**Nu Holdings: Q4’22 Conference Call**

**Operator**

Good afternoon, ladies and gentlemen. Welcome to Nu Holdings conference call to discuss the results for the **fourth quarter 2022**. A slide presentation accompanies today's webcast, which is available on Nu's Investors Relations website: www.investors.nu in English and www.investidores.nu in Portuguese. This conference is being recorded and the replay can also be accessed on the company's IR website.

This call is also available in Portuguese. To access it, you can press the icon on the lower right side of your Zoom screen, and then choose to enter the “Portuguese room”. After that, select “mute original audio”.

*Para acessar nossa conferência em português, clique no ícone do globo ao lado inferior direito da sua tela Zoom e selecione a opção “Portuguese room”. Ao acessar a nova sala, certifique-se de mutar o áudio original.*

Please be advised that all participants will be in listen-only mode. You may submit online questions at any time today, using the Q&A box on the webcast.

I would now like to turn the call over to **Mr. Jörg Friedemann, Investor Relations Officer** at Nu Holdings. Mr. Friedemann, you may proceed.

**Jörg Friedemann:** Thank you very much operator. And thank you all for joining our earnings call today. If you have not seen our earnings release, a copy is posted in the Results Center section of our Investor Relations website. With me on today's call are **David Velez, our Founder, Chief Executive Officer and Chairman, Youssef Lahrech, our President and Chief Operating Officer,** and **Guilherme Lago, our Chief Financial Officer.** Additionally, **Jag Duggal, our Chief Product Officer**, will join us for the Q&A session of the call.

Throughout this conference call, we will be presenting non-IFRS financial information, including adjusted net income. These are important financial measures for the Company, but are not financial measures as defined by IFRS. Reconciliations of the Company's non-IFRS financial information to the IFRS financial information are available in our earnings press release.

Unless noted otherwise, all growth rates are on a year-over-year FX neutral basis.

I would also like to remind everyone that today's discussion might include forward-looking statements, which are not guarantees of future performance and therefore you should not put undue reliance on them. These statements are subject to numerous risks and uncertainties and could cause actual results to differ materially from the Company's expectations. Please refer to the forward-looking statements disclosure in the Company's earnings press release.

Today our **Founder, Chairman and CEO, David Velez**, will discuss the main highlights of our fourth quarter 2022 results and provide an overview of our Brazilian operations. Subsequently, **Guilherme Lago, our CFO, and Youssef Lahrech, our President and COO,** will take you through our financial and operating performance for the quarter, after which time we will be happy to take your questions.

Now I would like to turn the call over to David. **David,** please go ahead.

**David Velez:** Thank you, Jörg.

Hello everyone! Thank you for being with us today. Once again, I am happy to share that Nu posted another record quarter, showing continued growth across all our metrics, including meaningful increase in profitability. We will also be disclosing numbers for Nu Brazil specifically today, which we think show a very exciting picture.

We welcomed more than 4 million customers to our platform this quarter, and we now have close to 75 million clients across our three geos, posting a growth of 38% YoY. We are now the 5th largest financial institution in Brazil and the 6th largest financial institution in Latin America in terms of number of customers.

Let's now dive into the main operating highlights of the quarter and of the year.

During the fourth quarter, our revenue amounted to almost US$1.5 billion, growing 112% year-over-year. The triple digit expansion in revenues is the compounded effect of the strong expansion of our active customer base in Brazil with our ability to cross-sell products and foster client engagement.

Nu also expanded gross profit by 137% year-over-year to US$578.3 million in the fourth quarter of 2022. The significant expansion of our gross profit margin, which reached 40% this quarter, up from 36% in the fourth quarter of 2021, reinforces the operational leverage capacity of our business and the strong execution of our team. In 2022, we succeeded both in terms of pricing adequately credit products amidst adverse conditions and adapting our funding cost to deal with much higher-than-expected interest rates.

As a result, Nu Holdings delivered an adjusted net income of US$113.8 million in the fourth quarter of 2022, up from US$3.2 million in the fourth quarter of 2021. The Brazilian operations highlighted in the right-side of the slide continued to mature and contribute meaningfully to these results, with 93% of our revenues generated by this geo. Adjusted profits for the Brazilian operations reached US$157.7 million in Q4 of 2022, up from a loss of US$3.8 million during the fourth quarter of 2021. Our progress in Brazil illustrates how our business model is able to start generating meaningful profits while growing revenue over 100%.

