

## **Nu Holdings LTD (NYSE: NU)**

Financials (FIG) Spring 2024

Portfolio Managers: Vijay Homan & Ville Myllymaeki



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# Holdings Overview

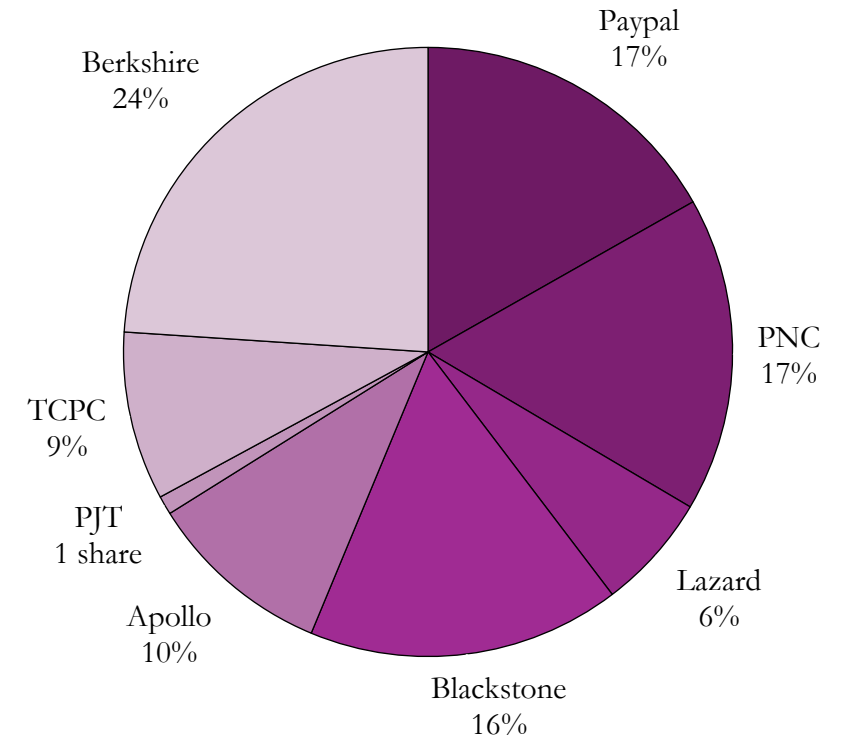
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# Holdings Overview



Company Name	Unrealized Gains (Losses)	Commentary
PayPal	\$1,916.55	Under new leadership, PayPal started off 2024 with a good note. Q1 2024 earnings showed that PayPal's earnings rose 27% from previous year. Revenue climbed up 9% and TPV grew 14%.
PNC Financial Services Group Inc	\$2,439.00	PNC Financial Services is a regional bank with asset management, corporate, retail, and institutional banking services. Their Q1 2024 earnings misses were due to lower net interest income, increased funding costs, and lower loan balances.
Lazard Inc	\$136.58	Lazard is one of the world's leading financial advisory and asset management firms. Although Lazard reported a loss for 2023, they beat EPS and revenue expectations for Q1 2024, signaling a possible turnaround.
Blackstone Inc	\$2,671.13	With more than \$1T AUM, Blackstone is the world's largest alternative asset manager. The macroeconomic conditions of 2023 shrank earnings 20% from the year prior, but with the expectation of cooling inflation and trimmed interest rates, Blackstone has a positive outlook for 2024.
Apollo Global Management	\$47.57	Apollo is another leader in the alternative asset management industry. With their acquisition of Athene, a retirement solutions company, they have substantial market share in the annuities industry with Athene leading the industry in total annuity sales for 2023.
PJT Partners Inc	\$95.53	PJT is a leading global advisory-focused elite boutique investment bank. As another firm severely affected by macroeconomic conditions, PJT has a more positive outlook for 2024
BlackRock TCP Capital	(\$801.64)	BlackRock TCP Capital Corp. is an externally-managed specialty finance company focused on middle-market lending. High expectations for Q2 2024, with analysts expecting 169.05% increase in sales YOY.
Berkshire Hathaway Inc Class B	\$2,548.91	Berkshire Hathaway is chaired by Warren Buffett with over \$348 billion AUM. They are massive conglomerate that houses diverse portfolio of acquisitions and have exhibited steady growth with no signs of stopping.

Holdings Breakdown<sup>1</sup>



# Macroeconomic Overview

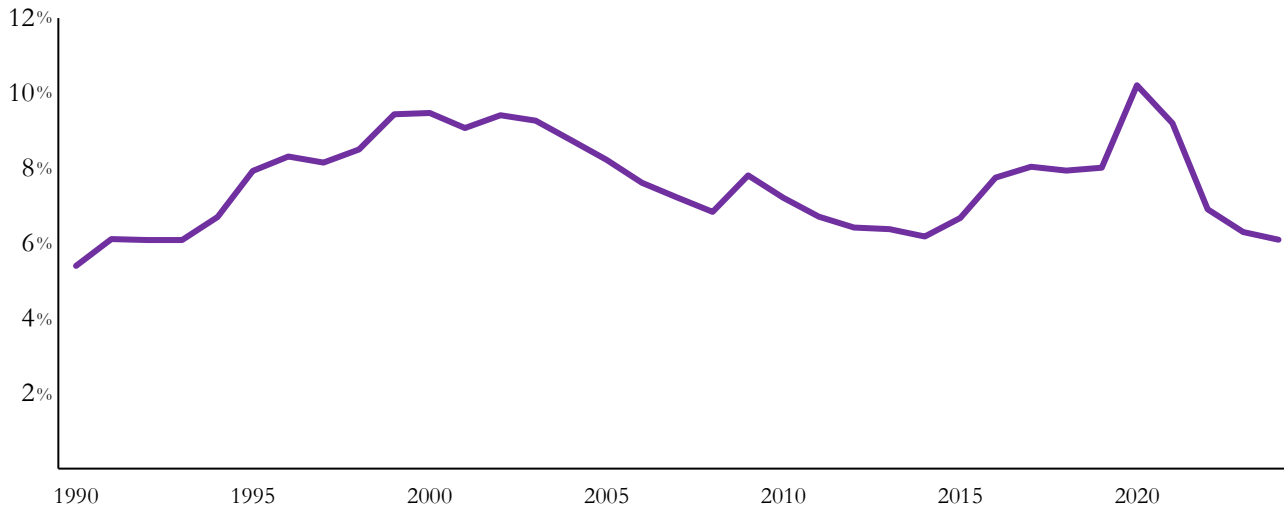
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Growing economy is creating promising numbers for Latin America market to make a strong recovery

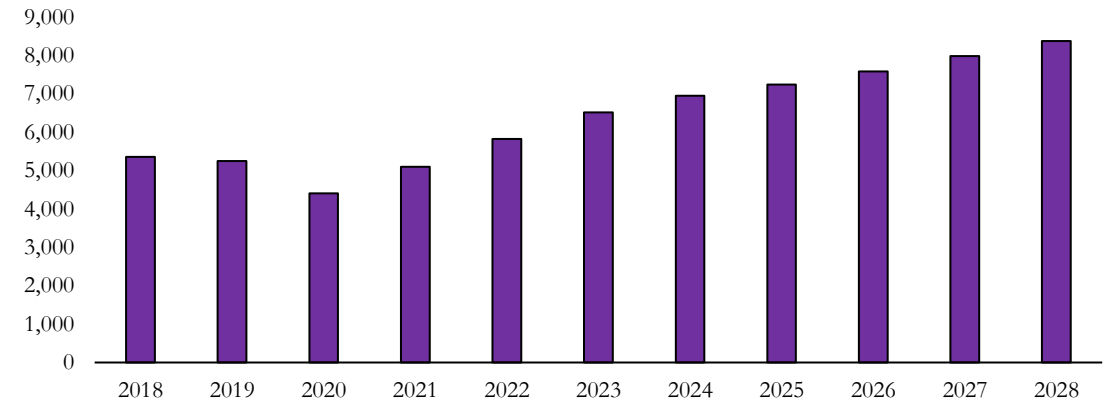
## Key Indicators

- Central task remains to boost growth rates and GDP is expected to expand by 1.6% in 2024
- Poverty has fallen and employment rate is recovering and is predicted to grow 1.9% this year
- Inflation continues to decline after remaining stubbornly high; cost of living has slowed down and is approaching 3% target
- Interest rates are moving towards monetary policy target range this year due to less fuel and food shortages and easing supply chain congestion

