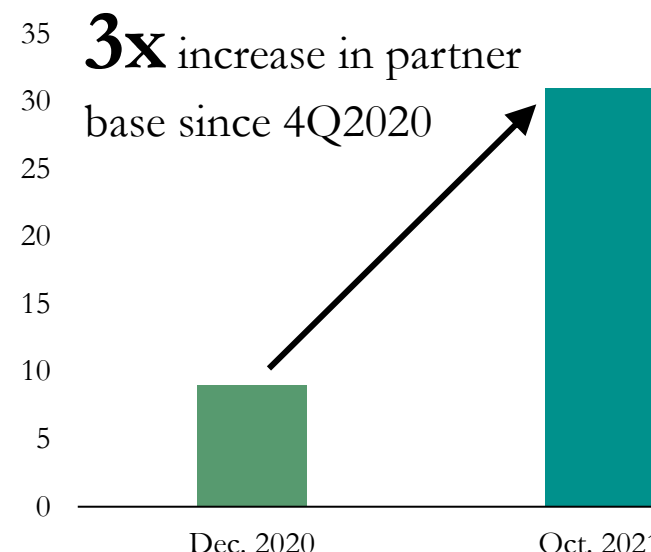
Co-Founder & People & Operations  
Ex-Google Gmail  
Consumer Operations Director



**Sanjay Datta**

Chief Financial Officer  
Ex- Google VP of Advertising Finance

## Partnerships



**WSFS bank**

We Stand For Service®

**Patelco**

CREDIT UNION

**Abound**  
CREDIT UNION

**cross river**

**AssociatedBank**

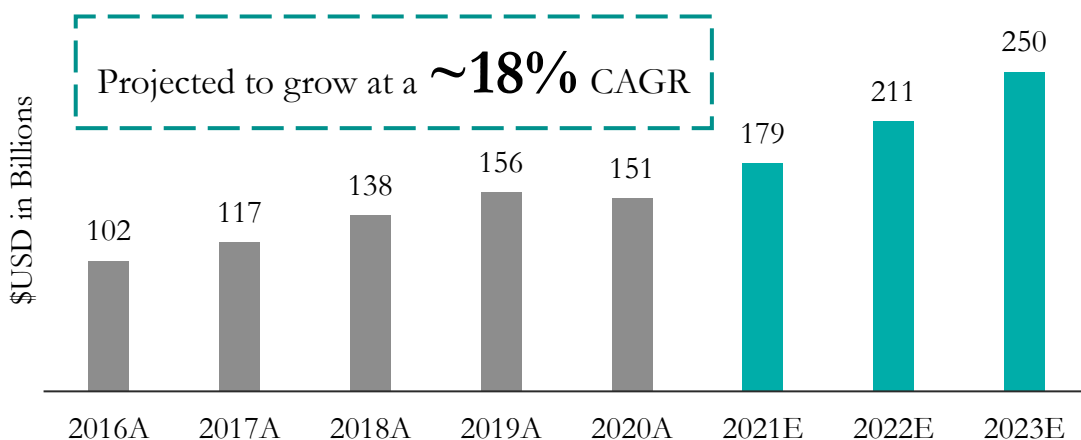
# Industry Environment

AI lending platform is poised to disrupt the lending industry, which relies on the dated FICO score system

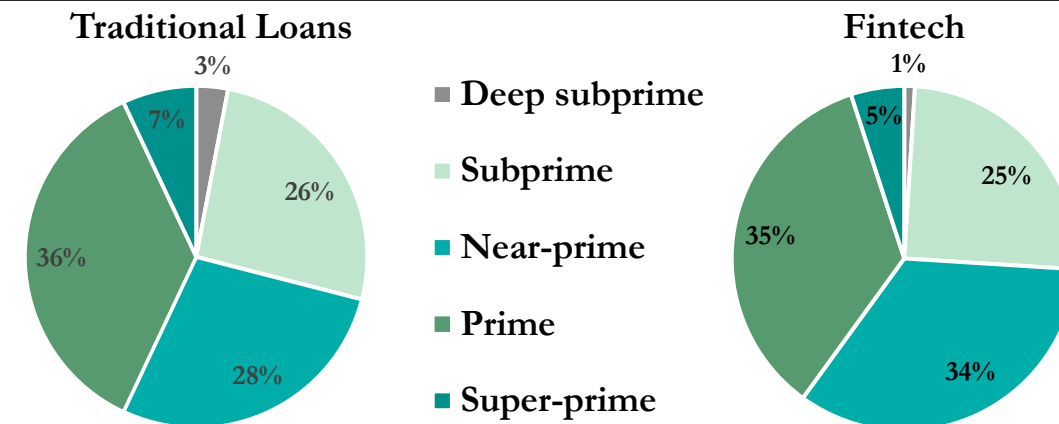
## *Inefficient Existing Credit Market*

- ❖ Over **90%** of lenders uses the FICO scores as their primary credit model, and merely rely on **8 – 15** flawed variables
- ❖ Upstart utilizes AI models that analyze **1,000+** variables and have been trained by **10.5 mm+** repayment events
- ❖ While only **20%** of Americans have ever defaulted on their loans, **52%** of Americans lack the access to prime credit
- ❖ As much as **30%** of the populace may have been declined for a loan despite having the ability to successfully repaid

## *Outstanding Personal Loan Market Size*



## *Loans by Credit Quality*

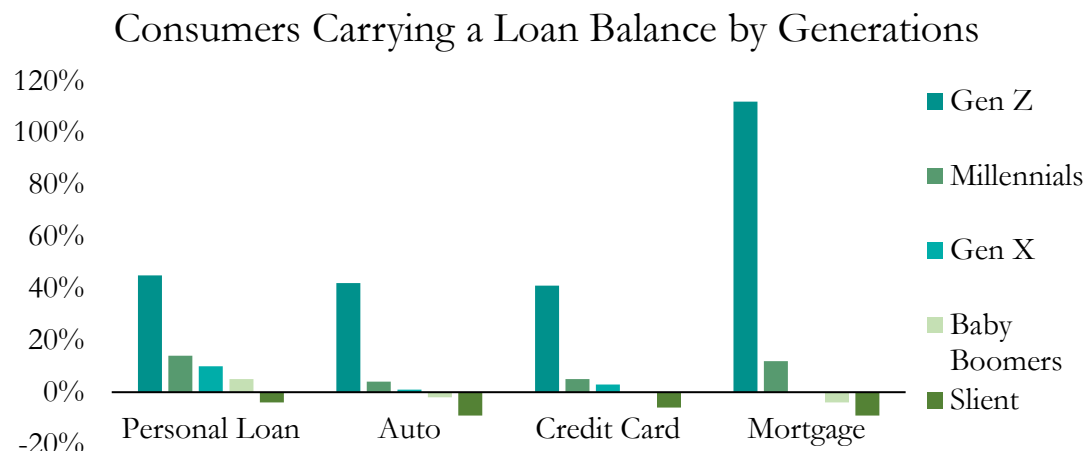


# Unique Positioning in Credit Market

## *First Mover Advantage*

- ❖ Upstart's **8 years** head start of proprietary platform incorporates modern technologies and software development
- ❖ Approves **27% more borrowers** than high-quality traditional lending models with a **16% lower average APR** for approved loans
- ❖ Enables banks and credit union partners to **lower default rate by 75%** while keeping approval rates constant
- ❖ Approximately **71% of Upstart-powered loans** are instantly approved and fully automated, which is **48 bps higher** than that of traditional lenders

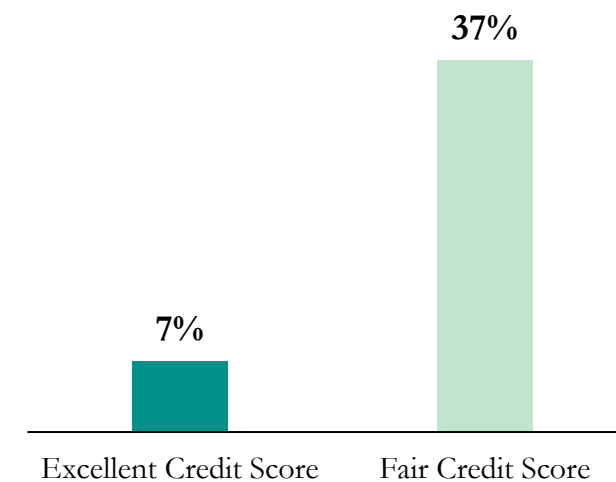
## *Emerging Youth Population*



Credit-age Gen Z is expected to rise **41%** to **45 mm** by 2022

## *Upstart-Prodigy Synergies*

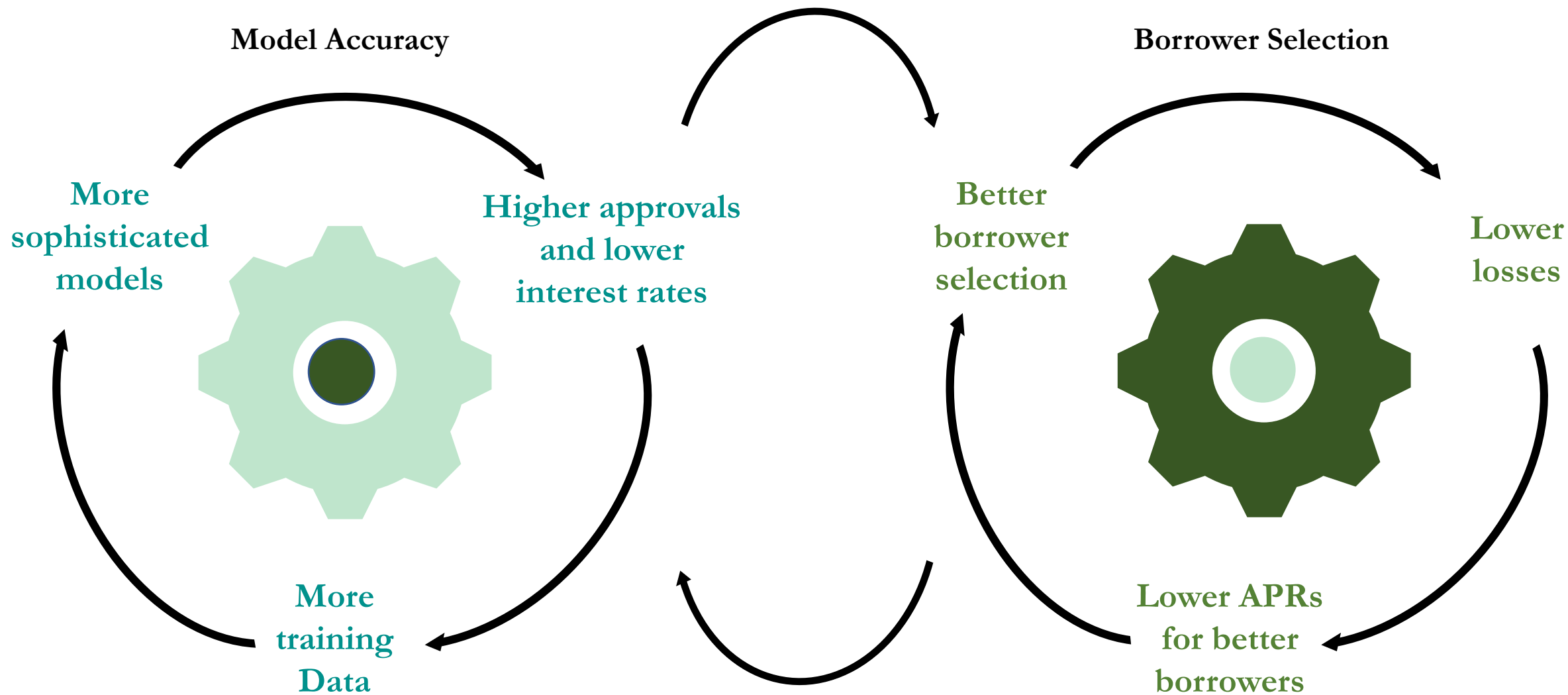
Total Interest Payments Margin



- Integration of Prodigy's cloud-based automotive retail software
- Projected **~12%** increase in new-vehicle retail sales in 2022 due to low interest rate

# Network Effect: Flywheel Dynamics

Binghamton Investment Fund



# Transition to AI Lending

## *New Distribution Channel*

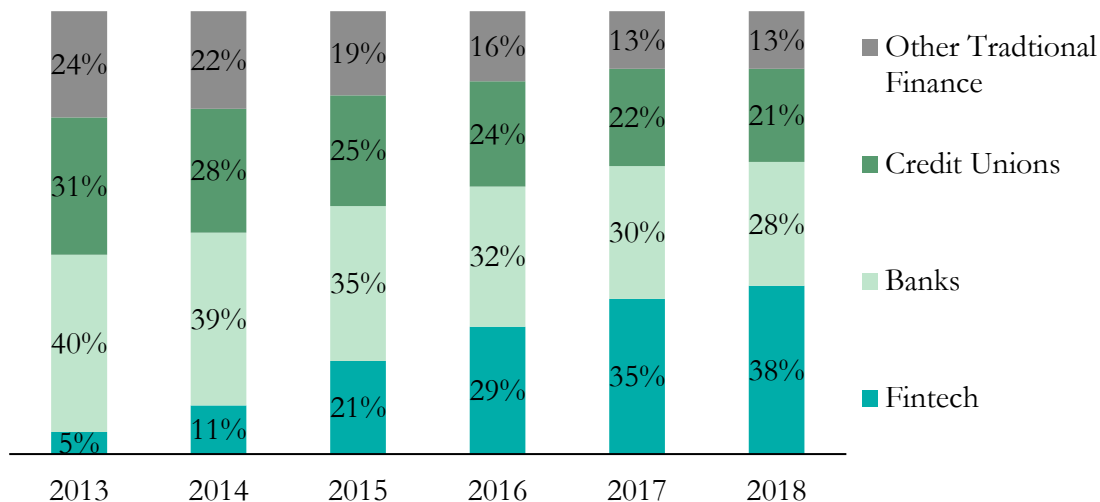
Upstart sourced most of the loans referenced from its website, but the company provides AI technology as a **back-end solution to bank partners**

Bank-sourced loans are growing at a stellar rate as bank partners increasingly offer **white-labeled Upstart-powered loans** via their own websites

Upstart does not incur any borrower acquisition costs while increasing contribution margin by **20%**

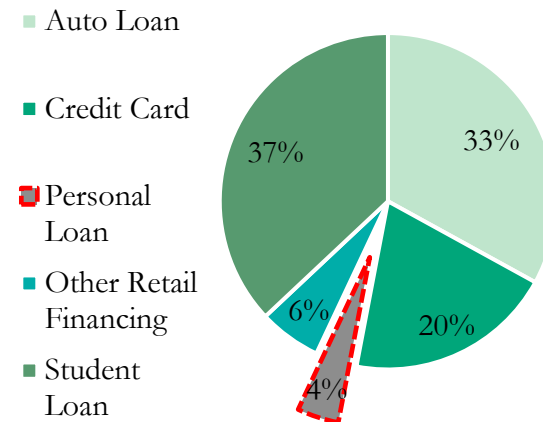
## *Emergence of Fintech in Personal Loan Market*