The beginnings of Nu were based on the unbundling of financial services, back in 2013. Now our most important business opportunities rest on the rebundling of financial services, by building a diversified multi-product, multi-segment and multi-country portfolio of businesses. As you can see in this slide, even our adjacent businesses already achieved the notable figure of a million customers, attesting the company's cross-sell capacity.

Despite the growing scale of our core products, Nu is still in the early days of its product development lifecycle. That said, the signs of the inflection of the S-Curve for our products are already clear. This slide is meant to show two things. First, the pace at which we develop and launch new products has accelerated over time. Second, our product portfolio is well positioned to deliver multiple years of strong growth. While NuAccount and Credit Cards have just reached the inflection points of their growth stages, most of our other products are at earlier stages of their life cycles, suggesting still high levels of up-sell and cross-sell potential, from multiple sources and for years to come.

We will continue to expand our platform with disruptive products that further strengthen our relationship with our customers and enable us to acquire increasing levels of customer principality and share of wallet across all demographic segments. Our most important launches in 2023 include the expansion of our lending products in Brazil into secured lines, such as public payroll, and the launching of savings accounts in both Mexico and Colombia.

Just as Nu is in the early days of its product development lifecycle, it is also in the early days of its international expansion.

Over the past decade we have successfully expanded our operations in Brazil, having reached a customer base that represents 44% of the adult population of the country. It is inevitable that our customer growth in

Brazil over the coming years will be lower than what we experienced over the last years. Our growth in Brazil will progressively pivot from customer acquisition into customer monetization.

Conversely, however, we are still at the early stages of the customer acquisition lifecycle in Mexico and Colombia, countries in which our penetrations are still low, but early signs of performance are extremely encouraging. Mexico and Colombia are beating Brazil at practically every single customer growth and engagement metric – they are growing faster and showing NPS levels higher than those of Brazil. In both of these countries, we have already become the top issuer of new credit cards.

The stages of development of our three geos are complementary and expected to provide Nu with very strong growth engines for years to come.

To better showcase the earnings potential of our model, we want to spend a few minutes digging specifically into our Brazil business, which continues to show very strong top-line traction, and also meaningful bottom-line profitability.

Over the past 4 years, we expanded our client base in Brazil by 11x, having reached a penetration of 44% of the adult population of the country. 70%-80% of the clients came to Nu through organic channels, mostly Member-Get-Member, providing us with strong growth virality and one of the lowest Customer Acquisition Costs among fintechs and incumbent banks globally. We have been successfully applying the same playbook in Mexico and Colombia.

The compounding effect of customer growth and higher levels of customer monetization have resulted in strong top-line growth in Brazil. In the fourth quarter of 2022, our Brazilian operations recorded US$1.4 billion in revenue, a 110% year-on-year growth, and a gross profit margin of 44%.

Adjusted net income grew progressively over the past quarters, reaching US$158 million in the fourth quarter of 2022, for an annualized Adjusted Return on Tangible Equity of 58% and an annualized Return on Equity of 40%. Although part of this number was positively impacted by the seasonal effects observed in the fourth quarter of the year, such as higher purchase volume and lower cost of funding, one can see that the profitability of our operations in Brazil has reached an inflection point and already position us among one of the financial institutions with the highest return on capital in the country. But we believe we are still in the early stages of the development of our model in the country, with still significant upside in terms of both top-line growth and operating leverage.

Finally, this slide details the outcome of our strategy in Brazil and at the Holding level. The viral expansion of our customer base combined with our successful cross-selling and up-selling strategies have driven strong profitability in our Brazil business. Beyond a fourth quarter that is positively affected by seasonality, Nu Brazil posted a Return on Tangible Equity of 25% and a Return on Equity of 15% for the full year of 2022, even considering the losses reported in the first quarter of the year.

While 2022 was a challenging year macro-wise and very critical for us as we built trust as a newly public company, we could not be more proud of our 2022 results, which largely exceed our internal expectations. The execution capability of the entire Nu team was very strong, and we proved that it is possible to maintain an accelerated rate of growth as we gain share in every product vertical and geography, while keeping credit delinquency in check, improving operating leverage, and ultimately showing strong profitability. But these achievements, as important as they are, represent only the first steps of what we can deliver in the future, once our new geos mature and, similarly to Brazil, scale further and start to compound the profitability potential that our model creates.