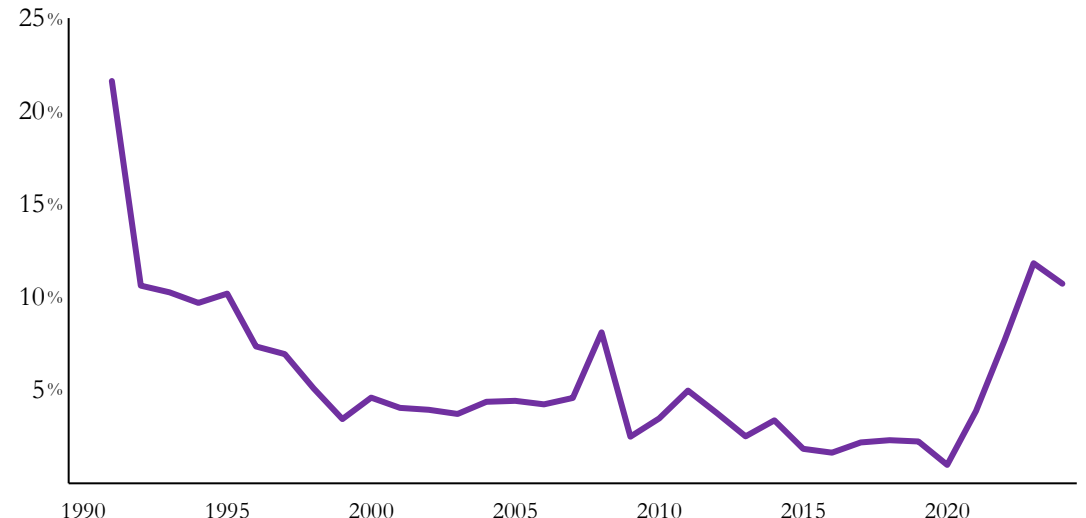
## Latin American Unemployment Rate<sup>1</sup>



## Latin American GDP in \$B USD<sup>1</sup>



## Latin American Inflation Rate<sup>1</sup>



# Political Overview

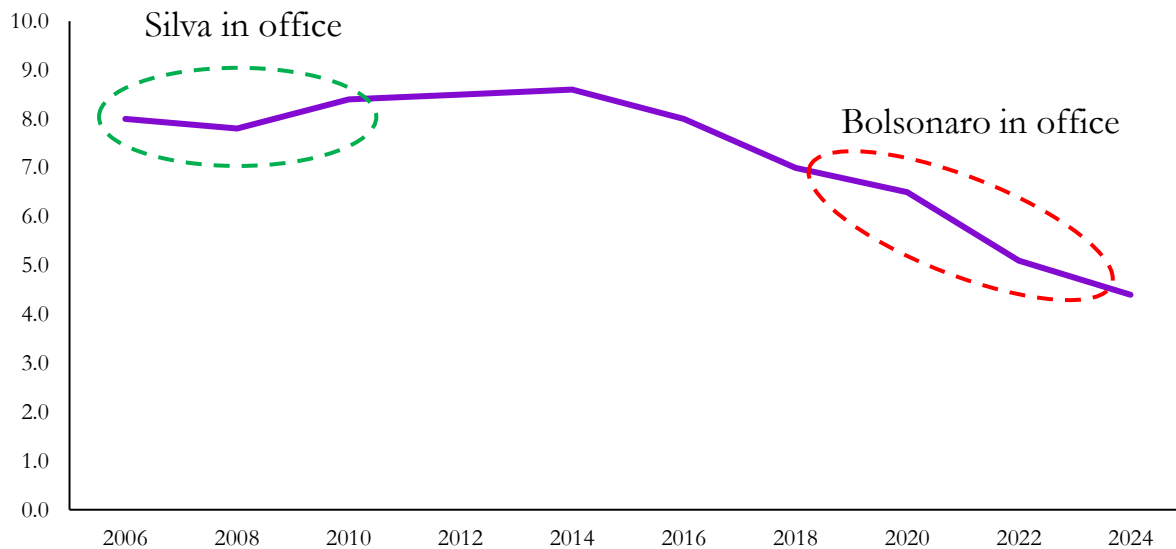
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President Lula has eased political tensions since being elected President, and hopes to return Brazil to levels of growth seen during his first term

## Political Tensions

- In January 2023, Brazil had an attempted insurrection in response to President Lula winning the election
- Supporters of President Bolsonaro stormed the capital and other government buildings after Bolsonaro lost the election
- Brazil ranks 34<sup>th</sup> in political transformation, 30<sup>th</sup> in economic transformation and 102<sup>nd</sup> in governance on the Bertelsmann Stiftung's Index (BTI)<sup>1</sup>

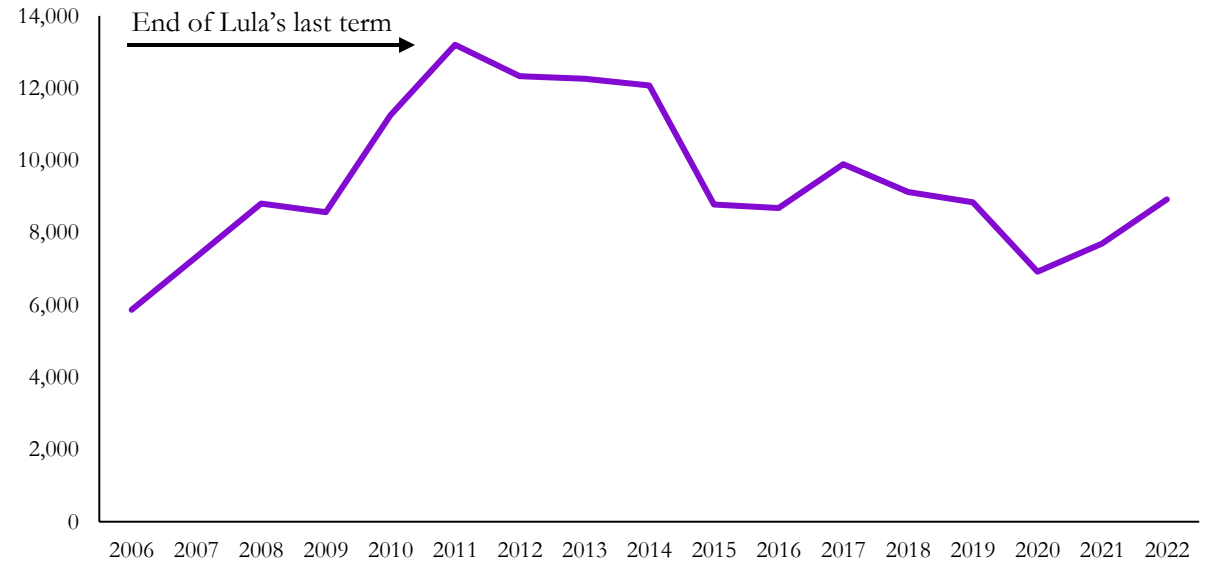
## Governance Index over Time<sup>1</sup>



## Pro-Business Congress Remains in Power

- In February of 2023, Brazil reelected congressional leaders aligned with Lula's center-left coalition
- This allowed them to push through legislation to drastically simplify the tax code, which had previously been a large burden on businesses
- A new fiscal framework has also paved the way for a \$74B public works program to be carried out over the next four years<sup>2</sup>
- Brazil's central bank has cut rates 6 times since August 2023<sup>3</sup>

## Brazil GDP per Capita in \$M USD<sup>4</sup>



Source: 1) BTI Project. 2) Financial Times. 3) Banco Central do Brasil. 4) World Bank.



# Industry Overview

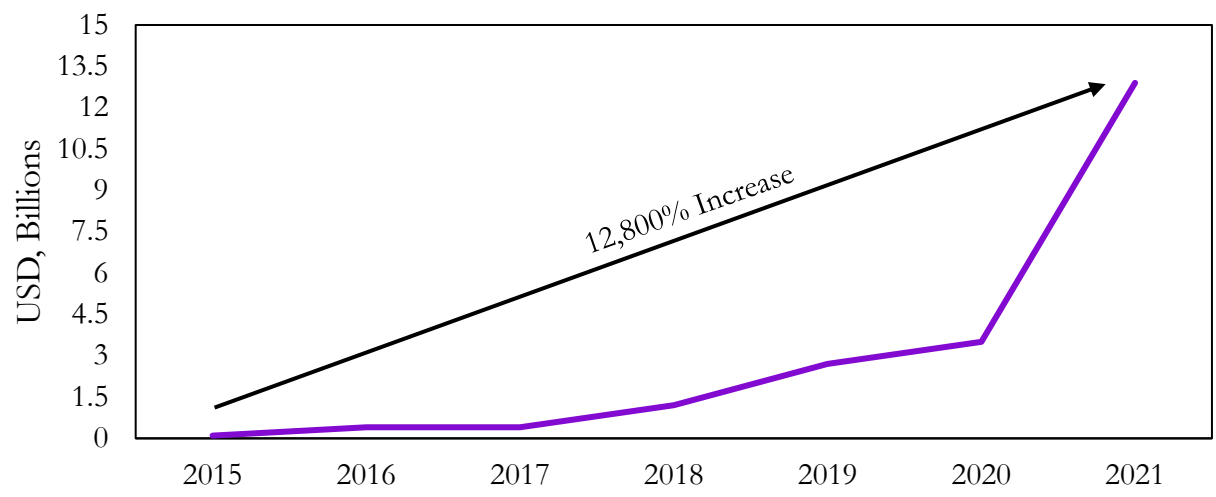
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Post-COVID, LATAM has made a significant shift towards digital payment processing with a focus on historically underbanked people