Personal Loans Originated by Lenders



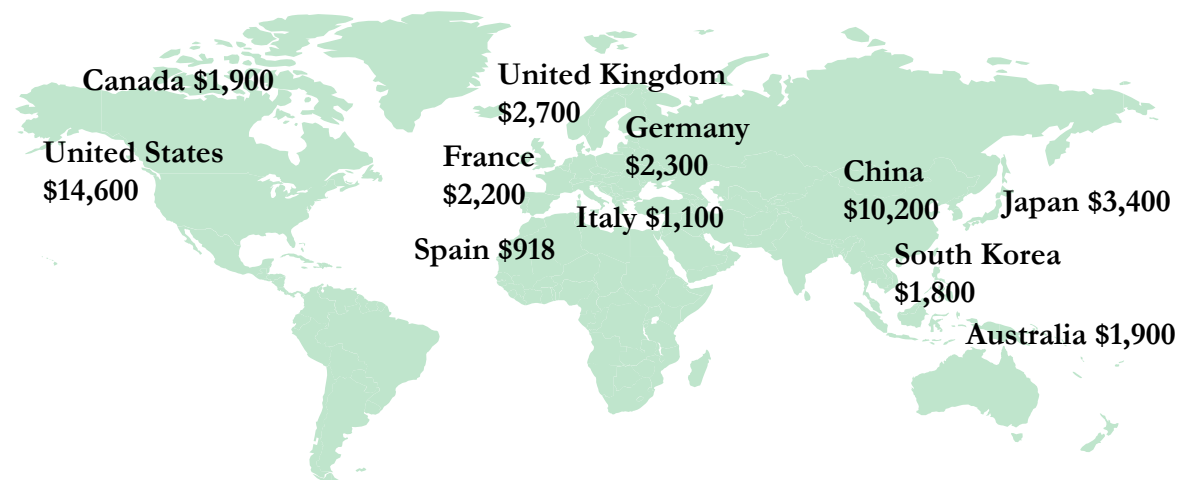
## *International and Vertical Expansion Opportunities*

Upstart TAM Potential in Non-Housing Debt Market



- ❖ Flywheel Dynamics to allow for developments
- ❖ Constantly improving AI models in real time
- ❖ Expansion into secured loans to reduce credit risk

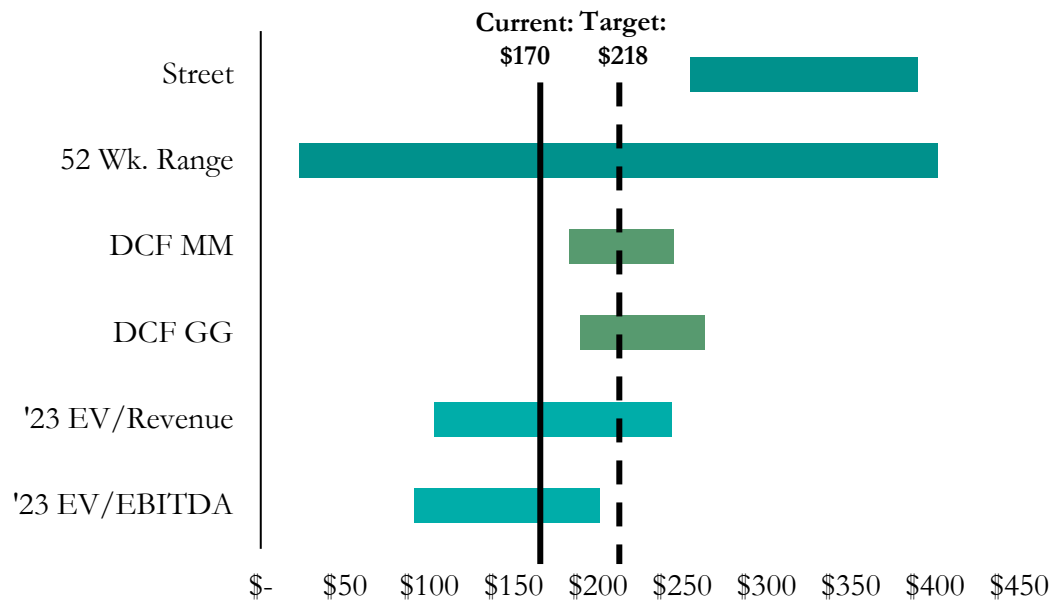
Total Household Debt by Country (in Billions)



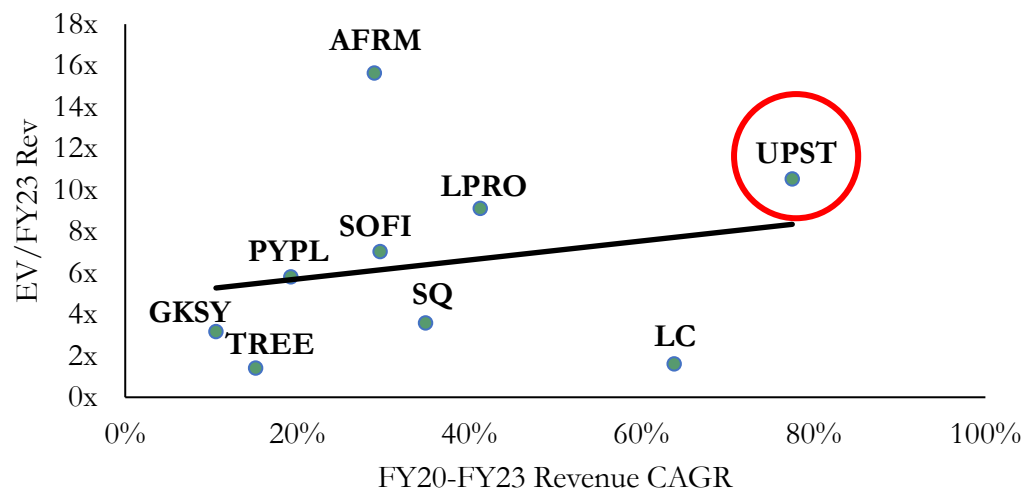
# Valuation

Binghamton Investment Fund

## Football Field Analysis



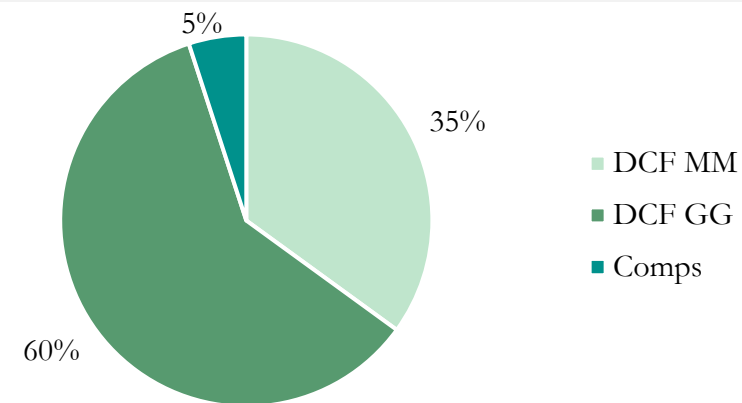
## EV/Revenue Valuation Framework



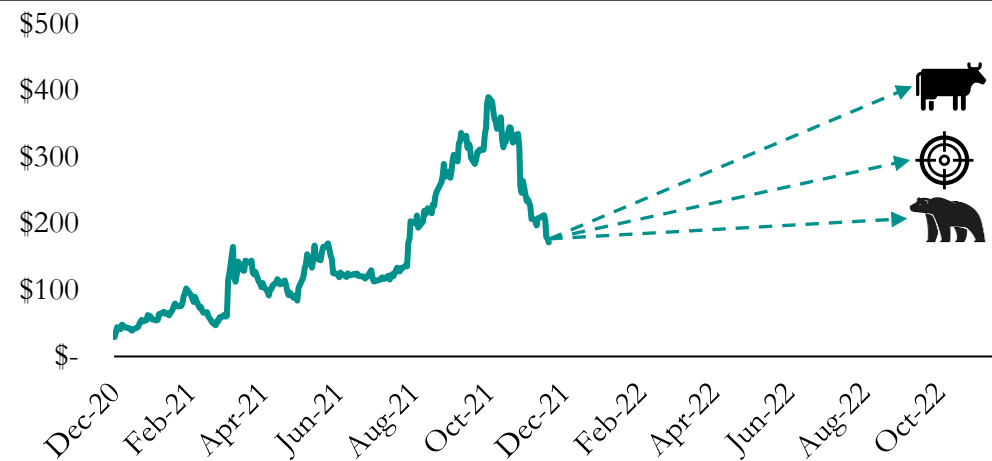
## Methodologies

### Discounted Cash Flow

### Comparable Companies Analysis



## Bull vs. Bear



# Investment Risk

- ❖ Upstart has material partner concentration in terms of both revenue and customer loan referrals
- ❖ Upstart could potentially lose market share as banks may develop their own AI lending platform
- ❖ Upstart substantially derives all its revenue from a single loan product, and it is thus susceptible to fluctuations in the unsecured personal loan market

## *Upside Case*

- ❖ UPST's partner base expands exponentially due to AI lending disruption
- ❖ Training dataset increases to over 200 millions of repayment events
- ❖ Faster penetration of the auto and bank-sourced loan TAM, and rapidly gaining market share in unsecured personal loan

## *Base Case*

- ❖ UPST's partner base expands at a constant rate
- ❖ Training dataset increases to over 100 millions of repayment events
- ❖ Moderate penetration of the auto and bank-sourced loan TAM, and gaining market share in unsecured personal loan

## *Downside Case*

- ❖ UPST's partner base expands relatively slow due to competitive pressures
- ❖ Training dataset increases to over 50 millions of repayment events
- ❖ Slower penetration of the auto and bank-sourced loan TAM, and slower expansion in the unsecured personal loan market



**BUY:  
UPST**

**Current Price:  
\$170**

**Target Price:  
\$218**

**Upside:  
28%**

Thank You

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Questions?

# Appendix A: Revenue Forecast A

| Upstart Holdings, Inc.   |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
|--|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|
| Revenue Forecast   |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
| Fiscal year ended  | FY 2018       | FY 2019        | FY 2020        | Q1 2021        | Q2 2021        | Q3 2021        | Q4 2021E       | 2021E          | 2022E            | 2023E            | 2024E            | 2025E            |
| <i>(in thousands, except per share data)</i>                           |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
| <b>Revenue:</b>  |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
| Platform and referral fees, net  | 83,381        | 144,055        | 200,257        | 106,953        | 169,080        | 191,442        | 262,426        | 729,901        | 871,062          | 1,158,758        | 1,472,400        | 1,929,294        |
| Servicing fees, net  | 5,101         | 15,792         | 28,343         | 9,217          | 18,217         | 18,979         | 22,609         | 69,022         | 74,543           | 80,507           | 86,947           | 93,903           |
| Interest income  | 10,831        | 4,342          | 4,816          | 5,175          | 6,649          | 18,029         | 27,171         | 57,024         | 61,585           | 66,512           | 71,833           | 77,580           |
| <b>Total revenue</b>   | <b>99,313</b> | <b>164,189</b> | <b>233,416</b> | <b>121,345</b> | <b>193,946</b> | <b>228,450</b> | <b>312,205</b> | <b>855,946</b> | <b>1,007,191</b> | <b>1,305,778</b> | <b>1,631,181</b> | <b>2,100,777</b> |
| <b>Revenue drivers:</b>  |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
| <b>Platform and referral fees revenue</b>                              |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
| Transaction volume (number of loans)                                   | 114,125       | 215,122        | 300,379        | 169,750        | 286,864        | 362,780        | 497,293        | 1,316,687      | 1,407,647        | 1,504,781        | 1,608,505        | 1,719,258        |
| Transaction volume (Dollars)   |               |                |                | 1,728,677      | 2,795,089      | 3,129,652      | 4,290,080      | 11,943,498     | 12,768,580       | 13,649,675       | 14,590,535       | 15,595,159       |
| Adjusted transaction volume (Dollar)                                   |               |                |                |                |                |                |                | 11,064,761     | 14,239,939       | 18,943,130       | 24,070,478       | 31,539,671       |
| Average value of loan  |               |                |                | 10             | 10             | 9              | 9              | 9              | 9                | 9                | 9                | 9                |
| Platform and referral fees revenue as % of transaction volume (Dollar) |               |                |                | 6.2%           | 6.0%           | 6.1%           | 6.1%           | 6.1%           | 6.1%             | 6.1%             | 6.1%             | 6.1%             |
| Conversion rate  | 9.1%          | 13.1%          | 15.2%          | 22.0%          | 24.4%          | 23.0%          | 23.5%          | 23.3%          | 23.5%            | 23.7%            | 23.9%            | 24.1%            |
| Number of rate inquiries received                                      | 1,254,121     | 1,642,153      | 1,976,178      | 771,591        | 1,175,672      | 1,577,304      | 2,116,142      | 5,640,709      | 5,979,152        | 6,337,901        | 6,718,175        | 7,121,265        |
| % Growth   |               | 30.9%          | 20.3%          |                | 52.4%          | 34.2%          | 34.2%          | 285.4%         | 6.0%             | 6.0%             | 6.0%             | 6.0%             |
| <b>Servicing fees revenue</b>  |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
| Servicing fees as a % of outstanding principal balance                 |               | 6.8%           | 36.1%          | 16.1%          | 22.1%          | 19.1%          | 19.1%          | 14.9%          | 14.9%            | 14.9%            | 14.9%            | 14.9%            |
| <b>Interest income revenue</b>   |               |                |                |                |                |                |                |                |                  |                  |                  |                  |
| Interest income revenue as a % of outstanding principal balance        |               | 1.9%           | 6.1%           | 9.0%           | 8.1%           | 13.9%          | 13.9%          | 12.3%          | 12.3%            | 12.3%            | 12.3%            | 12.3%            |

# Appendix B: Revenue Forecast B

| Upstart Holdings, Inc.   |                  |                  |                  |                  |                  |
|--|------------------|------------------|------------------|------------------|------------------|
| Revenue Forecast   |                  |                  |                  |                  |                  |
| Fiscal year ended  | 2026E            | 2027E            | 2028E            | 2029E            | 2030E            |
| <i>(in thousands, except per share data)</i>                           |                  |                  |                  |                  |                  |
| <b>Revenue:</b>  |                  |                  |                  |                  |                  |
| Platform and referral fees, net  | 2,422,084        | 2,820,182        | 3,191,454        | 3,440,552        | 3,693,676        |
| Servicing fees, net  | 101,415          | 109,529          | 118,291          | 127,754          | 137,975          |
| Interest income  | 83,786           | 90,489           | 97,728           | 105,547          | 113,990          |
| <b>Total revenue</b>   | <b>2,607,285</b> | <b>3,020,200</b> | <b>3,407,473</b> | <b>3,673,853</b> | <b>3,945,641</b> |
| <b>Revenue drivers:</b>  |                  |                  |                  |                  |                  |
| <b>Platform and referral fees revenue</b>                              |                  |                  |                  |                  |                  |
| Transaction volume (number of loans)                                   | 1,822,413        | 1,931,758        | 2,047,663        | 2,170,523        | 2,300,754        |
| Transaction volume (Dollars)   | 16,530,869       | 17,522,721       | 18,574,084       | 19,688,529       | 20,869,841       |
| Adjusted transaction volume (Dollar)                                   | 39,595,693       | 46,103,725       | 52,173,194       | 56,245,399       | 60,383,409       |
| Average value of loan  | 9                | 9                | 9                | 9                | 9                |
| Platform and referral fees revenue as % of transaction volume (Dollar) | 6.1%             | 6.1%             | 6.1%             | 6.1%             | 6.1%             |
| Conversion rate  | 24.1%            | 24.1%            | 24.1%            | 24.1%            | 24.1%            |
| Number of rate inquiries received                                      | 7,548,541        | 8,001,454        | 8,481,541        | 8,990,434        | 9,529,860        |
| % Growth   | 6.0%             | 6.0%             | 6.0%             | 6.0%             | 6.0%             |
| <b>Servicing fees revenue</b>  |                  |                  |                  |                  |                  |
| Servicing fees as a % of outstanding principal balance                 | 14.9%            | 14.9%            | 14.9%            | 14.9%            | 14.9%            |
| <b>Interest income revenue</b>   |                  |                  |                  |                  |                  |
| Interest income revenue as a % of outstanding principal balance        | 12.3%            | 12.3%            | 12.3%            | 12.3%            | 12.3%            |