With that, I would like to pass the floor to our CFO, Guilherme Lago, who will walk you through more details of our results.

**Guilherme Lago:** Thanks David. Good evening everyone.

To better frame the discussion around our year-end results, I'd like to recap the three key elements of our simple and powerful value-generating strategy:

- Number One: continuing to grow our customer base in the markets in which we operate - Brazil, Mexico and Colombia - and quickly converting new customers into active ones;
- Two: expanding average revenue per active customer, or ARPAC, through both cross-sell and up-sell; and
- Three: delivering growth while maintaining one of the lowest-cost operating platforms in the industry.

Our fourth quarter results show positive evolution in each one of these pillars.

Let's start with the first pillar of our strategy: customer acquisition. In the fourth quarter, we added 4.2 million and ended the year at 74.6 million customers - a 38% increase year-over-year. In Brazil, we are steadily adding between 1.0 and 1.5 million customers per month, the vast majority of which still come from referrals, which lowers the acquisition cost and accelerates activation.

In Mexico, we surpassed 3.2 million customers by the end of the quarter. As per the last available data for 2022, Nu's market share in terms of new cards issued in the country approached 29%, while share of purchase volumes for credit cards already achieved 5%. Our strongest growth in relative terms was in Colombia, where our customer base reached nearly 600 thousand. In Colombia, Nu accounted for 38% of the number of new credit cards in 2022, as per the latest available information, with 2% market share in terms of purchase volume for credit cards.

The second part of this pillar is activation, where we continued to drive higher levels in the fourth quarter. Our overall monthly activity rate reached 81.9%, 5.6 percentage points higher year-over-year and the eleventh consecutive quarter of sequential increase. We are seeing positive and increasing momentum in activity in all of our three markets, despite their different stages on the S-curve.

Let's move to the second pillar in our strategy: revenue generation. The three charts on this slide show a clear relationship.

Let's start with the chart on the left. We are very proud that, as of the end of 2022, 58% of our active customers had chosen Nu as their primary banking account, or PBA. This is the holy grail of the financial services business and the cornerstone of our model for three simple reasons:
**(i)** PBA customers generate ARPACs that are much higher than those of non-PBA customers;
**(ii)** PBA customers present 90-day NPLs that are much lower than those of non-PBA customers; and
**(iii)** PBA customers also have lower levels of price elasticity and adverse selection than those of non-PBA customers.

The number of PBA customers underscores the development of a model that effectively engages and serves our customers with multiple products and throughout all stages of their lifecycle. It begins with how we attract clients, which is through a powerful engine based on customer referrals.

The more customers use Nu as its Primary Bank Account, the greater the number of products they use and the higher the monthly ARPAC they generate. With every cohort we have been able to accelerate the pace at which Nu becomes the primary account of our customers. We have also been able to accelerate the pace at which our customers use our products. These two factors compound to speed up ARPAC for newer accounts also helping to push up the overall ARPAC of the company.

For the fourth quarter, our monthly ARPAC continued to increase and achieved US$8.2 per month, pushed by both the increasing cross-selling and up-selling of our new cohorts and the maturation of our older cohorts, whose average ARPAC reached US$23 per month.

We can see in this slide that our monthly ARPAC continues to grow sequentially, expanding 37% year-over-year. The higher number of active clients combined with higher ARPAC prompted the sustained growth in our revenues. Revenue grew 112% year-over-year to US$1.5 billion, another record-high. Our revenue in 2022 was nearly three times higher than in 2021 and almost seven times higher than in 2020.

Now turning to our cards business, we continued to experience strong growth, with purchase volumes up 54% year-over-year to US$24 billion. In 2022, purchase volumes reached US$81 billion, an 85% increase over 2021, demonstrating the power of our product cross sell, upsell and customer engagement capabilities.

Most of our purchase volumes continue to come from our older cohorts of customers, which spend three to four times as much per month as more recent cohorts. While there is a difference from the outset between newer and older cohorts, as shown on the chart on the right hand side, both show a clear upwards trend of consumption over time. On average, credit card spend for a customer who has been with us for more than 24 months triples. We expect the substantial amount of clients we added in the last two years to increase their purchase volume with our cards as their relationships with us continue to mature.

Our consumer finance portfolio, composed of credit card and personal loans, reached US$11 billion, a 62% expansion over year-end 2021.