## LATAM Banking in the Past

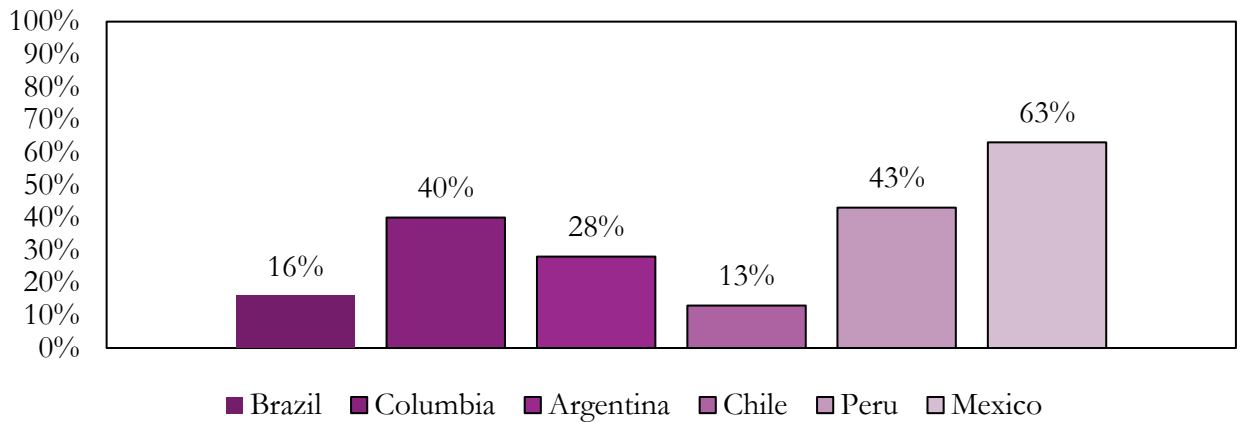
- Latin American banks typically only served affluent individuals due to lack of competition and historically stringent credit requirements
- People in LATAM have been very distrustful of banks, in part due to widespread ineptitude and corruption across the sector over the years
- As a result, many people carry out almost, if not all, of their transactions in cash
- During COVID some governments provided stimulus to their citizens through digital payment platforms

## Value of LATAM Fintech Investments<sup>1</sup>



Source: 1) FinTech Global. 2) World Bank.

## Percentage of Population Considered Unbanked<sup>2</sup>



## Shift Towards Digital Payment Processing

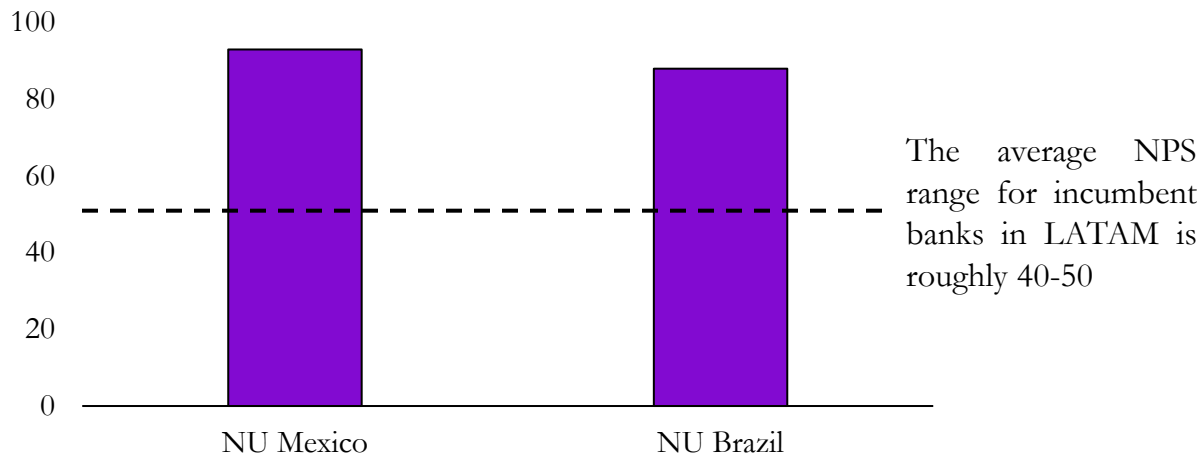
- The increase in smartphone adoption across LATAM has paved the way for fintech expansion
- The significant increase in fintech investments in LATAM over the last decade has aided in the region's efforts to move away from cash-based transactions
- Moving towards online payments for processes such as payroll payments makes it much easier for governments to collect income tax revenue
- It is estimated roughly 50% of all fintech's in LATAM were founded post-2016

There are doubts about NU's customer base and ability to continue expanding without significant marketing costs

## Market Concerns over Customer Base are Overblown

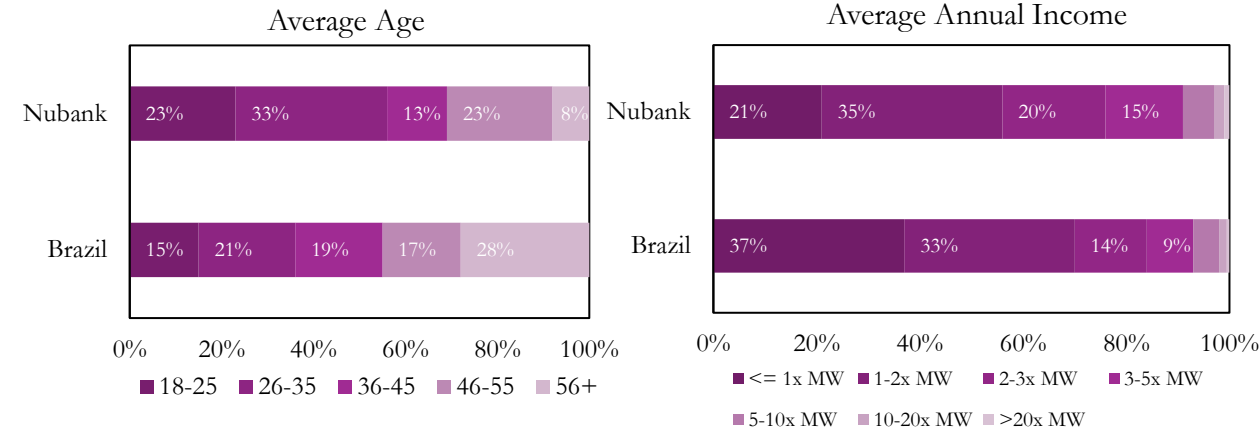
- Nubank's diverse user demographic demonstrates their **scalability** and **potential** to capture business from higher net-worth individuals, an area the market doubts they can successfully penetrate
- Their ability to maintain such a diverse customer base **mitigates** potential macroeconomic or political uncertainty, and provides them with an added competitive advantage relative to competitors
- Their exposure to low-income consumers is an advantage, not a detriment, as they have been able to successfully monetize a group of consumers that no one else has been able to

## NU's Net Promoter Score in Mexico & Brazil<sup>1</sup>



Source: 1) NU Investor Presentation.