# Appendix C: Fee Revenue Build

| Fees Revenue Build                                |         |         |         |        |        |        |        |        |        |        |        |        |        |
|---|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| In Billions                                       | FY 2018 | FY 2019 | FY 2020 | 2021E  | 2022E  | 2023E  | 2024E  | 2025E  | 2026E  | 2027E  | 2028E  | 2029E  | 2030E  |
| <b>Outstanding Consumer Debt in the US</b>        | 13,540  | 14,080  | 14,880  | 15,599 | 16,354 | 17,144 | 17,973 | 18,842 | 19,753 | 20,708 | 21,710 | 22,759 | 23,860 |
| <i>% Growth</i>                                   |         | 4.0%    | 5.7%    | 4.8%   | 4.8%   | 4.8%   | 4.8%   | 4.8%   | 4.8%   | 4.8%   | 4.8%   | 4.8%   | 4.8%   |
| <b>Total Balances by Debt Type</b>                |         |         |         |        |        |        |        |        |        |        |        |        |        |
| Personal loan                                     |         | 305     | 324     | 339    | 356    | 373    | 391    | 410    | 430    | 450    | 472    | 495    | 519    |
| <i>% of U.S. outstanding consumer debt</i>        |         | 2.2%    | 2.2%    | 2.2%   | 2.2%   | 2.2%   | 2.2%   | 2.2%   | 2.2%   | 2.2%   | 2.2%   | 2.2%   | 2.2%   |
| Credit Card                                       |         | 919     | 836     |        |        |        |        |        |        |        |        |        |        |
| Auto  |         | 1,300   | 1,350   | 1,415  | 1,484  | 1,555  | 1,631  | 1,709  | 1,792  | 1,879  | 1,970  | 2,065  | 2,165  |
| <i>% of U.S. outstanding consumer debt</i>        |         | 9.2%    | 9.1%    | 9.1%   | 9.1%   | 9.1%   | 9.1%   | 9.1%   | 9.1%   | 9.1%   | 9.1%   | 9.1%   | 9.1%   |
| Student Loan                                      |         | 1,400   | 1,570   |        |        |        |        |        |        |        |        |        |        |
| Mortgage  |         | 9,610   | 1,031   |        |        |        |        |        |        |        |        |        |        |
| Other Retail Financing                            |         | 544     | 494     |        |        |        |        |        |        |        |        |        |        |
| <b>Loans origination facilitated by Upstart</b>   |         |         |         |        |        |        |        |        |        |        |        |        |        |
| Unsecured Personal Loan                           |         |         | 3.2     | 7      | 9      | 11     | 14     | 16     | 18     | 21     | 24     | 26     | 28     |
| <i>% of the US unsecured personal loan market</i> |         |         | 1.0%    | 2.0%   | 2.5%   | 3.0%   | 3.5%   | 3.9%   | 4.3%   | 4.7%   | 5.0%   | 5.3%   | 5.5%   |
| Auto Loan   |         |         |         | 3      | 8      | 16     | 25     | 40     | 56     | 68     | 79     | 85     | 91     |
| <i>% of the US auto loan market</i>               |         |         |         | 0.2%   | 0.5%   | 1.0%   | 1.5%   | 2.3%   | 3.1%   | 3.6%   | 4.0%   | 4.1%   | 4.2%   |

Binghamton Investment Fund

# Appendix D: Income Statement

| Upstart Holdings, Inc.  |             |            |            |            |            |            |
|---|-------------|------------|------------|------------|------------|------------|
| Income Statement  |             |            |            |            |            |            |
| Fiscal year ended   | FY 2018     | FY 2019    | FY 2020    | Q1 2021    | Q2 2021    | Q3 2021    |
| <i>(in thousands, except per share data)</i>  |             |            |            |            |            |            |
| <b>Revenue</b>  |             |            |            |            |            |            |
| Revenue from fees, net  | \$ 88,482   | \$ 159,847 | \$ 228,600 | \$ 116,170 | \$ 187,297 | \$ 210,421 |
| Interest income and fair value adjustments, net   | 10,831      | 4,342      | 4,816      | 5,175      | 6,649      | 18,029     |
| <b>Total revenue</b>  | 99,313      | 164,189    | 233,416    | 121,345    | 193,946    | 228,450    |
| <b>Operating expenses</b>   |             |            |            |            |            |            |
| Sales and marketing   | 63,633      | 93,175     | 99,659     | 49,376     | 75,916     | 93,346     |
| Customer operations   | 15,416      | 24,947     | 37,581     | 17,388     | 24,164     | 34,978     |
| Engineering and product development   | 8,415       | 18,777     | 38,802     | 18,988     | 31,431     | 37,085     |
| General, administrative, and other  | 19,820      | 31,865     | 45,609     | 20,019     | 26,141     | 34,442     |
| <b>Total operating expenses</b>   | 107,284     | 168,764    | 221,651    | 105,771    | 157,652    | 199,851    |
| Income (loss) from operations   | (7,971)     | (4,575)    | 11,765     | 15,574     | 36,294     | 28,599     |
| Other income  | 487         | 1,036      | 5,549      | (5,233)    | 15         | 22         |
| Expense on warrants and other non-operating expenses, net   | (3,734)     | (1,407)    | (11,364)   | (18)       | (13)       | (776)      |
| Net income (loss) before income taxes   | (11,218)    | (4,946)    | 5,950      | 10,323     | 36,296     | 27,845     |
| Provision for income taxes  | -           | 74         | 371        | 221        | (988)      | (1,268)    |
| Net income (loss) before attribution to noncontrolling interests  | (11,218)    | (5,020)    | 5,579      | 10,102     | 37,284     | 29,113     |
| Net income (loss) attributable to noncontrolling interests  | 1,101       | (4,554)    | (404)      | -          | -          | -          |
| Net income (loss) attributable to Upstart Holdings, Inc. common stockholders  | \$ (12,319) | \$ (466)   | \$ 5,983   | \$ 10,102  | \$ 37,284  | \$ 29,113  |
| Net income (loss) per share attributable to Upstart Holdings, Inc. common stockholders, basic   | \$ (0.87)   | \$ (0.03)  | \$ 0.34    | \$ 0.14    | \$ 0.49    | \$ 0.37    |
| Net income (loss) per share attributable to Upstart Holdings, Inc. common stockholders, diluted   | \$ (0.87)   | \$ (0.03)  | \$ 0.34    | \$ 0.11    | \$ 0.39    | \$ 0.30    |
| Weighted-average number of shares outstanding used in computing net income (loss) per share attributable to Upstart Holdings, Inc. common stockholders, basic   | 14,128,183  | 14,335,611 | 17,513,670 | 73,629,120 | 76,674,126 | 79,392,601 |
| Weighted-average number of shares outstanding used in computing net income (loss) per share attributable to Upstart Holdings, Inc. common stockholders, diluted | 14,128,183  | 14,335,611 | 17,513,670 | 91,449,571 | 94,802,123 | 96,057,210 |

# Appendix E: Income Statement Projection

## Upstart Holdings, Inc.

### Income Statement

| Fiscal year ended                                     | FY 2018         | FY 2019        | FY 2020        | Q1 2021        | Q2 2021        | Q3 2021E       | Q4 2021E       | 2021E          | 2022E            | 2023E            | 2024E            | 2025E            | 2026E            | 2027E            | 2028E            | 2029E            | 2030E            |
|---|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <i>(in thousands, except per share data)</i>          |                 |                |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Revenue:</b>                                       |                 |                |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Revenue   | 99,313          | 164,189        | 233,416        | 121,345        | 193,946        | 228,450        | 312,205        | 855,946        | 1,007,191        | 1,305,778        | 1,631,181        | 2,100,777        | 2,607,285        | 3,020,200        | 3,407,473        | 3,673,853        | 3,945,641        |
| <b>Gross profit</b>                                   | <b>99,313</b>   | <b>164,189</b> | <b>233,416</b> | <b>121,345</b> | <b>193,946</b> | <b>228,450</b> | <b>312,205</b> | <b>855,946</b> | <b>1,007,191</b> | <b>1,305,778</b> | <b>1,631,181</b> | <b>2,100,777</b> | <b>2,607,285</b> | <b>3,020,200</b> | <b>3,407,473</b> | <b>3,673,853</b> | <b>3,945,641</b> |
| <b>Expenses:</b>                                      |                 |                |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| SG&A  | 83,453          | 125,040        | 145,268        | 69,395         | 102,057        | 127,788        | 172,490        | 471,730        | 514,796          | 615,179          | 703,236          | 821,657          | 1,019,763        | 1,181,263        | 1,332,734        | 1,436,920        | 1,543,222        |
| Customer operations                                   | 15,416          | 24,947         | 37,581         | 17,388         | 24,164         | 34,978         | 41,818         | 118,348        | 134,224          | 167,486          | 201,068          | 258,953          | 321,388          | 357,185          | 385,948          | 397,751          | 427,176          |
| Engineering and product development                   | 8,415           | 18,777         | 38,802         | 18,988         | 31,431         | 37,085         | 49,725         | 137,229        | 161,477          | 209,348          | 261,518          | 336,805          | 418,011          | 484,211          | 546,301          | 589,008          | 632,582          |
| <b>Total expenses</b>                                 | <b>107,284</b>  | <b>168,764</b> | <b>221,651</b> | <b>105,771</b> | <b>157,652</b> | <b>199,851</b> | <b>264,032</b> | <b>727,306</b> | <b>810,497</b>   | <b>992,013</b>   | <b>1,165,822</b> | <b>1,417,416</b> | <b>1,759,162</b> | <b>2,022,659</b> | <b>2,264,982</b> | <b>2,423,679</b> | <b>2,602,980</b> |
| <b>EBIT</b>   | <b>(7,971)</b>  | <b>(4,575)</b> | <b>11,765</b>  | <b>15,574</b>  | <b>36,294</b>  | <b>28,599</b>  | <b>48,173</b>  | <b>128,640</b> | <b>196,694</b>   | <b>313,765</b>   | <b>465,359</b>   | <b>683,361</b>   | <b>848,123</b>   | <b>997,541</b>   | <b>1,142,491</b> | <b>1,250,175</b> | <b>1,342,661</b> |
| Other income  | 487             | 1,036          | 5,549          | (5,233)        | 15             | 22             | 22             | 22             | 22               | 22               | 22               | 22               | 22               | 22               | 22               | 22               | 22               |
| Interest expense                                      | (3,734)         | (1,407)        | (11,364)       | (18)           | (13)           | (776)          | (776)          | (1,583)        | (1,583)          | (1,583)          | (1,583)          | (1,583)          | (1,583)          | (1,583)          | (1,583)          | (1,583)          | (1,583)          |
| <b>EBT</b>  | <b>(11,218)</b> | <b>(4,946)</b> | <b>5,950</b>   | <b>10,323</b>  | <b>36,296</b>  | <b>27,845</b>  | <b>47,419</b>  | <b>127,079</b> | <b>195,133</b>   | <b>312,204</b>   | <b>463,798</b>   | <b>681,800</b>   | <b>846,562</b>   | <b>995,980</b>   | <b>1,140,930</b> | <b>1,248,614</b> | <b>1,341,100</b> |
| Income tax expense                                    | -               | 74             | 371            | 221            | (988)          | (1,268)        | (293)          | (2,328)        | 3,868            | 6,170            | 9,151            | 13,438           | 16,678           | 19,617           | 22,467           | 24,585           | 26,404           |
| Noncontrolling interest                               | 1,101           | (4,554)        | (404)          | -              | -              | -              | -              | -              | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| <b>Net income</b>                                     | <b>(12,319)</b> | <b>(466)</b>   | <b>5,983</b>   | <b>10,102</b>  | <b>37,284</b>  | <b>29,113</b>  | <b>47,712</b>  | <b>129,407</b> | <b>191,265</b>   | <b>306,034</b>   | <b>454,647</b>   | <b>668,362</b>   | <b>829,884</b>   | <b>976,364</b>   | <b>1,118,463</b> | <b>1,224,029</b> | <b>1,314,697</b> |
| Share outstanding - basic                             |                 |                |                | 73,629,120     | 76,674,126     | 79,392,601     | 79,392,601     | 79,392,601     | 79,392,601       | 79,392,601       | 79,392,601       | 79,392,601       | 79,392,601       | 79,392,601       | 79,392,601       | 79,392,601       | 79,392,601       |
| Share outstanding - diluted                           |                 |                |                | 91,449,571     | 94,802,123     | 96,057,210     | 96,057,210     | 96,057,210     | 96,057,210       | 96,057,210       | 96,057,210       | 96,057,210       | 96,057,210       | 96,057,210       | 96,057,210       | 96,057,210       | 96,057,210       |
| share outstanding - basic and diluted                 | 14,128,183      | 14,335,611     | 17,513,670     |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| EPS - basic   |                 |                |                | \$ 0.14        | \$ 0.49        | \$ 0.37        | \$ 0.60        | \$ 1.63        | \$ 2.41          | \$ 3.85          | \$ 5.73          | \$ 8.42          | \$ 10.45         | \$ 12.30         | \$ 14.09         | \$ 15.42         | \$ 16.56         |
| EPS - diluted   |                 |                |                | \$ 0.11        | \$ 0.39        | \$ 0.30        | \$ 0.50        | \$ 1.35        | \$ 1.99          | \$ 3.19          | \$ 4.73          | \$ 6.96          | \$ 8.64          | \$ 10.16         | \$ 11.64         | \$ 12.74         | \$ 13.69         |
| EPS - basic and diluted                               | \$ (0.87)       | \$ (0.03)      | \$ 0.34        |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Drivers:</b>                                       |                 |                |                |                |                |                |                |                |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Revenue growth  |                 | 65.3%          | 42.2%          |                | 59.8%          | 17.8%          | 36.7%          | 266.7%         | 17.7%            | 29.6%            | 24.9%            | 28.8%            | 24.1%            | 15.8%            | 12.8%            | 7.8%             | 7.4%             |
| SG&A as a % of revenue                                | 84.0%           | 76.2%          | 62.2%          | 57.2%          | 52.6%          | 55.9%          | 55.2%          | 55.1%          | 51.1%            | 47.1%            | 43.1%            | 39.1%            | 39.1%            | 39.1%            | 39.1%            | 39.1%            | 39.1%            |
| Customer operations as a % of revenue                 | 15.5%           | 15.2%          | 16.1%          | 14.3%          | 12.5%          | 13.4%          | 13.4%          | 13.8%          | 13.3%            | 12.8%            | 12.3%            | 12.3%            | 12.3%            | 11.8%            | 11.3%            | 10.8%            | 10.8%            |
| Engineering and product development as a % of revenue | 8.5%            | 11.4%          | 16.6%          | 15.6%          | 16.2%          | 15.9%          | 15.9%          | 16.0%          | 16.0%            | 16.0%            | 16.0%            | 16.0%            | 16.0%            | 16.0%            | 16.0%            | 16.0%            | 16.0%            |
| Effective tax rate                                    |                 | 1.5%           | 6.2%           | 2.1%           | -2.7%          | -4.6%          | -0.6%          | -1.8%          | 2.0%             | 2.0%             | 2.0%             | 2.0%             | 2.0%             | 2.0%             | 2.0%             | 2.0%             | 2.0%             |