Our credit story has two tales. On the one hand, credit cards continue to grow strongly, at 69% year-over-year, as more clients are added to our ecosystem and our low-and-grow methodology plays out. On the other hand, we have been more cautious with origination in the personal loan portfolio, aligned with the higher risk of this product. Originations in personal loans increased slightly and the overall book grew sequentially during the fourth quarter to US$2 billion. The pace of growth has been lower than that of credit cards, at 33% year-over-year, but with the ongoing performance of the book we expect this to accelerate over coming quarters.

Let's now review in more detail the evolution of our credit card portfolio and originations of personal loans.

We continue to pursue our strategy of increasing the share of our credit card loans that earn interest, closing the gap as compared to the market. We have narrowed this gap by offering our customers interest-earning installment loans on their credit cards, which as of the fourth quarter surpassed market levels and represented 12% of our credit card loan book. We see attractive risk-adjusted rates of return on this type of financing - it allows us to monetize our credit card business beyond simple fee generation and fulfill a customer need. At the same time, we have been intentional in not expanding our share of revolving receivables, which continues at 7% of our total receivables and once again widened the gap versus the market, whose revolving now accounts for 17% of total receivables.

We base our origination of personal loans on the latest performance of our own cohorts, our assessment of risk going forward, including our judgment of the economic and credit environment. Last year we increased the resilience we demand from our loan originations and have seen positive performance to-date, leading to gradual increases in our origination volumes. We expect this trend to continue going forward as long as this positive performance track record persists.

Indeed, we continue to see upside in our ability to drive growth in lending in a healthy and profitable manner. We have substantial reach, given the size of our customer base. We believe the risk assessment in our platform is best-in-class, allowing us to deliver superior products and experience to our customers. We also have a strong capital base and an ample liquidity to increase our leverage. As market conditions improve and allow our credit risk appetite to increase, we should be able to deploy capital effectively and profitably. This strategy should be reinforced with the upcoming launch of secured lending.

In July 2022, we launched Money Boxes, which are personalized investment tools. We also started to remunerate deposits at 100% of the Brazilian interbank deposit rate, but retroactively and only for amounts that remained on deposit for more than 30 days. Given their staged roll out, these two changes did not materially affect our funding cost in the third quarter. But, in the fourth quarter, we started to see the full impacts of these actions.

In the fourth quarter of 2022, our cost of funding improved to an all-time low of 78% of the interbank deposit rate. This led our financial expenses to decline quarter over quarter.  We are starting to unlock the value of the strong liability franchise that has been built over the past years.

And our deposit base continued to grow. Deposits increased 55% year-over-year to US$16 billion. We have seen no material impact of the deployment of Money Boxes or the changes in remuneration on our deposits inflows.

The success of this new strategy already has had an important effect on our profitability for the fourth quarter and should be recurring in subsequent quarters.
The successful implementation of our new funding strategy, combined with the continued growth of our credit portfolio, made a meaningful contribution to our results in the fourth quarter. This is most visible in our net interest income, or NII.

Our NII reached US$688 million this quarter, growing 30% quarter-over-quarter. The improvement in our cost of funding helped the increase of our net interest margin, or NIM, 2.4 percentage points over the level in the third quarter to a record of 13.5%.

While we can attribute much of the recent gains in net interest margin to the new funding strategy, we expect this trend - respected seasonality -, which is especially strong in the fourth quarter, to continue going forward based on three factors:
(1) the growth in our credit portfolio, which should surpass that of our deposits;
(2) the adequate pricing of our credit products, as we continue to build underwriting resilience with pricing; and
(3) the improved mix of our loan book, especially as we resume the growth of our personal loans over the coming quarters.

Let's move to the third pillar in our overall strategy: maintaining a low cost-to-serve. We believe our platform is one of the most cost-effective in serving customers in the markets in which we operate. For the fourth quarter, our cost to serve amounted to US$0.9. On a year-over-year comparison, our cost to serve did not grow. This achievement is even more impressive considering how much we evolved in terms of products per customer and PBAs. Over the same period, our ARPAC increased 37%, clearly illustrating the strong operating leverage of our business model.

Looking ahead, as we said in past quarters, we expect our cost-to-serve to remain at or below the dollar level as scale gives us significant operating leverage and bargaining power with our suppliers.

In terms of gross profit, we achieved US$578 million, up 137% year-over-year, a significant acceleration versus the growth posted last quarter. This level of gross profit was the highest we have ever achieved. At the same time, our gross profit margin of 40%, 4 percentage points higher year-over-year, accelerated the pace of recovery started in the third quarter.