## Average Age and Annual Income of NU Customers<sup>1</sup>



## Strong NPS Highlights NU's Market Dominance

- Nubank's **exceptional** net promoter score underscores their strong product-to-market fit, validating the **stability** of their business model
- This demonstrates their ability to cross-sell and continue to monetize their existing customer-base
- At the same time, they can **organically** attract new customers through positive word-of-mouth, allowing them to save money on advertising expenses
- This further contributes to their potential to expand into new regions – without high customer acquisition costs, they will be able to penetrate new markets at a lower cost than potential competitors

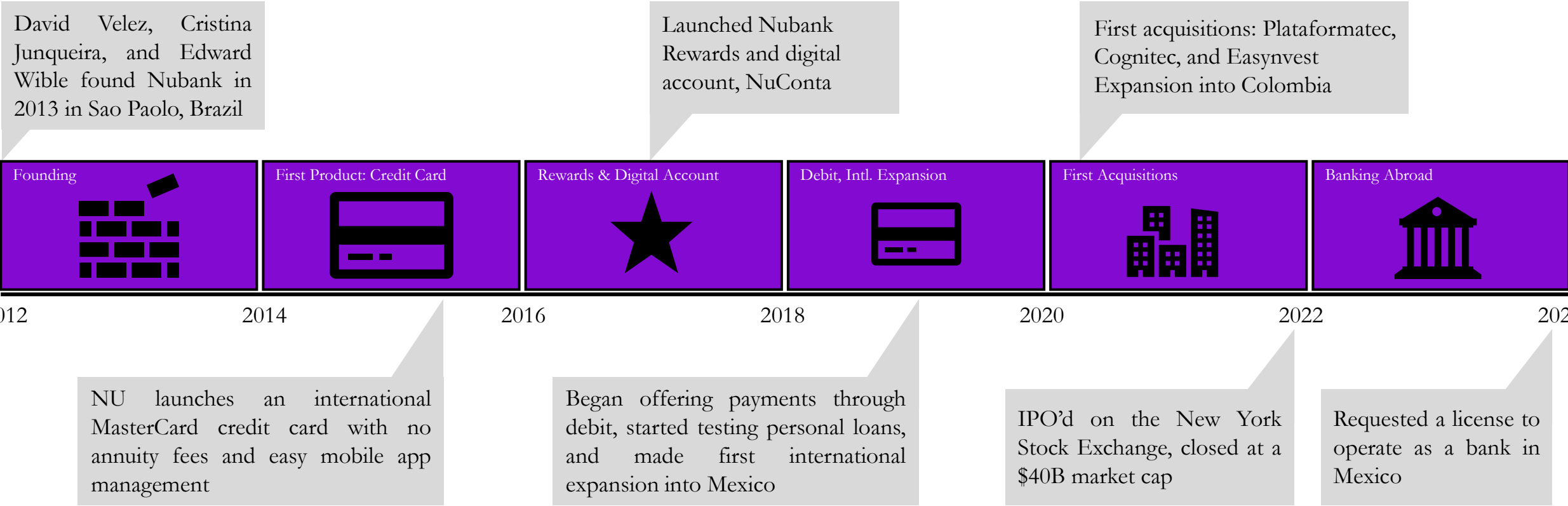
# Company Overview

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# Company Timeline



Nubank has taken important steps to scale their business and reach the largely underbanked Latin American population



# Management Team



A seasoned leadership team with a strong understanding of the financial services industry



## **David Vélez (Founder and CEO)**

- Founder, CEO, and Board Chairman at Nubank since 2013
- Previously a partner at Sequoia Capital from 2011-2013
- Work experience in investment banking and growth equity
- Obtained a BS and MBA from Stanford University



## **Youssef Lahrech (COO and President)**

- Became Nubank's Chief Operating Officer in 2020 and President in 2022
- 19 years at Capital One in product, risk, tech, and analytics teams
- Graduated with degrees in Mathematics and Engineering at Ecole Polytechnique and an MA in Engineering from MIT



## **Cristina Junqueira (Co-Founder and CGO)**

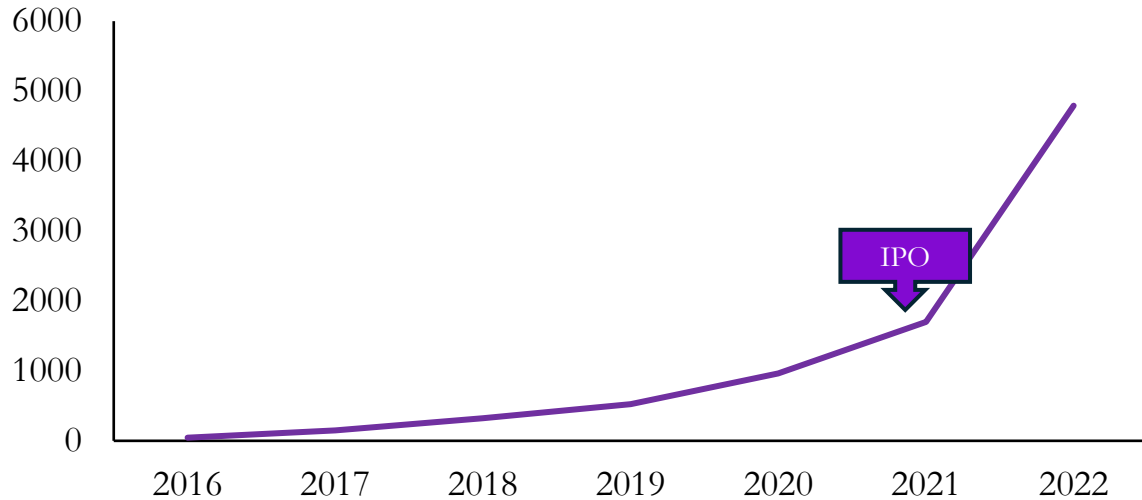
- Nubank's Co-Founder since 2013 and Chief Growth Officer as of 2022
- Previously at BCG and Itaú Unibanco's credit card team in Sao Paulo
- Made the Forbes 40 under 40 and Fortune's Most Powerful Women list
- Obtained an MBA from Northwestern's Kellogg School of Management

# Company Overview



The products and services behind the fifth largest financial institution in Latin America

## Revenue by Year in \$M USD<sup>1</sup>



## Mexico and Colombia Expansion

- Nubank offers credit cards, debit cards, and saving accounts providing 13% and 15% interest on deposits (**CuentaNu**)<sup>2</sup>
- Unlike Brazil, Mexico and Colombia's interest rates on deposits are fixed and do not change based on the interbank rate
- On 4/8/2024, Nubank's Colombia branch received a \$150M loan from the US IDFC to expand its business in the country<sup>4</sup>
- Nu Columbia was the fastest growing card issuer in 2023<sup>4</sup>
- Pending banking licenses will allow for more offerings in Mexico

Source: 1) NU 10-K. 2) Nubank.com. 3) NU Investor Presentation. 4) NU Investor Relations.

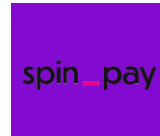
## Products and Services in Brazil<sup>3</sup>

Segment	Users (M)	YoY Growth
Credit Cards	40.6	21%
Investments	15.0	103%
Pix Financing	13.6	166%
Lending	7.1	40%
Insurance	1.5	40%
SME	2.2	57%
<b>Total</b>	<b>78.0</b>	<b>27%</b>

## Strategic M&A Activity<sup>4</sup>



**Olivia AI** is an American startup purchased by Nubank in 2022 that provided financial management services to customers powered by AI



**Spin Pay** is a Brazilian instant payments platform purchased by Nubank in 2021 to facilitate the integration of Pix (Brazilian government platform)



**Easynvest** is a Brazilian online stock trading app purchased by Nubank in 2020 to create Nubank's investing arm, NuInvest (no fee brokerage platform)

Neo-banks are “challenger banks” offering banking services entirely through digital platforms

## Neo-banking vs Traditional Banking

### Neo-Bank

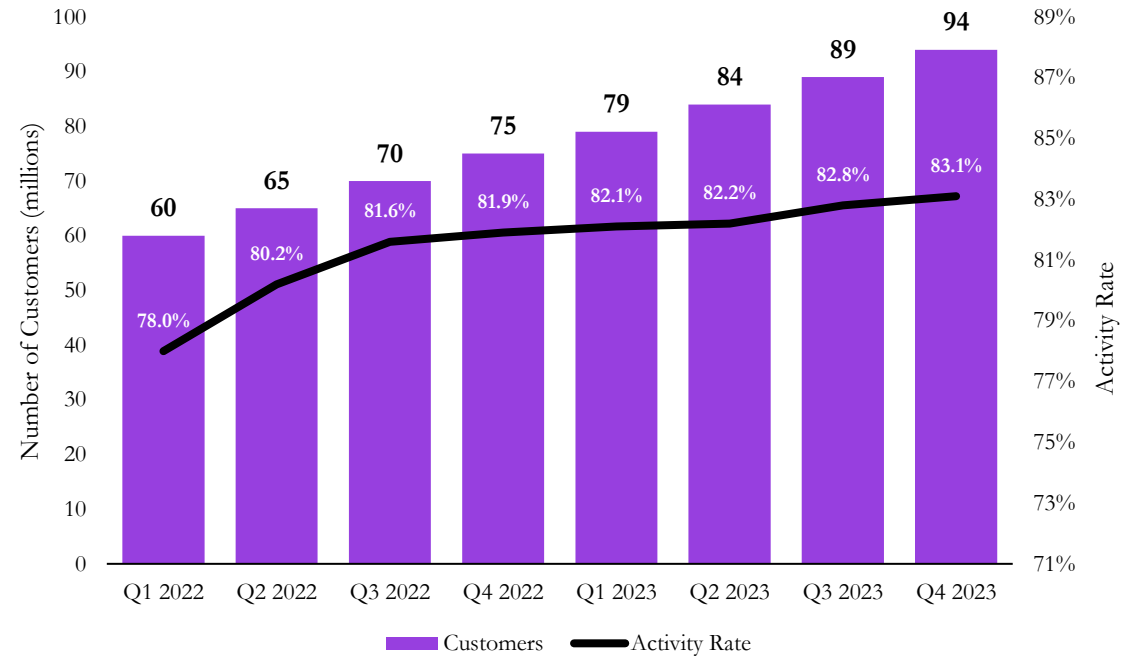
- “Digital bank” – Operates entirely online without physical branches
- Very low fees with transparent agreements
- Specialized product selection
- Flexible, short-term contracts & relationships