# Appendix F: Balance Sheet A

## Upstart Holdings, Inc.

### Balance Sheet

| Fiscal year ended  | <u>FY 2019</u> | <u>FY 2020</u> | <u>Q1 2021</u> | <u>Q2 2021</u> | <u>Q3 2021</u>   |
|--|----------------|----------------|----------------|----------------|------------------|
| <i>(in thousands, except per share data)</i>               |                |                |                |                |                  |
| <b>Assets</b>  |                |                |                |                |                  |
| Cash   | \$ 44,389      | \$ 250,819     | \$ 257,017     | \$ 506,287     | \$ 1,041,460     |
| Restricted cash  | 35,678         | 60,514         | 79,049         | 111,246        | 130,301          |
| Loans (at fair value)                                      | 232,305        | 78,460         | 57,189         | 82,311         | 129,625          |
| Notes receivable and residual certificates (at fair value) | 34,116         | 19,074         | 16,033         | 12,995         | 10,489           |
| Property, equipment, and software, net                     | 6,030          | 10,032         | 10,098         | 13,549         | 18,898           |
| Operating lease right of use assets                        | 16,190         | 18,310         | 17,265         | 16,208         | 70,025           |
| Non-marketable equity securities                           | -              | -              | -              | -              | 40,000           |
| Goodwill   |                |                |                | 66,866         | 66,866           |
| Intangible Assets, Net (Excluding Goodwill)                |                |                |                | 22,131         | 20,975           |
| Other assets   | 24,754         | 40,046         | 51,937         | 72,990         | 77,491           |
| <b>Total assets (a)</b>                                    | <b>393,462</b> | <b>477,255</b> | <b>488,588</b> | <b>904,583</b> | <b>1,606,130</b> |

# Appendix G: Balance Sheet B

## Liabilities, Convertible Preferred Stock, and Stockholders' Equity (Deficit)

### Liabilities:

|  |         |         |         |         |         |
|--|---------|---------|---------|---------|---------|
| Accounts payable   | 6,559   | 13,775  | 8,127   | 17,326  | 9,381   |
| Payable to investors   | 19,620  | 45,501  | 56,490  | 76,947  | 84,312  |
| Borrowings   | 118,609 | 62,626  | 41,891  | 6,057   | 649,222 |
| Payable to securitization note holders and residual certificate holders (includes \$0 and \$89,672 at fair value and \$0 and \$41,343 to related parties as of December 31, 2020 and 2019, respectively) | 96,107  | -       | -       | -       | -       |
| Accrued expenses and other liabilities (includes \$9,530 and \$12,446 at fair value as of December 31, 2020 and 2019, respectively)  | 34,648  | 35,669  | 42,869  | 70,379  | 71,951  |
| Operating lease liabilities  | 17,061  | 19,432  | 18,621  | 17,778  | 72,175  |
| <b>Total liabilities (a)</b>   | 292,604 | 177,003 | 167,998 | 188,487 | 887,041 |

### Commitments and contingencies

|   |         |   |   |   |   |
|---|---------|---|---|---|---|
| Convertible preferred stock \$0.0001 par value; 70,000,000 and 53,927,657 shares authorized as of December 31, 2020 and 2019, respectively; aggregate liquidation preference of \$0 and \$166,257 as of December 31, 2020 and 2019, respectively; 0 and 47,349,577 shares issued and outstanding as of December 31, 2020 and 2019 | 162,546 | - | - | - | - |
|---|---------|---|---|---|---|

### Stockholders' equity (deficit):

|  |          |          |          |          |         |
|--|----------|----------|----------|----------|---------|
| Common stock, \$0.0001 par value; 700,000,000 and 90,000,000 shares authorized as of December 31, 2020 and 2019, respectively; 73,314,026 and 14,561,398, shares issued and outstanding as of December 31, 2020 and 2019, respectively | 2        | 7        | 7        | 8        | 8       |
| Additional paid-in capital   | 12,489   | 369,467  | 379,703  | 737,924  | 711,804 |
| Retained earnings (accumulated deficit)  | (75,205) | (69,222) | (59,120) | (21,836) | 7,277   |
| <b>Total Upstart Holdings, Inc. stockholders' equity (deficit)</b>   | (62,714) | 300,252  | 320,590  | 716,096  | 719,089 |

|                          |       |   |   |   |   |
|--------------------------|-------|---|---|---|---|
| Noncontrolling interests | 1,026 | - | - | - | - |
|--------------------------|-------|---|---|---|---|

|   |          |         |         |         |         |
|---|----------|---------|---------|---------|---------|
| <b>Total stockholders' equity (deficit)</b> | (61,688) | 300,252 | 320,590 | 716,096 | 719,089 |
|---|----------|---------|---------|---------|---------|

|   |            |            |            |            |              |
|---|------------|------------|------------|------------|--------------|
| <b>Total liabilities, convertible preferred stock, and stockholders' equity (deficit)</b> | \$ 393,462 | \$ 477,255 | \$ 488,588 | \$ 904,583 | \$ 1,606,130 |
|---|------------|------------|------------|------------|--------------|



# Appendix H: Statement of Cash Flow A

## Upstart Holdings, Inc.

### Statement of Cash Flow

| Fiscal year ended   | FY 2018     | FY 2019     | FY 2020     | Q1 2021     | Q2 2021     | Q3 2021     |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>(in thousands, except per share data)</i>  |             |             |             |             |             |             |
| <b>Cash flows from operating activities</b>   |             |             |             |             |             |             |
| Net income (loss) before attribution to noncontrolling interests                                | \$ (11,218) | \$ (5,020)  | \$ 5,579    | \$ 10,102   | \$ 37,284   | \$ 29,113   |
| <b>Adjustments to reconcile net income (loss) to net cash provided by operating activities:</b> |             |             |             |             |             |             |
| Change in fair value of financial instruments   | 42,282      | 34,716      | 29,049      | 901         | (5,068)     | (1,672)     |
| Stock-based compensation  | 2,045       | 3,806       | 11,513      | 8,622       | 21,186      | 20,317      |
| Loss (gain) on loan servicing arrangements and sale of noncontrolling interests, net            | 2,169       | 856         | (1,530)     | 67          | (2,169)     | (2,121)     |
| Depreciation and amortization   | 314         | 774         | 2,278       | 816         | 1,983       | 2,185       |
| Incentive share expense   | -           | -           | 787         | -           | -           | -           |
| Noncash interest expense  | 19          | 74          | 73          | 18          | 198         | 774         |
| Gain on repurchased and retired convertible preferred stock warrants                            | -           | (3,657)     | -           | -           | -           | -           |
| Accrued interest on convertible notes   | 794         | -           | -           | -           | -           | -           |
| Net changes in operating assets and liabilities:  |             |             |             |             |             |             |
| Purchase of loans for immediate resale to investors   | (1,115,049) | (1,779,180) | (2,540,948) | (1,294,634) | (2,119,597) | (2,458,757) |
| Proceeds from immediate resale of loans to investors  | 1,115,049   | 1,779,180   | 2,540,948   | 1,294,634   | 2,119,597   | 2,458,757   |
| Purchase of loans held-for-sale   | -           | -           | (116,127)   | (18,240)    | (20,071)    | (41,994)    |
| Principal payments received for loans held-for-sale   | -           | -           | 18,218      | 2,637       | 1,039       | 722         |
| Net proceeds from sale of loans held-for-sale   | -           | -           | 47,604      | 38,140      | 19,043      | 33,354      |
| Other assets  | (3,001)     | (11,957)    | (13,186)    | (9,988)     | (9,663)     | (3,155)     |
| Operating lease liability and right-of-use asset  | -           | 871         | 251         | 234         | 214         | 580         |
| Accounts payable  | 1,118       | 3,613       | 7,033       | (5,807)     | 9,187       | (7,936)     |
| Payable to investors  | 14,100      | (14,875)    | 19,446      | 10,989      | 20,457      | 7,365       |
| Accrued expenses and other liabilities  | 1,716       | 22,381      | 4,709       | 4,601       | 19,184      | 6,069       |
| Net cash provided by operating activities   | 50,338      | 31,582      | 15,697      | 43,092      | 92,804      | 43,601      |

# Appendix I: Statement of Cash Flow B

## Cash flows from investing activities

|  |           |           |         |          |          |          |
|--|-----------|-----------|---------|----------|----------|----------|
| Principal payments received for loans held by consolidated securitizations               | 199,325   | 158,921   | 24,018  | -        | -        | -        |
| Net proceeds from sale of loans held-for-investment                                      | 45,698    | 100,678   | 97,340  | 8,329    | 1,389    | 1,075    |
| Principal payments received for loans held-for-investment                                | 38,678    | 48,124    | 15,758  | 3,002    | 4,486    | 7,234    |
| Principal payments received for notes receivable and repayments of residual certificates | 1,229     | 8,760     | 14,665  | 3,119    | 3,230    | 2,766    |
| Purchase of loans held-for-investment  | (169,442) | (265,286) | (9,655) | (12,947) | (29,601) | (50,190) |
| Purchase of non-marketable equity securities   | -         | -         | -       | -        | -        | (40,000) |
| Purchase of notes receivable and residual certificates                                   | -         | (485)     | (4)     | -        | -        | -        |
| Purchase of property and equipment   | (148)     | (4,004)   | (1,355) | (267)    | (1,730)  | (2,959)  |
| Capitalized software costs   | (896)     | (1,275)   | (4,250) | (334)    | (1,814)  | (2,328)  |
| Purchase of loans held by consolidated securitizations                                   | (251,681) | -         | -       | -        | (16,561) | -        |
| Net cash (used in) provided by investing activities                                      | (137,237) | 45,433    | 136,517 | 902      | (40,601) | (84,402) |

# Appendix J: Statement of Cash Flow C

## Cash flows from financing activities

|  |            |           |            |            |            |              |
|--|------------|-----------|------------|------------|------------|--------------|
| Proceeds from initial public offering, net of underwriting discounts and offering costs          | -          | -         | 159,488    | -          | -          | -            |
| Proceeds from secondary offering, net of underwriting discounts, commissions, and offering costs | -          | -         | -          | -          | 263,931    | -            |
| Taxes paid related to net share settlement of equity awards                                      | -          | -         | -          | -          | (236)      | -            |
| Payments made on securitization notes and certificates   | (226,775)  | (176,742) | (26,126)   | -          | -          | -            |
| Repayments of borrowings   | (92,954)   | (109,939) | (148,113)  | (26,584)   | (35,871)   | (2,957)      |
| Repayments of notes payable  | (21,468)   | (22,637)  | -          | -          | -          | -            |
| Distributions made to noncontrolling interests   | (11,238)   | (4,960)   | (622)      | -          | -          | -            |
| Repurchase and retirement of convertible preferred stock warrants                                | -          | (1,426)   | -          | -          | -          | -            |
| Repurchase and retirement of convertible preferred stock   | -          | (661)     | -          | -          | -          | -            |
| Proceeds from borrowings   | 144,048    | 153,491   | 92,057     | 5,831      | -          | -            |
| Proceeds from issuance of notes payable  | 42,537     | 39,863    | -          | -          | -          | -            |
| Proceeds from issuance of common stock under employee stock purchase plan                        | -          | -         | -          | -          | -          | 4,145        |
| Proceeds from issuance of convertible preferred stock, net of issuance costs                     | 49,925     | 1,912     | -          | -          | -          | -            |
| Proceeds from exercise of convertible preferred stock warrants                                   | -          | 1,631     | 6          | -          | -          | -            |
| Proceeds from exercise of stock options  | 323        | 278       | 2,362      | 1,492      | 1,440      | 6,841        |
| Proceeds from the issuance of securitization notes and certificates                              | 242,454    | -         | -          | -          | -          | -            |
| Proceeds from sale of noncontrolling interests   | 8,914      | -         | -          | -          | -          | -            |
| Proceeds from issuance of convertible debt   | -          | -         | -          | -          | -          | 661,250      |
| Payment of debt issuance costs   | -          | -         | -          | -          | -          | (15,727)     |
| Purchase of capped calls   | -          | -         | -          | -          | -          | (58,523)     |
| Net cash (used in) provided by financing activities  | 135,766    | (119,190) | 79,052     | (19,261)   | 229,264    | 595,029      |
| Net increase (decrease) in cash and restricted cash  | 48,867     | (42,175)  | 231,266    | 24,733     | 281,467    | 554,228      |
| <b>Cash and restricted cash</b>  |            |           |            |            |            |              |
| Beginning of year  | 73,375     | 122,242   | 80,067     | 311,333    | 336,066    | 617,533      |
| End of year  | \$ 122,242 | \$ 80,067 | \$ 311,333 | \$ 336,066 | \$ 617,533 | \$ 1,171,761 |

# Appendix K: Working Capital

Binghamton Investment Fund

| Upstart Holdings, Inc.                                   |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
|--|----------------|------------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|
| Working Capital  |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
| Fiscal year ended  | FY 2019        | FY 2020          | Q1 2021       | Q2 2021       | Q3 2021        | Q4 2021E       | 2021E          | 2022E          | 2023E          | 2024E          | 2025E          | 2026E          | 2027E          | 2028E          | 2029E            | 2030E            |
| <i>(in thousands, except per share data)</i>             |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
| <b>Current assets:</b>                                   |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
| Loans  | 232,305        | 78,460           | 57,189        | 82,311        | 129,625        | 195,351        | 464,476        | 501,634        | 541,765        | 585,106        | 631,915        | 682,468        | 737,066        | 796,031        | 859,713          | 928,490          |
| Notes receivable and residual certificates               | 34,116         | 19,074           | 16,033        | 12,995        | 10,489         | 25,324         | 64,841         | 70,761         | 84,559         | 96,663         | 112,941        | 150,369        | 174,183        | 196,518        | 211,881          | 227,555          |
| <b>Total current assets</b>                              | <b>266,421</b> | <b>97,534</b>    | <b>73,222</b> | <b>95,306</b> | <b>140,114</b> | <b>220,676</b> | <b>529,318</b> | <b>572,396</b> | <b>626,324</b> | <b>681,770</b> | <b>744,856</b> | <b>832,837</b> | <b>911,248</b> | <b>992,549</b> | <b>1,071,594</b> | <b>1,156,046</b> |
| <b>Current liabilities:</b>                              |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
| Accounts payable   | 6,559          | 13,775           | 8,127         | 17,326        | 9,381          | 20,715         | 55,549         | 60,621         | 72,442         | 82,811         | 96,756         | 120,084        | 139,102        | 156,939        | 169,207          | 181,725          |
| Payable to investors                                     | 19,620         | 45,501           | 56,490        | 76,947        | 84,312         | 128,089        | 345,838        | 206,478        | 184,554        | 175,809        | 164,331        | 203,953        | 236,253        | 266,547        | 287,384          | 308,644          |
| <b>Total current liabilities</b>                         | <b>26,179</b>  | <b>59,276</b>    | <b>64,617</b> | <b>94,273</b> | <b>93,693</b>  | <b>148,805</b> | <b>401,388</b> | <b>267,099</b> | <b>256,995</b> | <b>258,620</b> | <b>261,087</b> | <b>324,037</b> | <b>375,355</b> | <b>423,485</b> | <b>456,591</b>   | <b>490,370</b>   |
| <b>NWC</b>   | <b>240,242</b> | <b>38,258</b>    | <b>8,605</b>  | <b>1,033</b>  | <b>46,421</b>  | <b>71,871</b>  | <b>127,930</b> | <b>305,297</b> | <b>369,329</b> | <b>423,150</b> | <b>483,768</b> | <b>508,800</b> | <b>535,894</b> | <b>569,063</b> | <b>615,002</b>   | <b>665,676</b>   |
| <b>Change in NWC</b>                                     |                | <b>(201,984)</b> |               |               |                |                | <b>89,672</b>  | <b>177,367</b> | <b>64,032</b>  | <b>53,820</b>  | <b>60,619</b>  | <b>25,032</b>  | <b>27,094</b>  | <b>33,169</b>  | <b>45,939</b>    | <b>50,674</b>    |
| <b>Net working capital drivers:</b>                      |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
| <b>Current assets:</b>                                   |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
| Loans % growth   |                | -66.2%           |               | 43.9%         | 57.5%          | 50.7%          | 592.0%         | 8.0%           | 8.0%           | 8.0%           | 8.0%           | 8.0%           | 8.0%           | 8.0%           | 8.0%             | 8.0%             |
| Note receivable and residual certificates as a % of SG&A | 27.3%          | 13.1%            | 23.1%         | 12.7%         | 8.2%           | 14.7%          | 13.7%          | 13.7%          | 13.7%          | 13.7%          | 13.7%          | 14.7%          | 14.7%          | 14.7%          | 14.7%            | 14.7%            |
| <b>Current liabilities:</b>                              |                |                  |               |               |                |                |                |                |                |                |                |                |                |                |                  |                  |
| AP turnover  | 5.2%           | 9.5%             | 11.7%         | 17.0%         | 7.3%           | 12.0%          | 11.8%          | 11.8%          | 11.8%          | 11.8%          | 11.8%          | 11.8%          | 11.8%          | 11.8%          | 11.8%            | 11.8%            |
| DPO  | 19             | 35               | 43            | 62            | 27             | 44             | 43             | 43             | 43             | 43             | 43             | 43             | 43             | 43             | 43               | 43               |
| Payable to investors as a % of SG&A                      | 15.7%          | 31.3%            | 81.4%         | 75.4%         | 66.0%          | 74.3%          | 73.3%          | 40.1%          | 30.0%          | 25.0%          | 20.0%          | 20.0%          | 20.0%          | 20.0%          | 20.0%            | 20.0%            |