To illustrate how far we have come, our gross profit of US$1.7 billion in 2022 is more than two times higher that of 2021 and nearly five times higher that of 2020.

Operating leverage is a key element of our strategy, with the full benefits becoming increasingly clear as we advance product penetration and drive revenue growth. This is visible in our efficiency ratio, which improved for the fourth consecutive quarter to reach an all-time low at 47%, or 41% excluding share-based compensation. This is already comparable to the level of efficiency of Latin American incumbent banks, but still far from the potential of our platform that continues to collect the benefits of scale.

We expect our operating leverage to continue to be captured as our scale increases, although there might be seasonal variations affecting this number. In the fourth quarter, in particular, our platform benefited from stronger purchase volume and deposits inflows.

Now moving on to the bottom line, we posted another quarter of improving bottom-line performance. In the fourth quarter of 2022, our adjusted net income and net income amounted to US$114 million and US$58 million, respectively. These results are encouraging as they serve to validate our strategy and our business model.

However, we reinforce that we look at our business with a view towards long-term value creation, which may require us to make additional investments in the short-term to optimize our long-term opportunities. And we expect to continue managing the company this way.

We see this fourth quarter, and the year of 2022 as a whole, as evidences of our sustainable cost advantages:

- On Cost to Acquire: We added over 20 million customers during 2022 and presented one of the lowest Customer Acquisition Costs among fintechs and banks globally.
- On Costs to Serve: We held it constant on an FXN basis throughout the entire 2022, despite the inflationary pressures in the countries in which we operate and increasing levels of customer engagement.
- On Cost of Risk: We successfully managed the risk in our credit portfolio amid a very challenging backdrop and continued to outperform competitors when comparing apples to apples - Youssef will provide more detail shortly; and
- Cost of Funding: We began to unlock the potential of our deposits franchise, starting to close the negative gap we had against incumbent banks and widening the positive gap against fintechs.
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As we go into 2023, we expect the trends from the fourth quarter to continue to gain traction. In particular, we emphasize our ability to develop and scale best-in-class products, expand internationally and operate at low costs.

Now, I'd like to turn the call over to Youssef, our President and Chief Operating Officer, who will walk you through some highlights of our asset quality.

**Youssef Lahrech:** Thank you, Lago. Let me take you through some key indicators of asset quality and overall credit portfolio health for the fourth quarter of 2022.

Let's start with the overall NPL trends.

Our early delinquency indicator, NPL 15 to 90, improved this quarter, by 50 basis points, reaching 3.7%. This was driven by two main factors:

- Number one, the improvement in the credit performance of our personal loans portfolio in response to the management actions taken in Q2; and

- Second, the favorable seasonality that takes place during the fourth quarter, when early delinquencies usually trough. It is important to note that that trough is normally accompanied by a rebound in early delinquency rates during the first quarter of each year.

90+ NPL ratio increased from 4.7% to 5.2%, behaving in line with the expected stacking behavior of these buckets. I want to take this opportunity to reinforce that Nu has never sold delinquent loans, which otherwise would have a "purging effect" thereby artificially lowering delinquency rates.

With respect to loan renegotiations, they remain at 7% of the book, with approximately half of those being current and not past-due at the time of renegotiation.

For the credit card portfolio, these six graphs show the time-series of NPL by income band, where the purple line represents Nu and the gray line represents the industry. As we already mentioned during the previous calls and you can see on these updated charts, we continue to outperform the industry on a like-for-like basis. For the lower income bands, our comparative advantage is even more pronounced.

The gap for each income band continues to widen as you look at the trend over time, demonstrating that our competitive advantage in underwriting remains consistent and sustained.

Just as in past quarters, provisions continue to grow primarily driven by the growth in our portfolio. We front load provisions when we originate loans, based on the expected losses for the life of the credit in accordance with IFRS9's expected loss methodology.

This quarter, much of the expansion in our risk adjusted NIM can be traced back to the improvement in our cost of funding. However, even after adjusting for that factor, we would still see risk adjusted NIM stronger than that of the third quarter and even stronger compared to that of the fourth quarter of 2021.

Having shared these data and perspectives on credit and asset quality, let me now turn the call back to our Founder and CEO, David Vélez, for his concluding remarks.