### Traditional Bank

- Typical brick-and-mortar branches with in-person customer services
- Charge higher fees with complicated structures
- Wider range of services
- Emphasis on building deep, lasting relationships



## Increased Monthly Active Customers<sup>1</sup>



## Nubank vs Other Neo-banks

- Nubank’s 83% activity rate far surpasses its closest LATAM competitors, with PicPay sitting at 56% and Banco Inter at 54%
- Nubank is the fastest growing LATAM neo-bank due to its user-friendly interface and favorable payment plans
- Nubank rate on credit card debt of 38.5% sits well below Brazilian bank’s average rate of 145%

Source: PicPay Investor Presentation, Banco Inter Investor Presentation, Harvard DDDL

1) NU Investor Presentation.



Nubank generates business by offering low-limit credit cards and financial services that benefit consumers and merchants

## Revenue Segments

### Credit Cards

50%  
of total revenue

#### Interchange Fees (Merchant)

~2-3% on credit cards ~.07% on debit cards

#### Interest Income & Late Fees (Customer)

Up 111% YoY due to growth of credit cards segment (46%)  
140% APR (Traditional Brazilian banks charge 200%-500%)

### Net Interest Income

39%  
of total revenue

#### Loans

Spread between interest on loans and interest paid on deposits  
Loan originations increased 100% Q4 YoY

#### Deposits

38% YoY growth of deposit volume, reaching \$23.7B  
Deposit cost as % of Interbank Rate: steady at 80%

### Other Fees & Commission Income

11%  
of total revenue

#### Fees on Products and Services

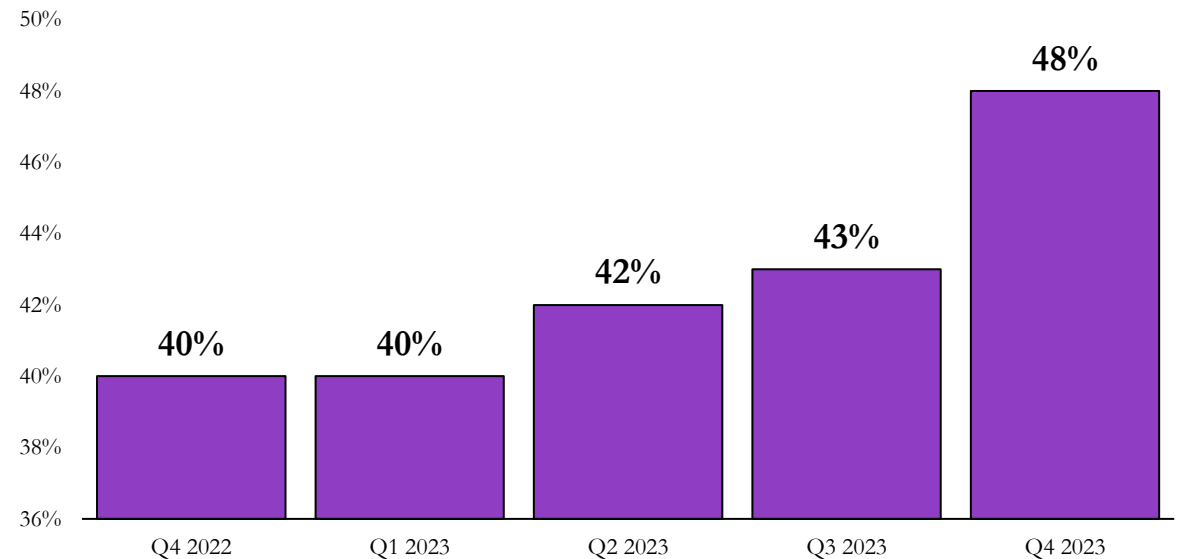
Includes credit card usage fees, account maintenance fees, and overdraft fees

International money transfers generating large portion of fees due to Nubank's extensive international network

## Customer Acquisition Strategy

- Primarily targeting low-limit individuals & SMEs, expanding into higher-income & corporate clientele
- Aims to provide intuitive digital services to educate consumers that may have never used a bank
- Focus on cross-selling products that still show low penetration in underbanked economies
- Maintain best-in-class product to keep NPS high and limit CAC

## Increasing Gross Profit Margins



# Investment Rationale

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Our three-pronged thesis indicates that as Nubank expands into new markets, profitability will continue to increase significantly

## Expansion into New Markets

Mexico + Colombia → South America

- Mexico and Colombia present largely untapped markets for Nubank
- Their banking application in Mexico serves as an unrealized catalyst
- Their establishment in Brazil will allow them to expand into other Latin American countries as they see fit

## Lower Costs than Other Banks

A Bank with No Branches

- Nubank's lack of brick-and-mortar locations and superior underwriting technology cause their costs and pricing to be lower than competitors
- The market underestimates how quickly they will penetrate new markets due to these pricing advantages

## Increasing Revenue per Customer

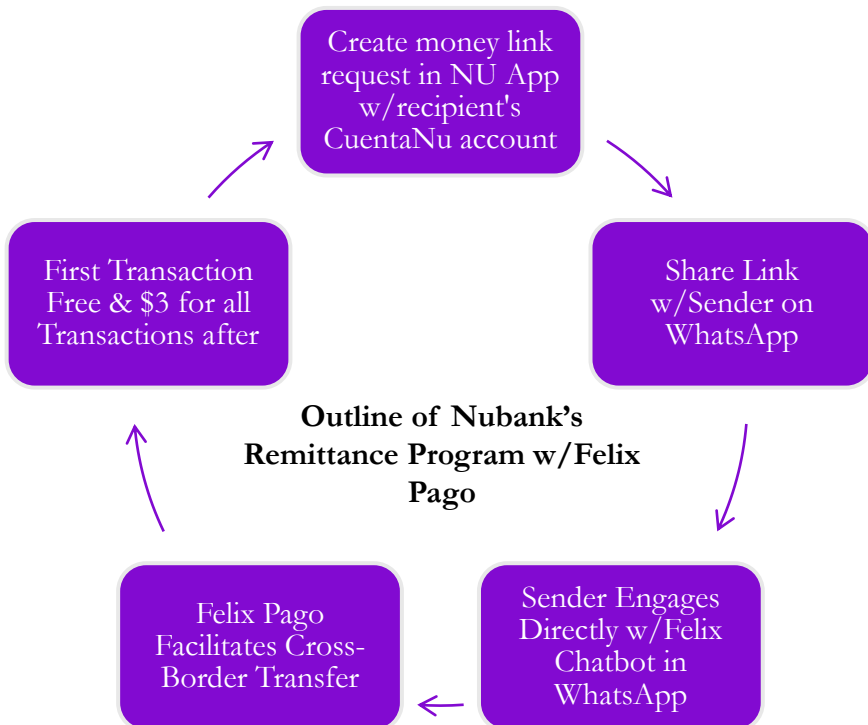
Financial Performance is Improving

- Superior cross-selling has allowed Nubank to increase revenue per customer while maintaining the same cost structure
- We expect there to be organic margin expansion as the number of customers NU services increases

Despite regulatory challenges, Nubank has gained significant traction in Mexico and Colombia even without their full product suite

## Catalysts for NU Mexico

- The large underbanked population
- Growing digital adoption among the youth and rest of population
- The substantial potential for facilitating international fund repatriation



## Regulatory Hurdles, No Problem

- Nubank has currently applied for their banking license in Mexico and is awaiting approval from the National Banking and Securities Commission (CNBV)
- Nubank just received regulatory approval from the Financial Superintendence of Colombia (SFC) earlier this year to operate as a financing company
- Despite this NU has shown impressive ability to make headway in these market

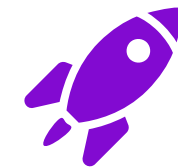
**\$1.4B**  
invested in Mexico<sup>1</sup>

**~5%**  
Market Share in  
Columbia (as just a  
credit card issuer)

**+5.5M**  
Users in Mexico<sup>1</sup>

**800,000**  
Credit Card Users in  
Columbia<sup>1</sup>

## 3 Pillars of Success for NU



- Nubank's 1st priority for Mexico expansion is getting their banking license. They have closely collaborated with the Mexican gov and should receive approval relatively soon
- The 2nd priority for NU is launching their full product suite to their existing Mexico customer base, showcasing the superiority of their product over incumbents
- Nubank's third priority involves penetrating the untapped market in Mexico, where only 12% of the population have credit cards<sup>2</sup>, and incumbents often **charge customers** for holding deposits. Leveraging word-of-mouth advertising to attract more customers.