# Appendix L: WACC

## WACC Calculation

*(in thousands, except per share data)*

|                       |              |
|-----------------------|--------------|
| Risk free rate        | 1.54%        |
| Equity risk premium   | 4.72%        |
| Beta                  | 1.38         |
| <b>Cost of Equity</b> | <b>8.05%</b> |

|                                 |              |
|---------------------------------|--------------|
| Cost of debt                    | 2.17%        |
| Tax rate                        | 21.00%       |
| <b>Cost of debt after taxes</b> | <b>1.71%</b> |

|                    |              |
|--------------------|--------------|
| Stock price        | 171.59       |
| Shares outstanding | 81,957       |
| MV of equity       | 14,063,072   |
| MV of debt         | 23,835       |
| Weight of equity   | 99.83%       |
| Weight of debt     | 0.17%        |
| <b>WACC</b>        | <b>8.04%</b> |

# Appendix M: Discounted Cash Flow Model

## Upstart Holdings, Inc.

### Discounted Cash Flow Model

| Fiscal year ended                            | FY 2018        | FY 2019        | FY 2020        | Q1 2021       | Q2 2021       | Q3 2021       | Q4 2021E      | 2021E          | 2022E          | 2023E          | 2024E          | 2025E          | 2026E          | 2027E          | 2028E            | 2029E            | 2030E            |                |
|--|----------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|----------------|
| <i>(in thousands, except per share data)</i> |                |                |                |               |               |               |               |                |                |                |                |                |                |                |                  |                  |                  |                |
| <b>Free cash flow:</b>                       |                |                |                |               |               |               |               |                |                |                |                |                |                |                |                  |                  |                  |                |
| Revenue                                      | 99,313         | 164,189        | 233,416        | 121,345       | 193,946       | 228,450       | 312,205       | 855,946        | 1,007,191      | 1,305,778      | 1,631,181      | 2,100,777      | 2,607,285      | 3,020,200      | 3,407,473        | 3,673,853        | 3,945,641        |                |
| EBIT   | (7,971)        | (4,575)        | 11,765         | 15,574        | 36,294        | 28,599        | 48,173        | 128,640        | 196,694        | 313,765        | 465,359        | 683,361        | 848,123        | 997,541        | 1,142,491        | 1,250,175        | 1,342,661        |                |
| Taxes  |                | (74)           | (371)          | (221)         | 988           | 1,268         | 293           | 2,328          | (4,692)        | (7,485)        | (11,101)       | (16,301)       | (20,232)       | (23,796)       | (27,254)         | (29,822)         | (32,029)         |                |
| <b>NOPAT</b>                                 | <b>(7,971)</b> | <b>(4,649)</b> | <b>11,394</b>  | <b>15,353</b> | <b>37,282</b> | <b>29,867</b> | <b>48,466</b> | <b>130,968</b> | <b>192,002</b> | <b>306,280</b> | <b>454,258</b> | <b>667,060</b> | <b>827,892</b> | <b>973,745</b> | <b>1,115,237</b> | <b>1,220,352</b> | <b>1,310,633</b> |                |
| D&A  | 314            | 774            | 2,278          | 816           | 1,983         | 2,185         | 4,432         | 9,416          | 11,970         | 16,674         | 22,271         | 30,540         | 40,209         | 49,247         | 58,575           | 63,804           | 69,567           |                |
| CapEx  | 1,044          | 5,279          | 5,605          | 601           | 3,544         | 5,287         | 5,705         | 15,137         | 17,812         | 23,092         | 28,847         | 37,151         | 46,108         | 53,411         | 60,259           | 64,970           | 69,777           |                |
| Change in NWC                                | -              | -              | (201,984)      | -             | -             | -             | -             | 89,672         | 177,367        | 64,032         | 53,820         | 60,619         | 25,032         | 27,094         | 33,169           | 45,939           | 50,674           |                |
| <b>FCFF</b>                                  | <b>(8,701)</b> | <b>(9,154)</b> | <b>210,051</b> | <b>15,568</b> | <b>35,721</b> | <b>26,765</b> | <b>47,193</b> | <b>35,575</b>  | <b>8,794</b>   | <b>235,830</b> | <b>393,862</b> | <b>599,830</b> | <b>796,960</b> | <b>942,488</b> | <b>1,080,383</b> | <b>1,173,247</b> | <b>1,259,750</b> |                |
| Discount                                     |                |                |                |               |               |               |               | 0.5            | 1.5            | 2.5            | 3.5            | 4.5            | 5.5            | 6.5            | 7.5              | 8.5              | 9.5              |                |
| <b>PV of cash flows</b>                      |                |                |                |               |               |               |               |                | <b>34,226</b>  | <b>7,831</b>   | <b>194,376</b> | <b>300,475</b> | <b>423,555</b> | <b>520,879</b> | <b>570,157</b>   | <b>604,943</b>   | <b>608,057</b>   | <b>604,306</b> |
| <b>Drivers:</b>                              |                |                |                |               |               |               |               |                |                |                |                |                |                |                |                  |                  |                  |                |
| Revenue growth                               |                | 65.3%          | 42.2%          |               |               |               |               | 266.7%         | 17.7%          | 29.6%          | 24.9%          | 28.8%          | 24.1%          | 15.8%          | 12.8%            | 7.8%             | 7.4%             |                |
| EBIT margin                                  | -8.0%          | -2.8%          | 5.0%           | 12.8%         | 18.7%         | 12.5%         | 15.4%         | 15.0%          | 19.5%          | 24.0%          | 28.5%          | 32.5%          | 32.5%          | 33.0%          | 33.5%            | 34.0%            | 34.0%            |                |
| Tax rate                                     |                | 1.6%           | 3.2%           |               |               |               |               | 2.4%           | 2.4%           | 2.4%           | 2.4%           | 2.4%           | 2.4%           | 2.4%           | 2.4%             | 2.4%             | 2.4%             |                |
| D&A as a % of CapEx                          | 30.1%          | 14.7%          | 40.6%          | 135.8%        | 56.0%         | 41.3%         | 77.7%         | 62.2%          | 67.2%          | 72.2%          | 77.2%          | 82.2%          | 87.2%          | 92.2%          | 97.2%            | 98.2%            | 99.7%            |                |
| CapEx as a % of revenue                      | 1.1%           | 3.2%           | 2.4%           | 0.5%          | 1.8%          | 1.8%          | 1.8%          | 1.8%           | 1.8%           | 1.8%           | 1.8%           | 1.8%           | 1.8%           | 1.8%           | 1.8%             | 1.8%             | 1.8%             |                |

# Appendix N: Terminal Value Calculations

| Terminal Value Calculation |                   |                            |                   |
|----------------------------|-------------------|----------------------------|-------------------|
| <b>Growth rate</b>         |                   | <b>Multiple method</b>     |                   |
| Terminal Cash Flow         | 1,259,750         | Terminal revenue           | 3,945,641         |
| WACC                       | 8.04%             | WACC                       | 8.04%             |
| Terminal growth rate       | 3.50%             | EV/Revenue                 | 7.00x             |
| Terminal value             | 28,723,347        | Terminal value             | 27,619,487        |
| PV of terminal value       | 13,778,693        | PV of terminal value       | 13,249,168        |
| <b>Enterprise value</b>    | <b>17,647,498</b> | <b>Enterprise value</b>    | <b>17,117,973</b> |
|                            |                   |                            |                   |
| Debt                       | 23,835            | Debt                       | 23,835            |
| Cash                       | 506,287           | Cash                       | 506,287           |
| <b>Equity value</b>        | <b>18,129,950</b> | <b>Equity value</b>        | <b>17,600,425</b> |
|                            |                   |                            |                   |
| Diluted shares outstanding | 81,957            | Diluted shares outstanding | 81,957            |
| <b>Price/share</b>         | <b>221.21</b>     | <b>Price/share</b>         | <b>214.75</b>     |

| Sensitivity Analysis |       |               |        |        |        |        |
|----------------------|-------|---------------|--------|--------|--------|--------|
|                      |       | Gordon Growth |        |        |        |        |
|                      |       | 4.00%         | 3.75%  | 3.50%  | 3.25%  | 3.00%  |
| WACC                 | 7.04% | 331.07        | 309.60 | 291.15 | 275.13 | 261.09 |
|                      | 7.54% | 280.53        | 265.13 | 251.64 | 239.72 | 229.11 |
|                      | 8.04% | 242.59        | 231.13 | 220.93 | 211.79 | 203.56 |
|                      | 8.54% | 213.09        | 204.30 | 196.39 | 189.22 | 182.70 |
|                      | 9.04% | 189.52        | 182.62 | 176.35 | 170.62 | 165.37 |
|                      |       | Multiple      |        |        |        |        |
|                      |       | 9.00x         | 8.00x  | 7.00x  | 6.00x  | 5.00x  |
| WACC                 | 7.04% | 280.03        | 254.81 | 229.60 | 204.38 | 179.17 |
|                      | 7.54% | 270.20        | 246.08 | 221.96 | 197.83 | 173.71 |
|                      | 8.04% | 260.84        | 237.76 | 214.68 | 191.59 | 168.51 |
|                      | 8.54% | 251.93        | 229.84 | 207.74 | 185.65 | 163.56 |
|                      | 9.04% | 243.43        | 222.28 | 201.14 | 179.99 | 158.84 |

# Appendix O: Comparable Companies Analysis

## Upstart, Inc.

### Comparable Company Analysis

(in millions, except per share data)

| Company               | Ticker | Price  | Shares Out. | Cash   | Total Debt | EV      | LTM EPS   | '23 EPS   | '23 EBIT | '23 EBITDA | '23 Revenue | Market Cap | LTM P/E | '23 P/E | '23 EV/EBITDA | '23 EV/EBIT | '23 EV/Revenue |
|-----------------------|--------|--------|-------------|--------|------------|---------|-----------|-----------|----------|------------|-------------|------------|---------|---------|---------------|-------------|----------------|
| Upstart Holdings      | UPST   | 171.59 | 82          | 1,041  | 721        | 13,743  | \$ 0.84   | \$ 3.19   | 314      | 330        | 1,306       | 14,063     | 204.27x | 53.86x  | 41.59x        | 43.80x      | 10.52x         |
| Paypal Holdings Inc   | PYPL   | 183.93 | 1,175       | 13,292 | 8,700      | 211,513 | \$ 4.16   | \$ 5.20   | 9,444    | 10,467     | 36,378      | 216,105    | 44.21x  | 35.38x  | 20.21x        | 22.40x      | 5.81x          |
| Affirm Holdings Inc   | AFRM   | 107.24 | 281         | 1,440  | 485        | 29,180  | \$ (3.12) | \$ (0.97) | (324)    | (93)       | 1,867       | 30,135     |         |         |               |             | 15.63x         |
| SoFi Technologies Inc | SOFI   | 15.19  | 807         | 534    | 3,014      | 14,738  | \$ (0.31) | \$ 0.23   | 7        | 421        | 2,099       | 12,257     |         | 66.04x  | 35.01x        | 2035.58x    | 7.02x          |
| Square                | SQ     | 181.31 | 461         | 5,383  | 5,189      | 83,439  | \$ 1.07   | \$ 1.28   | 849      | 1,703      | 23,315      | 83,634     | 169.45x | 141.54x | 49.00x        | 98.28x      | 3.58x          |
| Open Lending Corp     | LPRO   | 21.64  | 126         | 91     | 152        | 2,792   | \$ 1.05   | \$ 1.28   | 210      | 217        | 307         | 2,731      | 20.61x  | 16.93x  | 12.88x        | 13.33x      | 9.10x          |
| Minimum               |        | 15.19  | 82          | 91     | 152        | 2,792   | \$ (3.12) | \$ (0.97) | (324)    | (93)       | 307         | 2,731      | 20.61x  | 16.93x  | 12.88x        | 13.33x      | 3.58x          |
| Quartile 1            |        | 20.03  | 115         | 423    | 402        | 11,005  | \$ (1.01) | \$ (0.07) | (76)     | 139        | 1,056       | 9,875      | 20.61x  | 21.55x  | 14.71x        | 15.59x      | 4.70x          |
| Median                |        | 139.42 | 371         | 1,240  | 1,868      | 21,959  | \$ 0.95   | \$ 1.28   | 262      | 376        | 1,983       | 22,099     | 44.21x  | 50.71x  | 27.61x        | 60.34x      | 7.02x          |
| Quartile 3            |        | 181.97 | 899         | 7,361  | 6,067      | 115,458 | \$ 1.84   | \$ 3.69   | 2,998    | 3,894      | 26,581      | 116,752    | 169.45x | 122.66x | 45.50x        | 1551.25x    | 12.36x         |
| Maximum               |        | 183.93 | 1,175       | 13,292 | 8,700      | 211,513 | \$ 4.16   | \$ 5.20   | 9,444    | 10,467     | 36,378      | 216,105    | 169.45x | 141.54x | 49.00x        | 2035.58x    | 15.63x         |

### Comps Output (Share price)

|            |  |  |  |  |  |  |  |  |  |  |  |  |        |        |        |         |        |
|------------|--|--|--|--|--|--|--|--|--|--|--|--|--------|--------|--------|---------|--------|
| Minimum    |  |  |  |  |  |  |  |  |  |  |  |  | 17.31  | 53.95  | 55.84  | 54.92   | 60.92  |
| Quartile 1 |  |  |  |  |  |  |  |  |  |  |  |  | 17.31  | 68.64  | 63.23  | 63.60   | 78.73  |
| Median     |  |  |  |  |  |  |  |  |  |  |  |  | 37.14  | 161.57 | 115.21 | 234.90  | 115.77 |
| Quartile 3 |  |  |  |  |  |  |  |  |  |  |  |  | 142.34 | 390.80 | 187.35 | 5942.70 | 200.88 |
| Maximum    |  |  |  |  |  |  |  |  |  |  |  |  | 142.34 | 450.93 | 201.45 | 7796.88 | 252.92 |