**David Velez:** Thanks, Youssef.

It has now been a little over one year since our IPO, and despite much more adverse conditions than we could have anticipated, we are proud to have over-delivered on our commitments to the market. Our over 8,000 colleagues delivered these results through an unwavering focus on strong execution and I thank each and every one of them. Let me now close by summarizing some of the most important changes in the environment, how we adapted our strategy to deliver on what had been promised and what lies ahead of us for 2023.

First, in late 2021, no one expected the sharp increase in policy rates that skyrocketed to almost 14% in Brazil. To mitigate this we launched money boxes and six months later we lowered our cost of funding to 78% of the CDI from about 100%, while both deposits and money boxes continued to grow sequentially and strongly.
Second, with a tougher environment for asset quality in Brazil, we became more restrictive in originating personal loans, while repricing our products and building resilience within our portfolios. In parallel, we accelerated the launch of secured lending, with the general launch of payroll lending in Brazil expected in the upcoming quarter. We are confident that this is a disruptive solution for our customers which will foster growth into different client segments, thus further balancing our credit book.

Third, we doubled down on smart efficiency moves to foster profitability and showcase the operating leverage of our model. One of these moves was the termination of the CSA, which will save the company $70 million per year, but, beyond that, it reinforces how committed Nu as a company is to accelerating value creation for all of our shareholders. Our efficiency ratio will continue to improve progressively over the coming years as we capture cost savings opportunities and reduce the rate of headcount growth going forward.

Finally, in 2023 we will prioritize "winning our fair share of wallet in the upmarket in Brazil" where there remains tremendous opportunity, growing our personal lending book - both secured and unsecured - and expediting the inflection of the growth model in our new geos.

Almost two million customers with monthly income above R$12,000 are already clients of Nu, but our share of wallet with them is currently at approximately 10%. In 2023 we will also break into the secured lending market, positioning payroll loans as a core product to complement our personal lending product shelf and widen our growth opportunities in the country. Last, but not least, 2023 will be the year in which we will launch and deepen the penetration of NuCuenta in both Mexico and Colombia, which should accelerate the growth and sustainability of our platform in those countries. We will continue investing significantly in both countries as we think the potential prize is very significant.

We enter 2023 with a lot of strength and are excited to continue proving our model across products and geographies.

We would like to take your questions now. Thank you very much.

**Operator:** We will now start the Q&A session for investors and analysts. If you wish to ask a question, please press the "reaction" button and then click on "raise your hand". If your question is answered, you can exit the queue by clicking on "put your hand down". Please limit yourself to one question and a follow-up. If you have further questions, please re-enter the queue. You may submit online questions at any time today, using the Q&A box on the webcast.

I would like to turn the call over to **Mr. Jörg Friedemann** at Nu Holdings.

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**Jörg Friedemann:** Thank you, operator. And our first question comes from Jorge Kuri, Morgan Stanley.

**Jorge Kuri:** Congrats on the fantastic results, and thanks for the additional disclosure on the Brazil numbers. The profitability at this point is evidently really impressive. So congrats on that. I wanted to ask about the Money Boxes. It was a really positive surprise to see your funding cost at 78% of CDI, down from 95% in the previous quarter. To what extent this is a seasonal improvement based on the fourth quarter excess liquidity that normally comes in customers because of the 13th salary? Or is this sort of like the level from which you could continue to improve in 2023? And what do you think is the opportunity for you to continue to improve that number?

**Guilherme Lago:** Jorge, thank you so much for your question. We do expect the funding cost to remain largely at the same levels throughout the coming quarters, respective seasonality. As you correctly pointed out, in the fourth quarter of every year, we have the additional flow from the salary, which has in the month of December 2022, pushed down a little more the cost of funding than would otherwise be expected in a so-called normal month. However, we haven't yet seen the full impact of the change in the remuneration. We will only see this in the first quarter of 2023. So with those puts and takes, we do expect that cost of funding at today's levels is a sustainable level for us to see throughout 2023.

**Jörg Friedemann:** And our next question comes from the line of Tito Labarta from Goldman Sachs. Operator, please open his line.

**Tito Labarta:** Congratulations, pretty impressive results. My question is a little bit on the competitive environment. And just looking at -- now you're 58% of your active client base, you have its primary banking clients already when we look at the industry, some of your incumbent peers, particularly the ones focused on similar regions or income levels seem to be suffering a lot more than you are. So just to think about what do you think has been able to differentiate you and really manage this credit cycle in a way that many people didn't think you potentially could and be able to deliver the results that you can. And if you could talk a little bit about how competition perhaps is influencing that? That would be helpful if you give some color on that.