# Competitive Cost Advantages

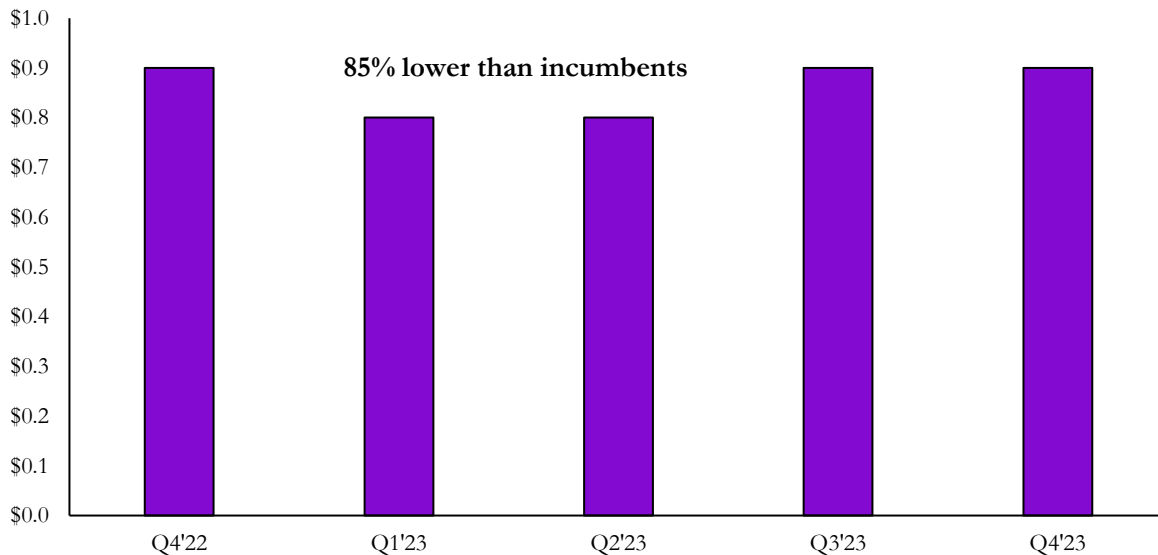


Nubank's ability to maintain low customer acquisition costs and a low cost of risk help them offer competitive pricing

## Customer Acquisition Costs

- The customer acquisition cost for Nubank stands at \$7, with only \$2 of that being paid marketing
- Their ratio of LTV/CAC was more than 30x in Q1'22, while a 'good' ratio for a startup is anything more than 3x
- Such low customer acquisition costs, combined with fewer operational costs from their neobanking model allow them to offer lower prices for their products than competitors

## Cost of Serving Customers in USD

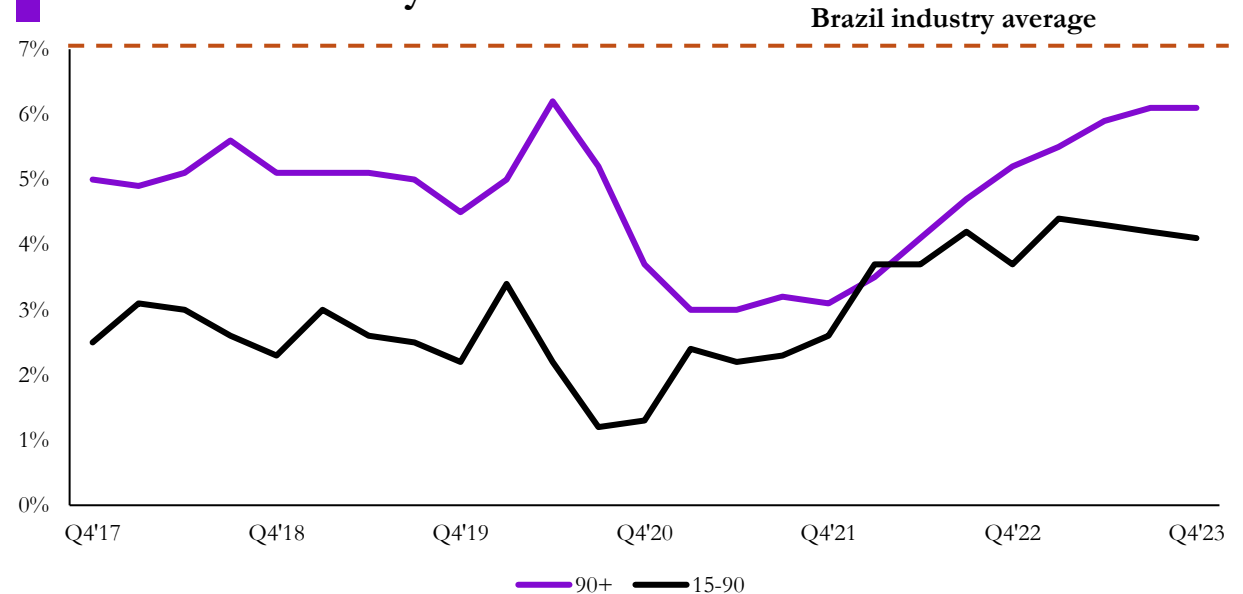


Source: NU Investor Presentation.

## Cost of Risk

- Nubank has been well known for having best-in-class credit underwriting compared to the Brazilian industry average
- They do so by implementing credit models and data analysis into their underwriting approach, treating it as more of a science than an art
- This allows them to offer lower interest rates and attract more demand for their loans than traditional banks or other neobanks
- Competitive costs also help them maintain at high net promoter score

## 15-90 and 90+ day NPLs



# Increasing Revenue per Customer

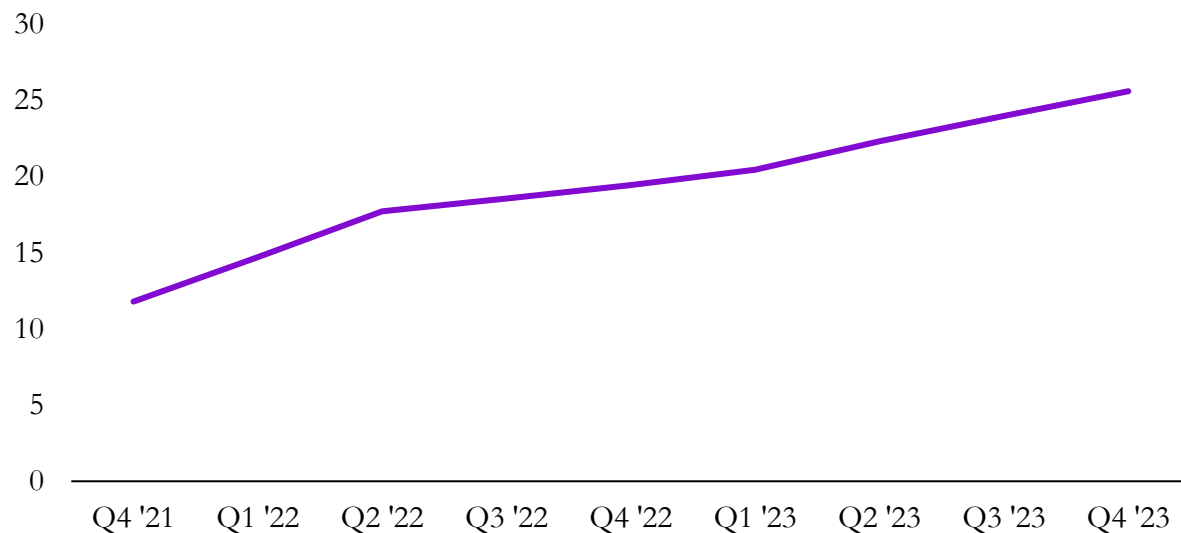


NU's organic revenue/customer growth coupled with their high operating leverage is ideal for achieving economies of scale

## Increasing Revenue per Customer

- NU has consistently increased their revenue per customer
- This, along with their 32% CAGR in customer growth<sup>1</sup>, has contributed to their industry-leading revenue growth rates despite reaching an increasing portion of their potential market
- Their ability to grow revenue per customer mostly derives from continuous efforts to cross-sell new products and services to existing customers, keeping them engaged in the NU ecosystem