# Appendix P: Comparable Companies Analysis B

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| Value          | Q1     | Spread |
|----------------|--------|--------|
| '23 EV/EBITDA  | 90.97  | 110.12 |
| '23 EV/Revenue | 102.91 | 140.75 |
| DCF GG         | 189.37 | 73.74  |
| DCF MM         | 182.82 | 61.94  |
| 52 Wk. Range   | 22.61  | 378.88 |
| Street         | 255    | 135    |

# Appendix Q: Evolution of Upstart's AI Platform

|                      | 2014  |  |   | 2020   |   |  |
|----------------------|---|--|---|--|---|--|
| Number of Variables  | 23<br>Education<br>Standard credit attributes | 58<br>Employment & affordability<br>Education<br>Standard credit attributes      | 212<br>Multi-bureau credit attributes<br>Employment & affordability<br>Education<br>Standard credit attributes                                      | 1,000+<br>Digital signals<br>Trended credit attributes<br>Multi-bureau credit attributes<br>Employment & affordability<br>Education<br>Standard credit attributes  | 1,000+<br>Unstructured credit data<br>Digital signals<br>Trended credit attributes<br>Multi-bureau credit attributes<br>Employment & affordability<br>Education<br>Standard credit attributes   | 1,000+<br>Macroeconomic signals<br>Multi-bureau unstructured credit data<br>Digital signals<br>Trended credit attributes<br>Multi-bureau credit attributes<br>Employment & affordability<br>Education<br>Standard credit attributes  |
| Training Data Points | 0 (3rd party Data Only)                       | ~30,000  | ~320,000  | ~1,100,000   | ~5,500,000  | ~10,500,000  |
| Modeling Techniques  | Monte Carlo simulation<br>Logistic regression | Probabilistic regression<br>AVF<br>Monte Carlo simulation<br>Logistic regression | Stochastic gradient boosting<br>Game-theoretic feature priority<br>Probabilistic regression<br>AVF<br>Monte Carlo simulation<br>Logistic regression | Dynamic equilibrium targeting<br>Recursive AS model<br>Stochastic gradient boosting<br>Game-theoretic feature priority<br>Probabilistic regression<br>AVF<br>Monte Carlo simulation<br>Logistic regression | Bayesian HP optimization<br>Discretized gradient boosting<br>Dynamic equilibrium targeting<br>Recursive AS model<br>Stochastic gradient boosting<br>Probabilistic regression<br>Game-theoretic feature priority<br>AVF<br>Monte Carlo simulation<br>Logistic regression | Neural networks<br>Bayesian HP optimization<br>Discretized gradient boosting<br>Dynamic equilibrium targeting<br>Recursive AS model<br>Stochastic gradient boosting<br>Probabilistic regression<br>Game-theoretic feature priority<br>AVF<br>Monte Carlo simulation<br>Logistic regression |
| Model Applications   | Binary default prediction                     | Identity fraud<br>Default timing<br>Binary default prediction                    | Acquisition targeting<br>Loan stacking<br>Prepayment<br>Identity fraud<br>Default timing<br>Binary default prediction                               | Income fraud<br>Acquisition targeting<br>Loan stacking<br>Prepayment<br>Identity fraud<br>Time-delimited default prediction<br>Binary default prediction   | Fee optimization<br>Income fraud<br>Acquisition targeting<br>Loan stacking<br>Time-delimited prepayment prediction<br>Identity fraud<br>Time-delimited default prediction<br>Binary default prediction  | Competing prepayment & default risk prediction<br>Fee optimization<br>Income fraud<br>Acquisition targeting<br>Loan stacking<br>Time-delimited prepayment prediction<br>Identity fraud<br>Time-delimited default prediction<br>Binary default prediction                                   |

# Appendix R: No Action Letter From the CFPB

## Upstart has worked with regulators since inception to ensure it operates safely within the law.

AI-based lending expands access to affordable credit by constantly finding new ways to identify qualified borrowers. Yet an AI based model must avoid unlawful disparate impact or statistical bias, that would be harmful to disadvantaged groups.

Upstart has demonstrated that our platform doesn't introduce bias to the credit decision process and has developed reporting procedures to ensure future versions of the model will continue to be fair. In September 2017, Upstart became the first company to receive a [No Action Letter](#) from the Consumer Financial Protection Bureau (CFPB).<sup>\*</sup> The purpose of such letters is to reduce potential regulatory uncertainty for innovative products that may offer significant consumer benefit. On November 30, 2020, at the expiration of our first no-action letter, we received a new no-action letter from the CFPB, which has a 3 year term.

# Appendix T: CFPB's Acceptance of Upstart

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The NAL Recipient has agreed to allow the Bureau to share key highlights from simulations and analyses that it conducted pursuant to its model risk management and compliance plan; the simulations and analyses were not separately replicated by the Bureau. The following results provided by the NAL Recipient reflect the net effect of both the alternative data and the machine learning methodology used in the lender's model as applied to the lender's applicant pool.

The results provided from the access-to-credit comparisons show that the tested model approves 27% more applicants than the traditional model, and yields 16% lower average APRs for approved loans.

This reported expansion of credit access reflected in the results provided occurs across all tested race, ethnicity, and sex segments resulting in the tested model increasing acceptance rates by 23-29% and decreasing average APRs by 15-17%.

In many consumer segments, the results provided show that the tested model significantly expands access to credit compared to the traditional model. In particular, under the tested model, the results provided reflect that:

- "Near prime" consumers with FICO scores from 620 to 660 are approved approximately twice as frequently.
- Applicants under 25 years of age are 32% more likely to be approved.
- Consumers with incomes under \$50,000 are 13% more likely to be approved.

With regard to fair lending testing, which compared the tested model with the traditional model, the approval rate and APR analysis results provided for minority, female, and 62 and older applicants show no disparities that require further fair lending analysis under the compliance plan.



# Appendix U: Household Debt Statistics by Country

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## 2. The US, China, and Japan are the countries with the highest total debt for households in the world.

The United States is by far the leader here with its total owed balances of \$14.6 trillion. The second in line — China — doesn't even come close with their \$10.2 trillion. Japan rounds up the top three with total owed balances of \$3.4 trillion. These figures show the shocking difference in total debt of Americans compared to other nations.

(CEIC)

## 3. The United Kingdom, Germany, and France are among the countries whose households owe over \$2 trillion in debt.

The households of several other leading economies owed balances of over \$1 trillion, according to the global household debt stats. The United Kingdom leads the way with \$2.7 trillion. Germany and France follow with \$2.3 trillion and \$2.2 trillion, respectively.

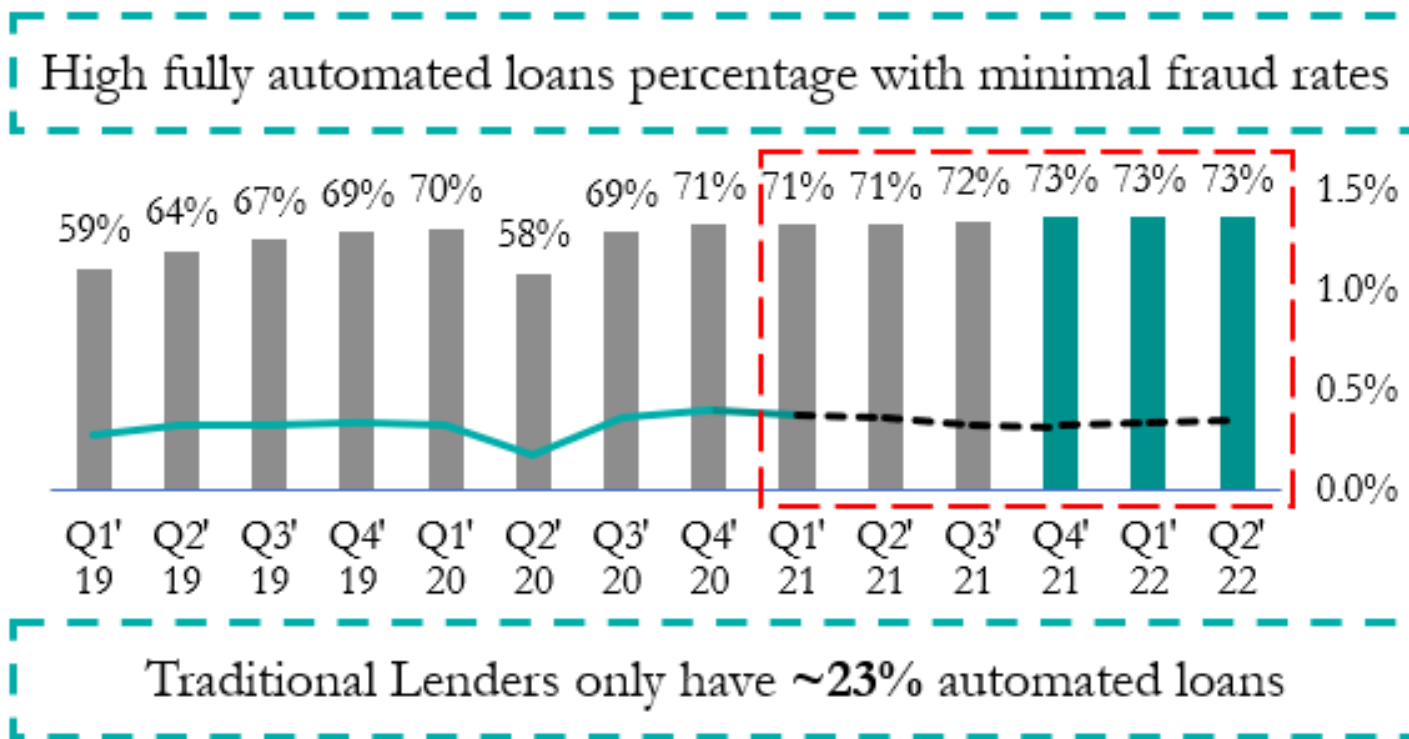
(CEIC)

## 4. Canada, Australia, and South Korea all owe over \$1 trillion in household debt each.

Based on household debt data, Canada and Australia rank first in this category with \$1.9 trillion each, followed by South Korea (\$1.8 trillion). The list rounds up with Italy (\$1.1 trillion), followed by the Netherlands and Switzerland, at \$1 trillion each. Spain is just off the list with \$918 billion.

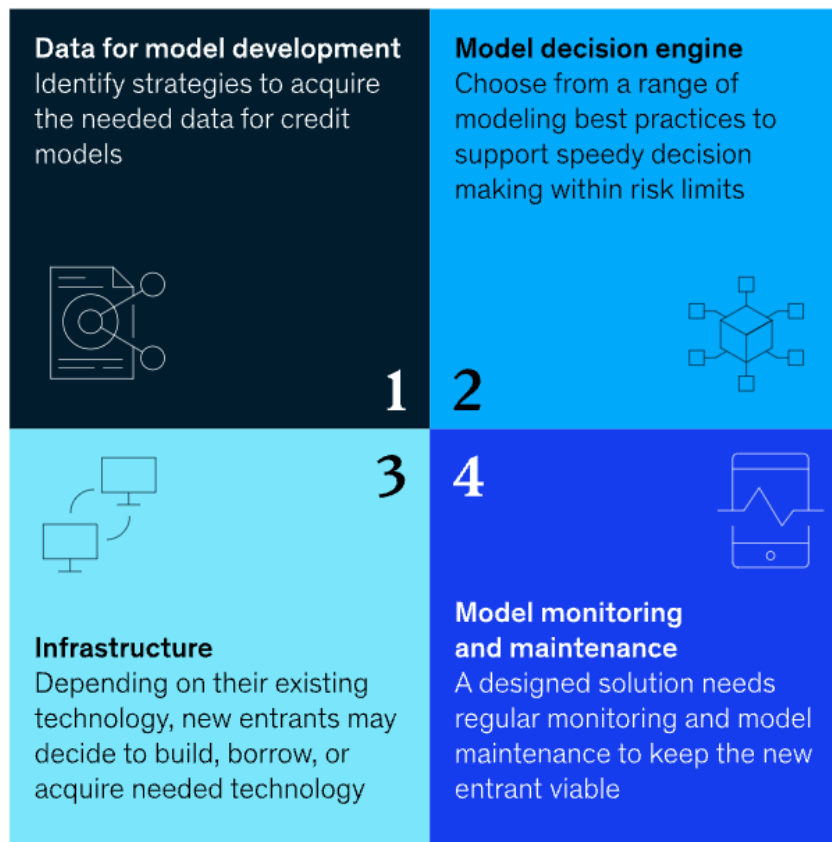
(CEIC)

# Appendix V: Automated loans and fraud rates

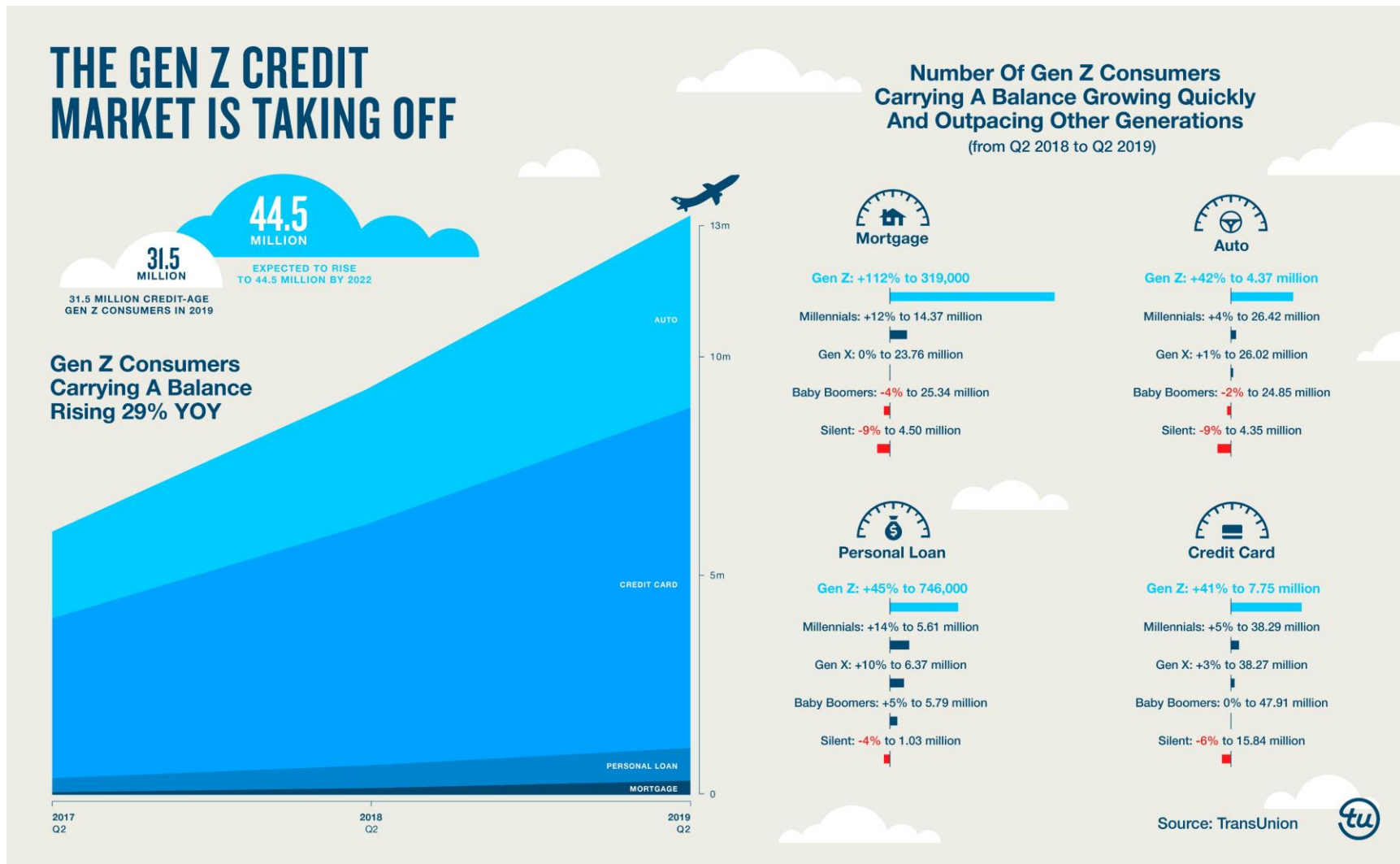


# Appendix W: Opportunity in Consumer Lending

Four enablers of credit solutions are essential to the new-entrant strategy.