**David Velez:** Sure, Tito. Thank you very much for the question. So I think the story that we're playing out is a very different story that the incumbent banks are playing out because, on one end, we have 44% of the adult population in Brazil as a customer, a very meaningful population. On the other hand, we have very small market share still in a lot of our products. In credit card, we have something like around 13%. On personal loans, we have about 3%, 4%. So we get to grow within our consumer base, cherry picking the best customers and can continue gaining share, even if the environment is pretty adverse. So that's the first big differentiation. The second consideration is, and this is, I think, a point that perhaps the market hasn't understood that well, we are growing our credit book within our own, what in Brazil called (foreign language) or the closed ocean. We are -- we give credit to customers that uses our primary bank accounts that are getting their salaries in our account, they are using our app to do payments, they're getting an insurance. So that generates a lot of loyalty on one end. That generates a lot of information that we can use for underwriting. We are not providing credit in the open ocean, as a lot of banks have actually done over the past 12 months. There's been a lot of growth in that open ocean. So it's been a different strategy. And as a result, we get to continue to cherrypick within a base that we understand and that we know.

The third consideration is we've actually always looked to provide products that are very good for consumers, and we've been very careful about taking into account ratios on household debt. So just to give you one data point. The -- on the credit card product, we don't think revolving as a product is a good product for consumers to finance. It's a very high interest rate. Consumers enter into that product, and they ultimately end up getting very high losses. So as a result, we look for customers that pay on time. We've always look for customers that pay their bill on time. If we could choose, we could only get we get 100% customers that pay on time. And as a result, what you see is in the market, about 70% of customers -- yes, of the incumbent banks getting to their revolver. For us, it's only 7%.

So we end up with a consumer base that is healthier, that is less leveraged, that is -- provides more data to give us information around underwriting, and that we ultimately get to cherrypick to provide credit and continue to grow, even if the environment as a big headline is adverse and generates some risk.

Regardless of that, we did though decided to take it a little bit slower, as you saw in 2022, especially in consumer lending, which has a newer product. But as you will see -- as you see here on the delinquency numbers in Q4, which ended up being better than we expected, even though there is some seasonality, we already started growth again and feel comfortable that we can start tweaking up the growth on the lending side, but we will be monitoring this very closely. And if the environment shifts, we are very, very agile and can shift very quickly as well.

**Tito Labarta:** Great. That's very clear. Very helpful. One follow-up, if I may. Thanks for the Slide 10, showing that profitability in Brazil. You're showing annualized of 40%, but you still have a very under-levered balance sheet. And efficiency is improving pretty quickly. But do you think there's still upside to that 40% ROE in Brazil as you expand the product base, the whole upsell and cross-sell to your clients? And do you think there's some upside to that number from here?

**Guilherme Lago:** Tito, we think that the profitability levels that we are showing now are a good testament of the long-term potential of the profitability that we can have as a digital bank. It provides clear evidence in our view about the cost modes and the revenue advantages that we have. So in the long term, we do believe that there is more upside optionality there. In the short term, we don't provide guidance. So for 2023, we do expect to see some puts and takes in this equation. Would you expect, on 1 hand, to see the cap on the interchange of prepaid cards coming into fruition on April 1. We do expect that as we accelerate growth, this will now put additional weight on our margins. Conversely, as tailwinds, we expect that we will continue to grow and extract even more operating efficiency out of our system. So all in all, we think 2023 is another year of a healthy level of returns on equity, respected seasonality across the quarters in the long term, we believe that there is more profitability for us to extract from the model that we have seen so far in Brazil. And we also hope that Brazil is also a good showcase to what we can develop in other deals. So as we can see in the S curve that David showed, Mexico and Colombia are a few years behind Brazil, but we have no doubt that they will achieve profitability levels at the same ZIP code as the ones that we are achieving in Brazil in a few years.