## Revenue Per Customer in USD<sup>1</sup>

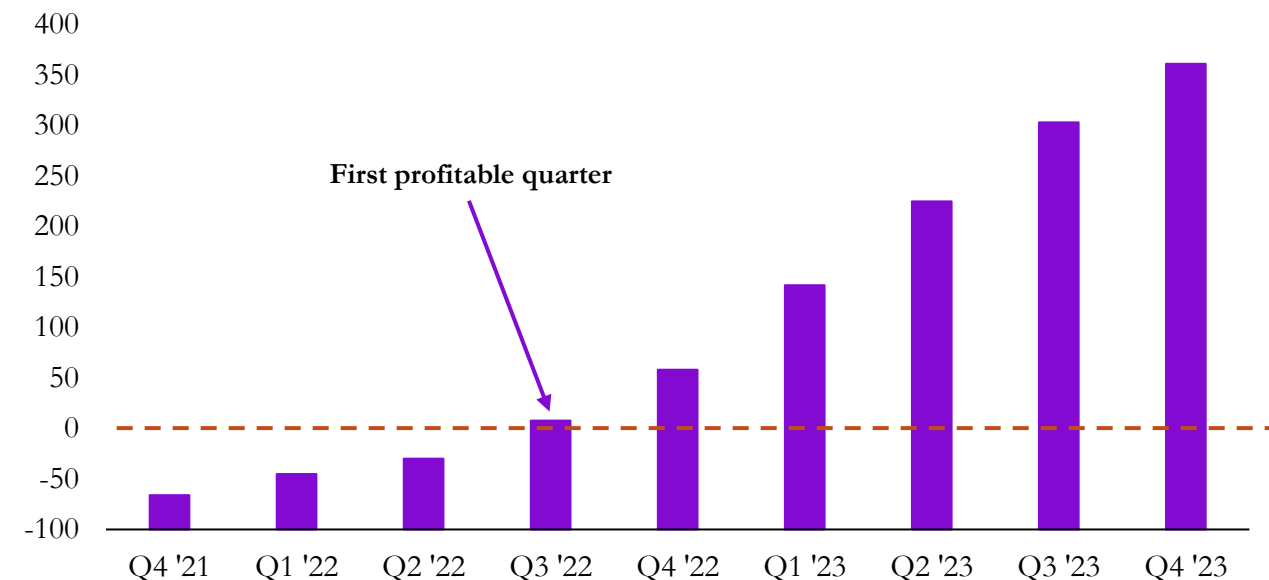


Source: 1) NU Investor Presentation. 2) NU 10-K.

## High Operating Leverage

- NU has also been able to convert a high percentage of their incremental revenue into profits stemming from their hyper-scalable cost structure
- Given their relatively high proportion of fixed costs to variable costs (i.e. costs that will scale with customers & revenue vs. those that won't) NU will likely be able to create organic margin expansion by scaling their business with no necessary cost-cutting

## Net Income in \$M USD<sup>2</sup>



# Financial Analysis

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# Earnings and Revenue Multiple Methods



Earnings Multiple Method	
Implied Equity Value	77,689,590
S/O <sup>1</sup>	4,765,940
<b>Implied Share Price</b>	<b>\$16.30</b>

Revenue Multiple Method	
Implied Enterprise Value	59,592,096
Less: Net Debt <sup>2</sup>	(4,787,096)
Equity Value	64,379,192
S/O <sup>1</sup>	4,765,940
<b>Implied Share Price</b>	<b>\$13.51</b>

Earnings Multiple Method	
PV of Stage 1 CFs	\$11,170,712
2028 Net Income	6,494,205
P/E Multiple	20.00x
TV	129,884,101
WACC	14.32%
PV of TV	66,518,878
<b>Implied TEV</b>	<b>\$77,689,590</b>

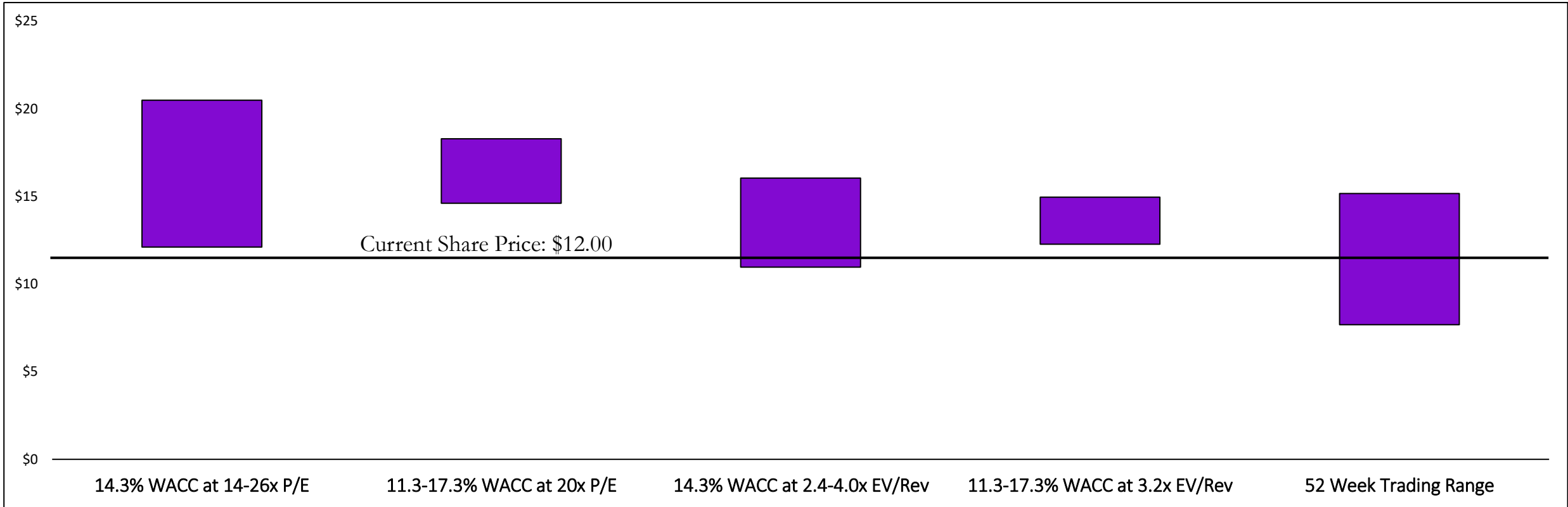
Revenue Multiple Method	
PV of Stage 1 CFs	\$11,170,712
2028 Revenue	29,545,973
Revenue Multiple	3.20x
TV	94,547,114
WACC	14.32%
PV of TV	48,421,384
<b>Implied TEV</b>	<b>\$59,592,096</b>

Sensitivity Analysis		Earnings Multiple				
		14.0x	17.0x	20.0x	23.0x	26.0x
WACC	17.32%	\$10.93	\$12.77	\$14.61	\$16.44	\$18.28
	15.82%	\$11.50	\$13.46	\$15.42	\$17.38	\$19.34
	14.32%	\$12.11	\$14.21	\$16.30	\$18.39	\$20.49
	12.82%	\$12.78	\$15.02	\$17.25	\$19.49	\$21.73
	11.32%	\$13.50	\$15.89	\$18.29	\$20.68	\$23.07

Sensitivity Analysis		Revenue Multiple				
		2.4x	2.8x	3.2x	3.6x	4.0x
WACC	17.32%	\$10.04	\$11.16	\$12.27	\$13.39	\$14.51
	15.82%	\$10.49	\$11.68	\$12.87	\$14.06	\$15.25
	14.32%	\$10.97	\$12.24	\$13.51	\$14.78	\$16.05
	12.82%	\$11.49	\$12.85	\$14.20	\$15.56	\$16.92
	11.32%	\$12.05	\$13.50	\$14.95	\$16.40	\$17.85