# Appendix X: Gen Z Consumers in Credit Market

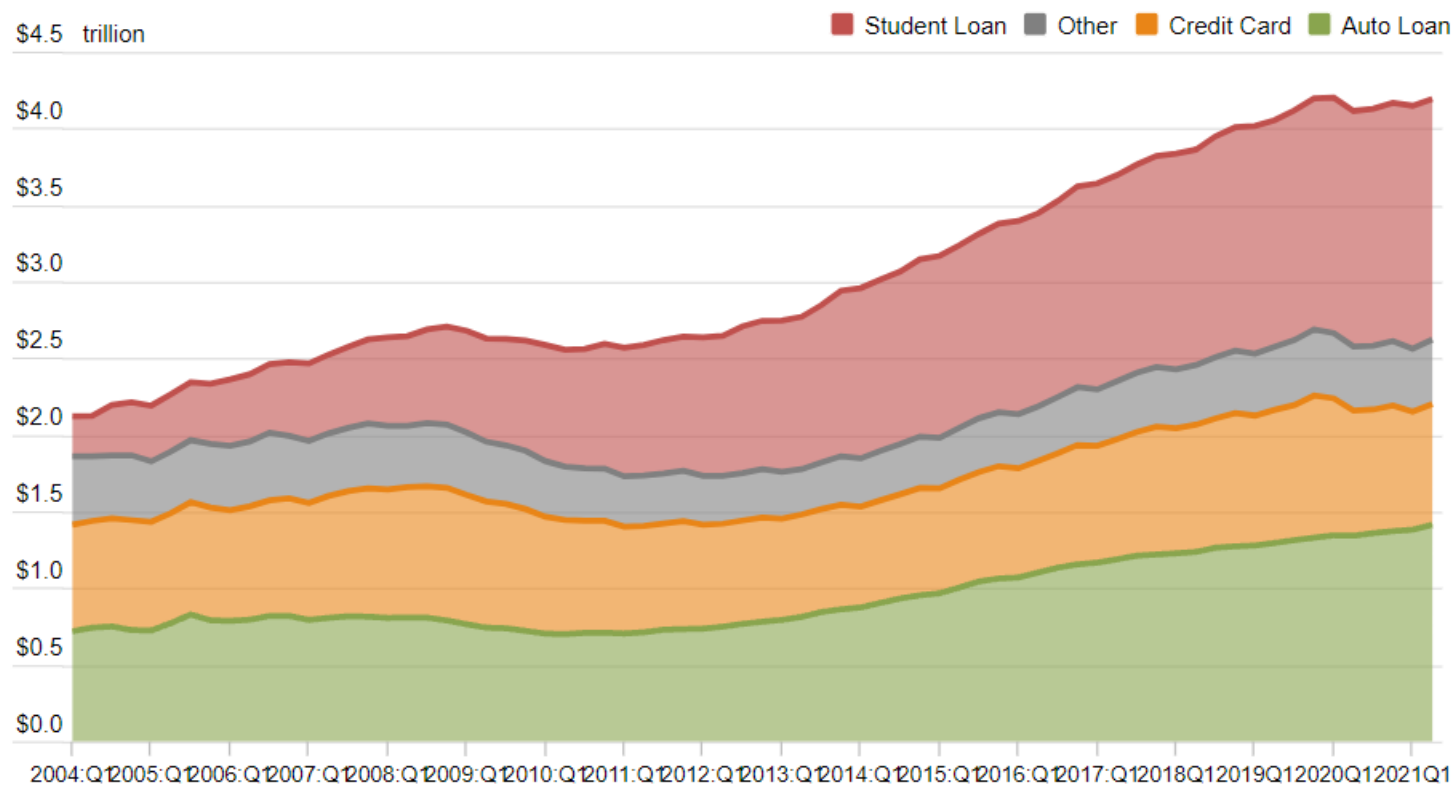




# Appendix Y: Non-Housing Debt Balance Breakdown

Binghamton Investment Fund

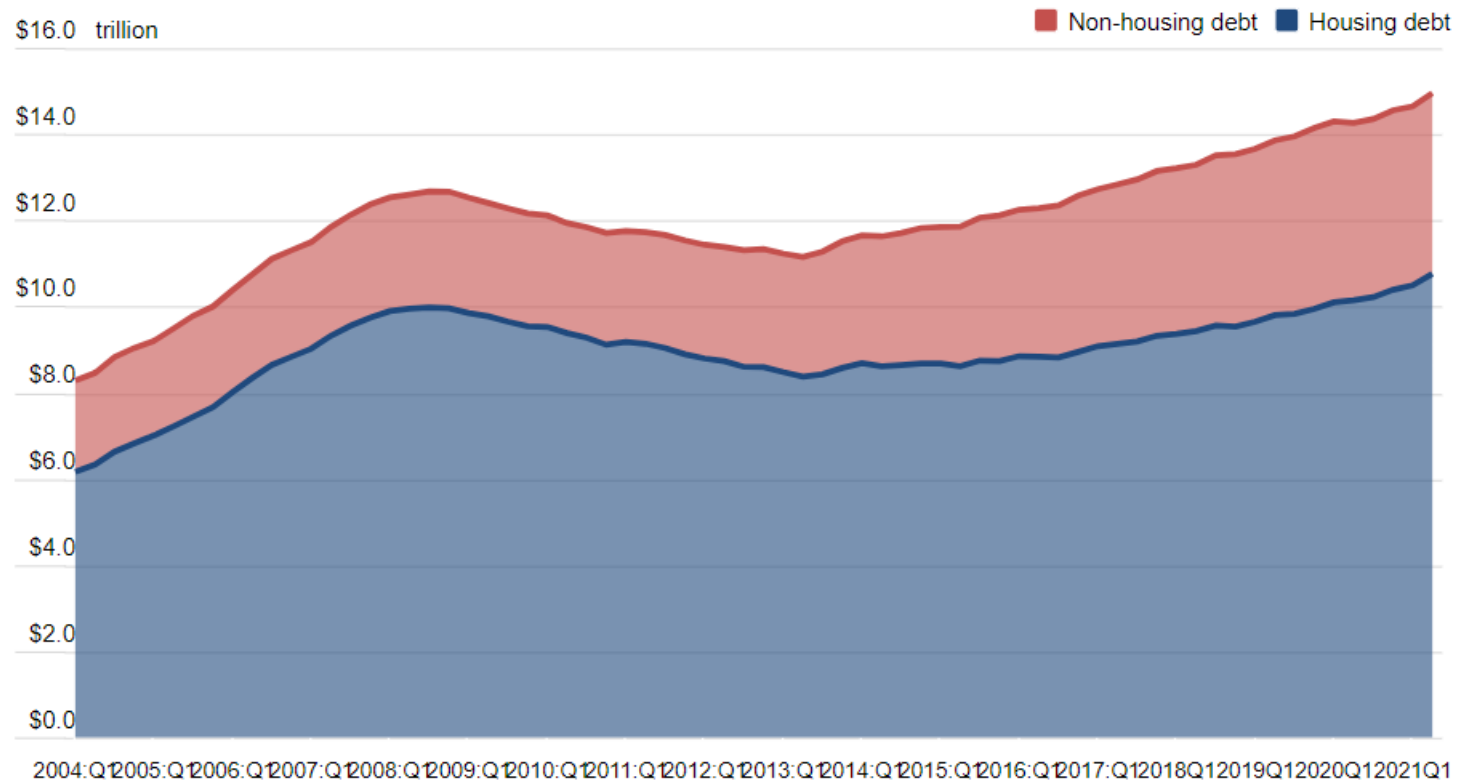
## Non-Housing Debt Balance



Source: FRBNY Consumer Credit Panel/Equifax

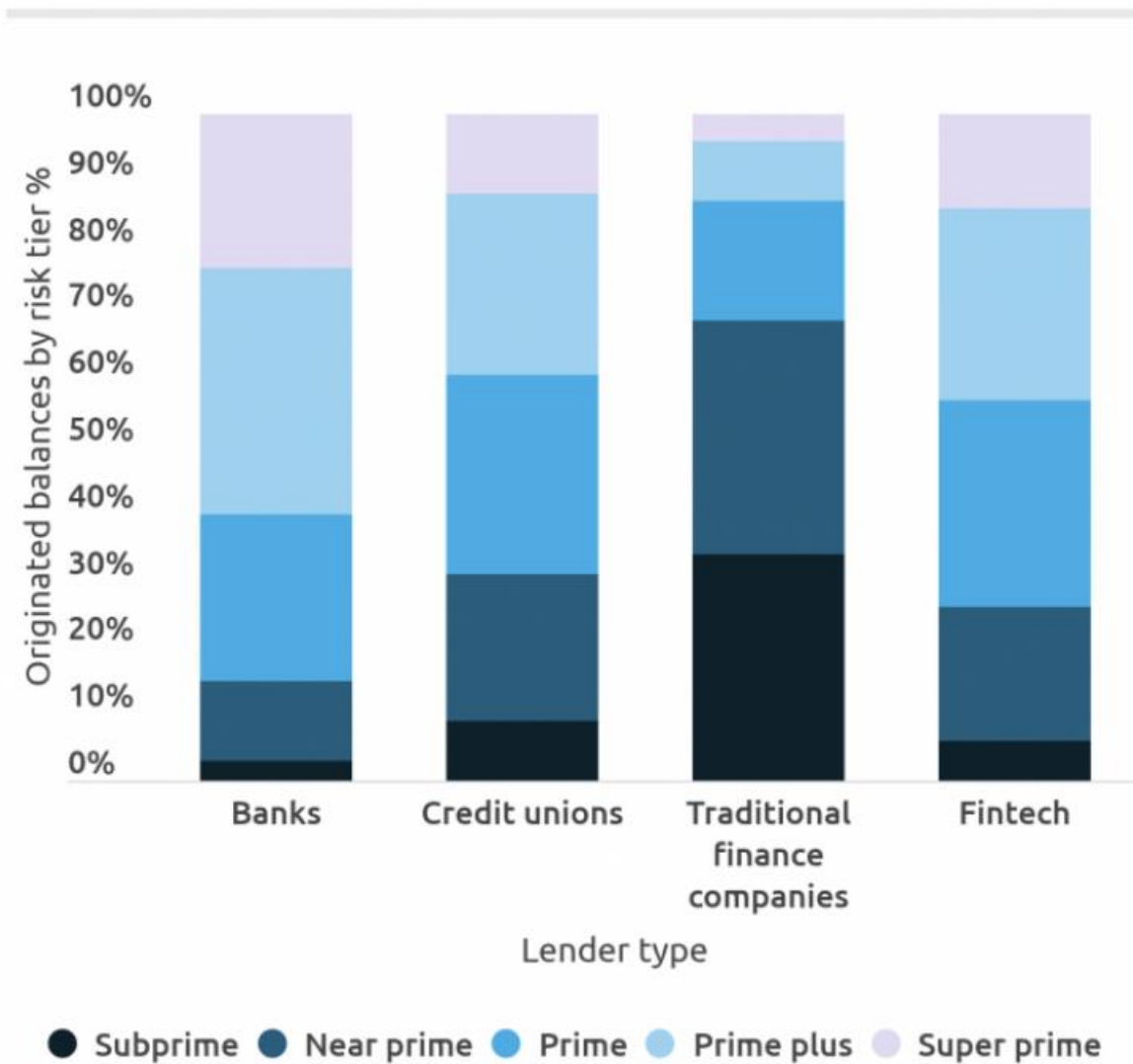
# Appendix Z: U.S Total Debt Balance

## Total Debt Balance



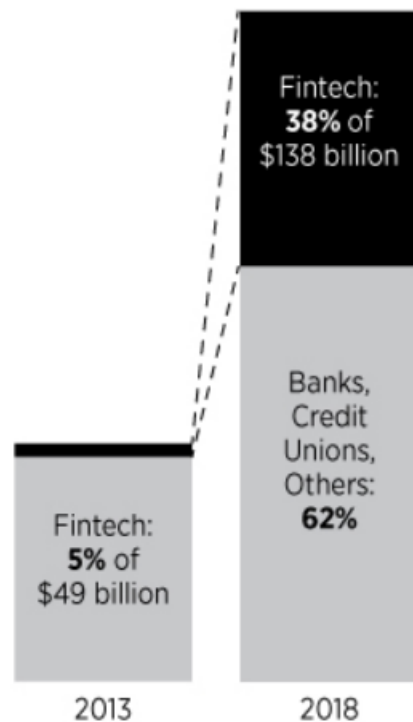
Source: FRBNY Consumer Credit Panel/Equifax

# Appendix AA: Loan Origination by Lender Type

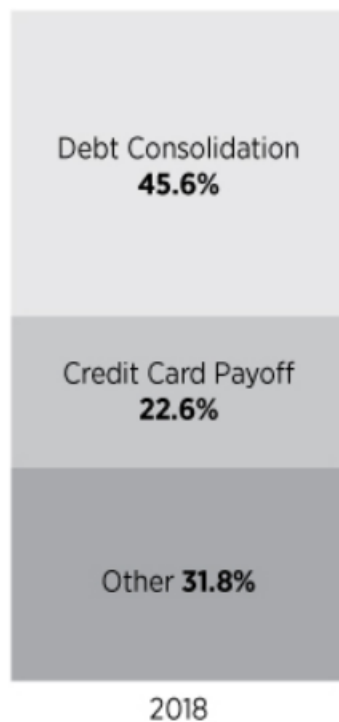


# Appendix AB: Fintech Reshaping Personal Loan

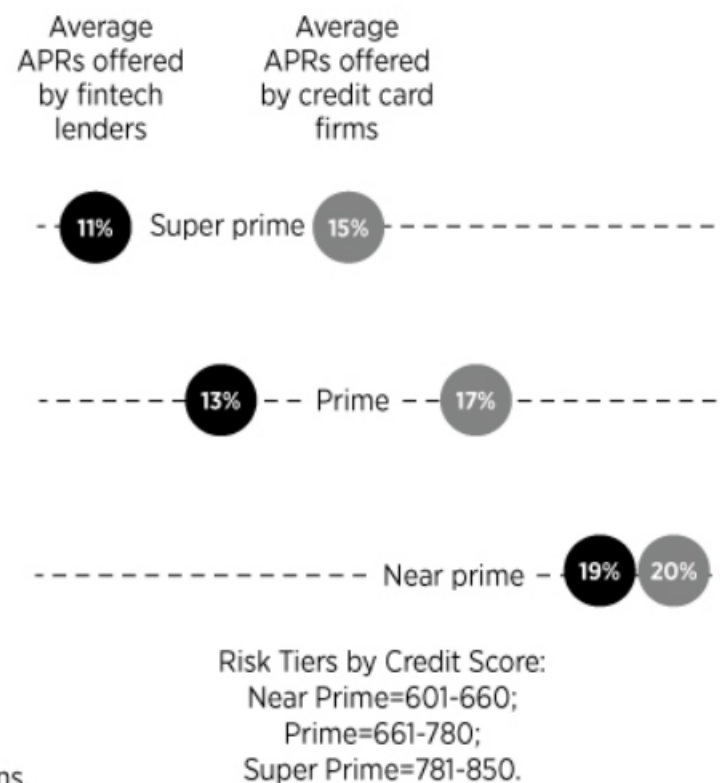
Much of the growth in balances on unsecured personal loans is attributed to fintech.



Majority of consumers taking out online personal loans use them to manage other debt.



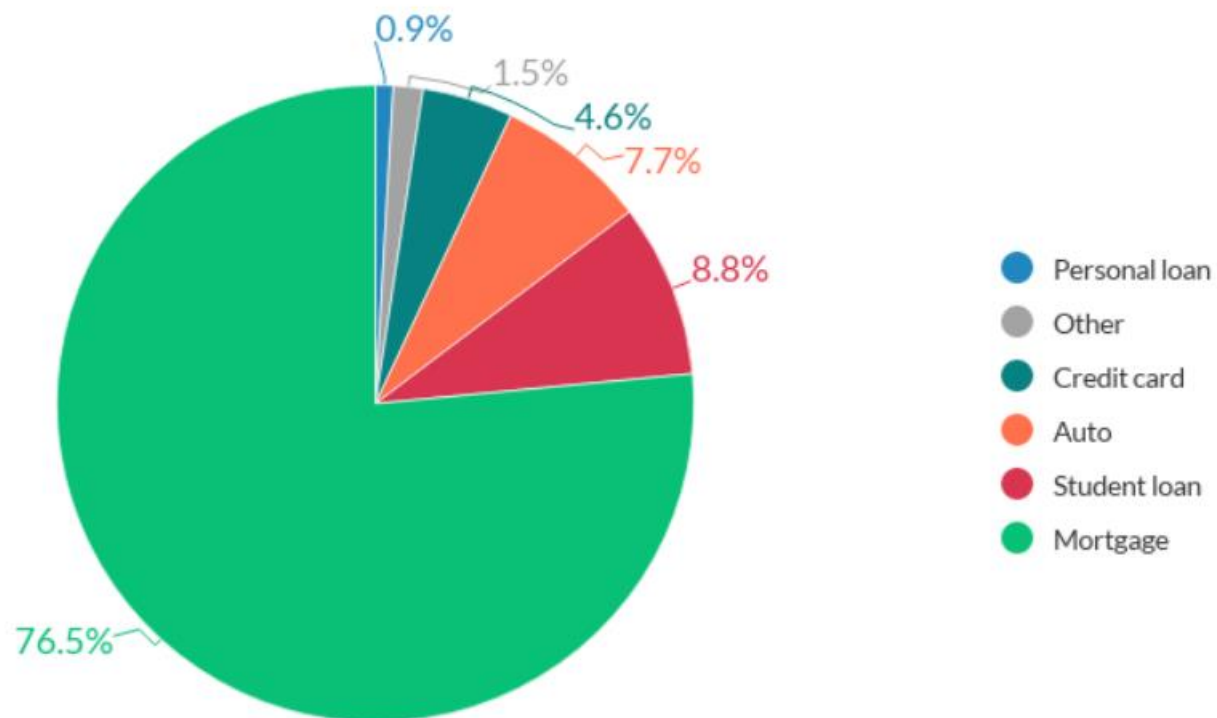
On average and for every credit risk level, fintech lenders offer lower annual percentage rates (APRs) when compared with those of credit card firms.



SOURCES: TransUnion, LendingClub, Mintel and author's calculations.

■ FEDERAL RESERVE BANK OF ST. LOUIS

# Appendix AC: Breakdown of Consumer Debt



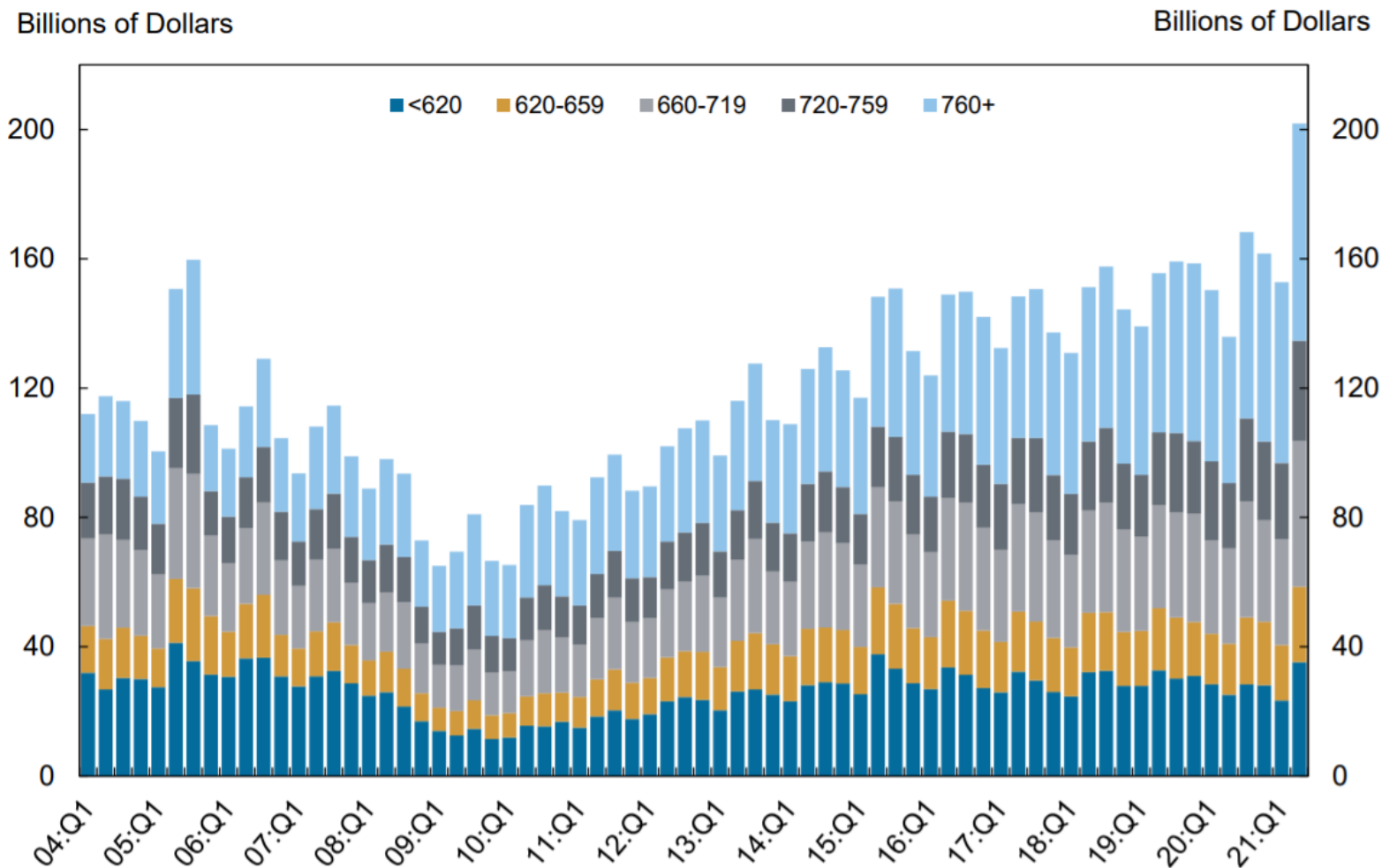
Source: Federal Reserve Bank of New York, TransUnion

# Appendix AD: Personal Loan Stat by Credit Score

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| Credit score range | Average APR | Average loan amount |
|--------------------|-------------|---------------------|
| 720+               | 10.73%      | \$17,753            |
| 680-719            | 19.04%      | \$13,784            |
| 660-679            | 24.74%      | \$10,811            |
| 640-659            | 30.18%      | \$8,872             |
| 620-639            | 37.09%      | \$7,281             |
| 580-619            | 65.93%      | \$5,897             |
| 560-579            | 102.36%     | \$4,130             |
| Less than 560      | 156.11%     | \$2,799             |

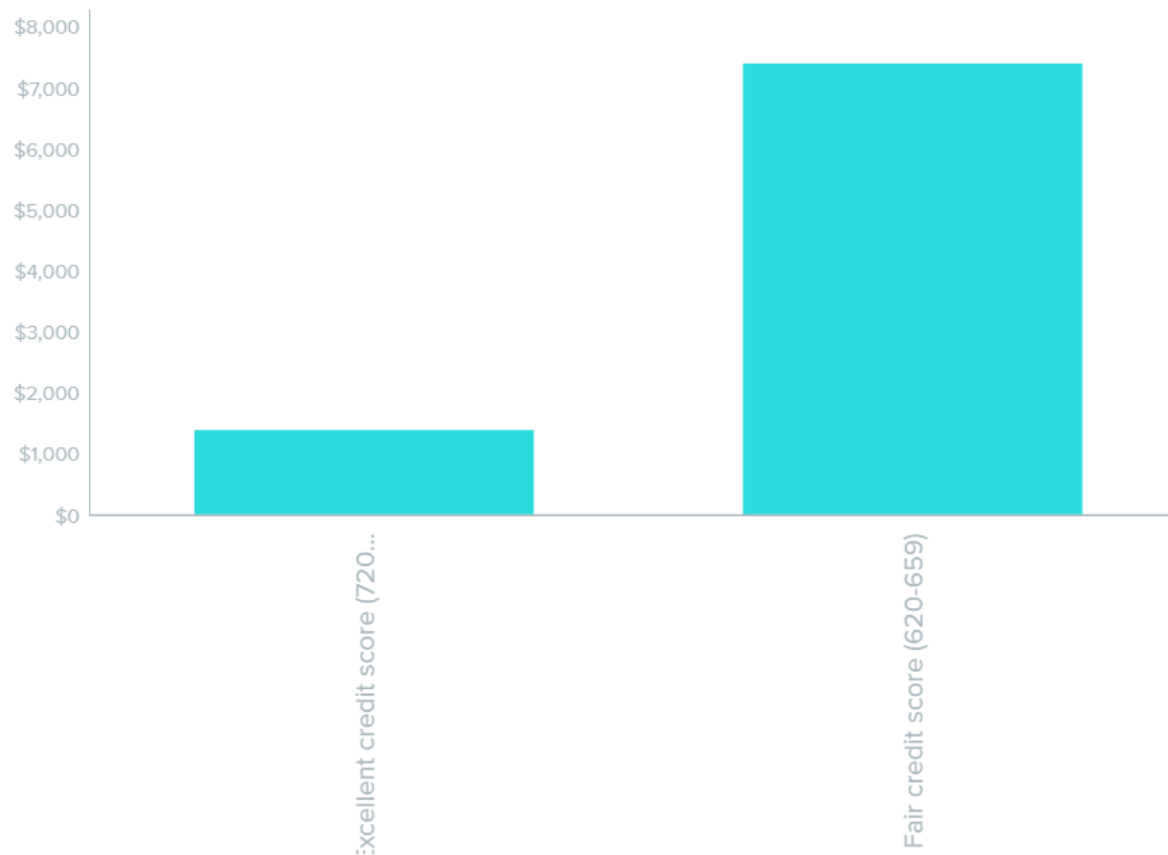
# Appendix AE: Auto Loan Origination by Credit Score



Source: New York Fed Consumer Credit Panel/Equifax  
 \* Credit Score is Equifax Riskscore 3.0

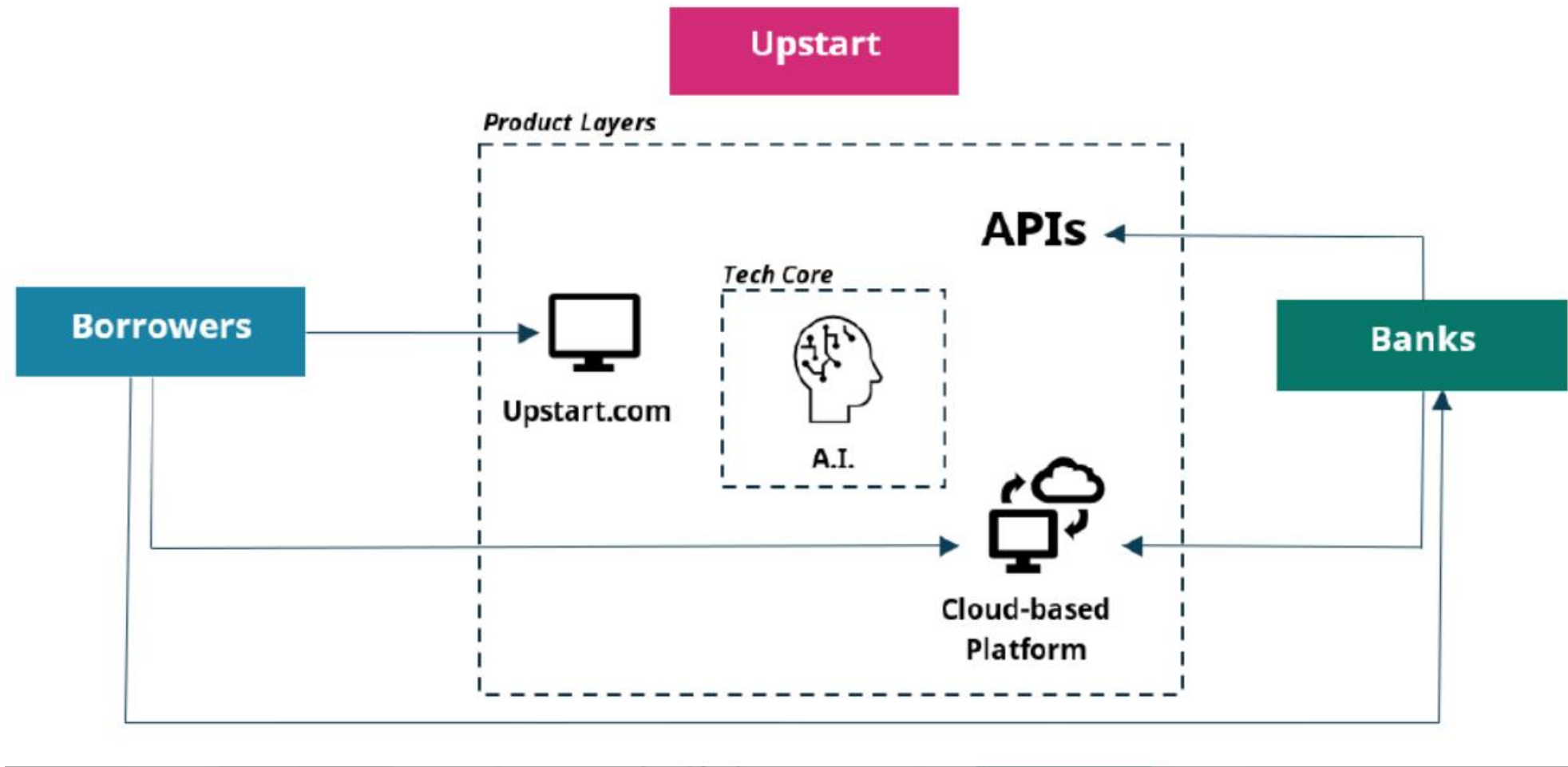
# Appendix AF: Excellent v.s Fair Credit Score

Excellent vs. Fair Credit Score - Interest Paid over a 5 Year Car Loan





# Appendix AG: Simplified Upstart's Business Model



# Appendix AH: Auto Opportunity

- Prodigy is now “Upstart Auto Retail” and enables dealerships to offer customers auto loans
- Tripled dealership footprint y/y, adding an average of over one dealership per day
- Seven bank partners signed up and are using the auto lending on Upstart’s platform