# Sensitivity Analysis and Comparable Companies



Company Name	Ticker	Market Data (\$) <sup>2</sup>		Financial Data (LTM) <sup>2</sup>					
		Share Price	Market Cap (\$MM)	Net Revenue (\$MM)	EPS (\$)	Fwd 2yr Rev CAGR	P/E	P/TBV	
Nu Holdings Ltd (XNYS:NU)	NU	\$13.71	65,341	\$8,348	\$0.31	36.8%	44.2x	10.2x	
SOFI TECHNOLOGIES, INC. (XNAS:SOFT)	SOFT	\$9.01	9,604	\$3,396	(0.21)	16.9%	N.A	2.0x	
Itau Unibanco Holding SA (XNYS:ITUB)	ITUB	\$6.19	56,552	\$23,672	0.67	7.4%	9.6x	2.1x	
Banco Bilbao Vizcaya Argentaria SA (XNYS:BBVA)	BBVA	\$10.18	58,545	32,135.0	1.61	6.8%	6.43x	1.1x	
KakaoBank Corp. (XKRX:323410)	323410	\$16.35	7,800	881.1	0.61	15.2%	26.18x	1.7x	
<b>Average</b>		<b>\$8.46</b>	<b>\$41,567</b>	<b>\$19,734</b>	<b>\$0.69</b>	<b>16.6%</b>	<b>6.4x</b>	<b>1.7x</b>	
<b>Median</b>		<b>\$9.01</b>	<b>\$56,552</b>	<b>\$23,672</b>	<b>\$0.67</b>	<b>12.15%</b>	<b>6.4x</b>	<b>2.0x</b>	

# Risks & Mitigants

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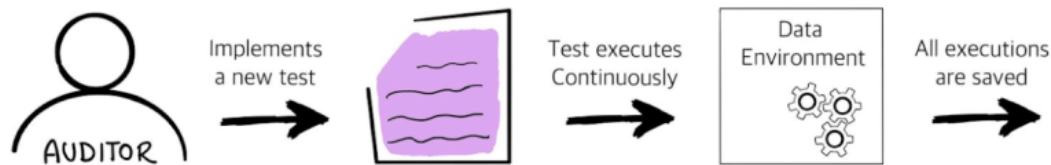
There is risk that the provided financial documents are inflated to veil unexpected losses or stimulate investment in the company

## Lojas Americanas – A Case Study

- Founded in 1929, Lojas Americanas was the 6<sup>th</sup> largest retailer in Brazil with over 1,900 stores
- In January 2023, accounting irregularities were discovered that had attempted to hide nearly \$4B of debt
- Later that month, Lojas Americanas declared bankruptcy in the US
- They were audited by KPMG from 2016-2019, and PwC thereafter
- Nubank’s corporate auditor is KPMG
- NU recently adopted an accounting change to improve their NPL ratio by writing off NPLs after 120 days instead of 365 days

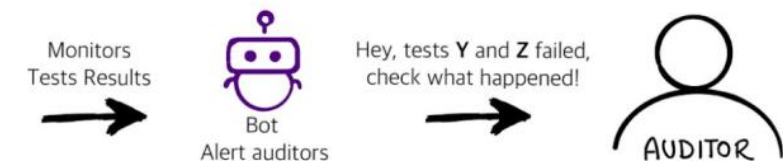
## Mitigant: Continuous Auditing

- Nubank has adopted continuous auditing, which provides fast information about control breaches, rules, exceptions and anomalies in key risk indicators



The Flow of Adding a new Continuous Auditing Test

DATE	TEST	RESULT
~~~~~	X	OK
~~~~~	Y	FAILED
~~~~~	Z	FAILED



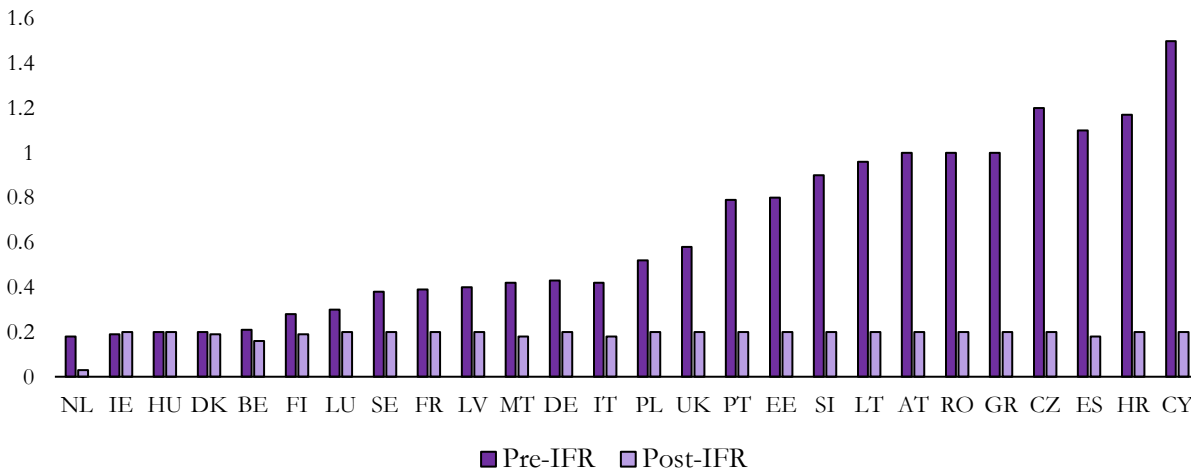
The Flow of monitoring Continuous Auditing Tests results

Credit card regulations could impact the profitability and risk management practices of banks in Latin America

## Credit Card Regulation

- Credit card regulation, particularly in the EU, has impacted how credit card companies operate and their profitability
- The EU capped interchange fees at 0.2% for debit cards and 0.3% for credit cards (IFR)
- Companies shifted towards higher annual fees or offering premium services to maintain profitability
- With tighter margins and greater transparency, competition intensified as card issuers sought to attract customers with better service offerings and loyalty programs

## Debit Card Fees Pre and Post IFR



## Credit Card Deregulation Under Luiz Inácio Lula de Silva

- President Lula's government has supported deregulation that increased competition banking and finance sectors
- Efforts were made to streamline processes and reduce red tape
- Push towards modernizing financial regulations to incorporate and foster technological advancements (aligning with Nubank's digital banking model)
- The government's deregulation efforts also promoted financial inclusion by making banking services more accessible to a broader segment of the population

## Positive Outlook for Nubank

- Deregulation lowers entry barriers for new companies, allowing Nubank to rapidly expand customer base in new markets like Mexico and Colombia
- Less restrictive regulatory environment allows Nubank to innovate (particularly digital banking solutions) without severe hurdles, introducing new products to their total offerings
- Reduced bureaucracy and simpler compliance allow Nubank to offer competitive rates and services to customers

With heavy reliance on digital tech, neobanks are at risk for cyber attacks, possibly exposing sensitive customer information to bad actors

## What does Cybercrime mean for Neobanks?

- Fraud: Cybercriminals attempt to open new accounts or access existing accounts using stolen identities. Neobanks are common targets due to ease of access and lack of real-world infrastructure.
- Data Breaches: With neobanks storing the sensitive, personal information of their customers, hackers view them as attractive targets to steal data from.
- This is commonly cited as one of the major downsides of neobanks – the fact that nothing is done in-person makes it harder to detect fraud

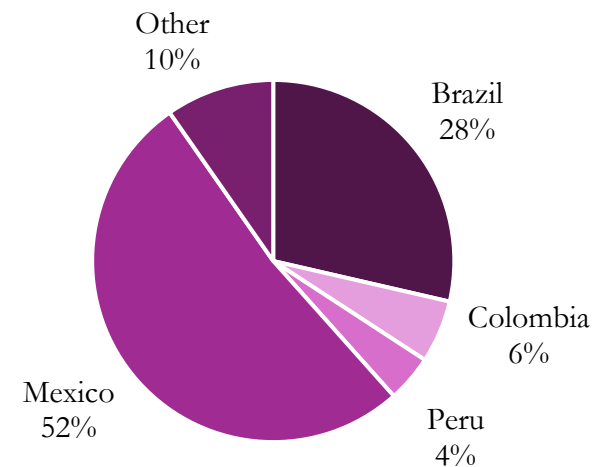
## In-App Protection Against Cybercrime

- The Moda Rua (Street Mode) feature allows customers to set a maximum limit for transactions when they are disconnected from a secure Wi-Fi network.
- Alo Protegido allows customers to grant access to Nubank to assess whether incoming calls might be a scam, blocking them before the phone even rings
- The app requires face ID verification for riskier and more expensive purchases

## Nubank's Cybersecurity Policies

- Installed protection systems built on and cryptographic algorithms that encrypt customer information, making it virtually impossible for unauthorized access
- Developed AI models that recognizes and flags and customer activity that deviates from the customers regular purchasing pattern. When a purchase has been deemed fraudulent, a customer is notified, and the purchase is immediately blocked.

## Cybercrime in LATAM (2023)



- Nubank is most popular in Brazil, Mexico, and Colombia, the 3 countries with the highest rate of cybercrime.
- Implementing exhaustive cybersecurity policies is a must for Nubank in ensure the safety of customers' personal information

We propose to buy 175 shares of NU at a share price of \$12.00 for a total **purchase price of \$2,100.**

This would represent 7.95% of the Financials portfolio and 0.89% of the total IAC portfolio.

The purchase would be funded by IAC cash.