**David Velez:** And just to add a bit on that, Lago, I think ultimately, if you take a step back and go back to the kind of first principles of the business model that we've always been espousing is the model of digital banking should provide much higher ROE in traditional banking because ultimately, you are operating with costs that are over 85% lower that incumbents. We don't have branches in every corner. We don't need hundreds of thousands of employees. We do need a lot of very expensive headquarters. All of that, we don't need it to serve customers and even provide a better experience. So that has always been sort of the hypothesis. We've tried to prove it through unit economics when we show economics of the products that we have, the lining their upwards of 60% in credit card, they're 100%. But now we finally get to prove it to you with an actual geography like Brazil that is at a mature level and showing this level of ROE. And while there are some benefits of seasonality in Q4, as Lago mentioned, ultimately, that is the direction that I think model will converge towards in Brazil and in other geographies as well.

**Jörg Friedemann:** And our next question comes from the line of Mario Pierry of BofA.

**Mario Pierry:** Congratulations on the quarter. A quick question from me. When I look at your net interest margin evolution, you clearly benefited from lower funding costs. But we're looking here the model. And we're also seeing higher lending spreads on your products. Even though your mix is going against you, given you're growing more in credit cards and personal loans. So my question is related to your ability to continue to be price, not only given the competitive environment, but the health of your clients, right? Like we know the economy in Brazil. It's okay. It's not doing great. We know that our consumers in Brazil are facing the effects of higher rates, higher inflation, disposable incomes. So I just wanted to understand here like if you see much more room for repricing your product. And as a follow-up to that question, we have been hearing a lot of noise in Brazil of potential implementation of interest rate caps on credit card loans. If you could discuss that as well, that would be helpful.

**Guilherme Lago:** Mario, thank you so much for your question. Let me try to break them into first a little bit on net interest margin and then the second one on the cap. On the net interest margin, as you have seen, and I'll draw your attention to Slide #22 of our presentation, we have seen a fairly material expansion over the past 4 quarters. And we expect that this expansion will continue as a result largely of 2 factors. Number one, we do expect that the credit portfolio will outpace the growth of deposits, and therefore, we should see the loan-to-deposit ratio going up, and that should be, by and large, a big tailwind to net interest margins. Number two, we do expect that the continue of the lower cost of funding that should increase the margins that we have. We are not relying, going straight to your question, on additional repricing of our products. But we believe that we will see kind of a shift in mix throughout 2023. I think personal loans -- unsecured personal loans on one hand may outpace the growth of credit cards. But conversely, we should also see throughout 2023, the beginning of the consignado or public payroll loans. So the combination of this change in mix should provide us also with an expansion of net interest margin by and large. So I think that is my attempt to address your first question. Basically, net interest margins is expected to continue at a healthy pace, not because we will reprice the product up, but because of the growth of the volume and the continuous lower of cost of funding. That is the number one. Number two, on the cap on credit cards, we have been hearing and discussing with a few analysts and investors about this question. And this is a question that has been lingering in Brazil for over a decade now, right? So for over a decade, we have seen attempts to restructure and reshape the unit economics of credit cards. We have been investing a lot of time understanding this and actively participating in these discussions. We don't think that there's going to be any short-term change to the unit economics of credit cards. It is a very complex product, that if you change 1 thing in interest rates, you should probably also change other things in interest-free installments.

And therefore, it poses for a very complex outcome. It is our view also that interest rate caps and credit cards will largely lead to lower levels of financial inclusion and lower levels of credit availability to the general public, which seems to be the opposite direction at what the Brazilian Central Bank and the current administration wants. So we any of those risks in the short term, but we are watching this carefully and participating in the debate.

**Jörg Friedemann:** And our next question comes from the line of Gustavo Schroden from Bradesco.

**Gustavo Schroden:** Congrats on the bottom line, strong bottom line. My question is about -- is indeed about the bottom line or the net income. I understand that you do not provide an official guidance, and I could hear your answer on the Tito's question. But my point here is that if we annualized, for example, the fourth quarter results, we could have a sense of a feeling about what would be the net income in 2023, right? So what I'm trying to understand here is that -- do you think that it would be reasonable to use the fourth quarter results as a prox for earnings quarter or earnings during the coming quarters in 2023 to have like as a starting point for us? Or do you see some change over the course that could change the dynamics that we saw in the fourth quarter?

**Guilherme Lago:** Gustavo, thanks so much for your question. It is -- it's a challenging question to address as we don't provide guidance. But I think 2023 provides for a mix of puts and takes, as I mentioned to Tito. And on average, we expect that we will continue to post relatively healthy levels of returns on equity and bottom line profitability in Brazil. Although we do expect to continue to see seasonality playing its role throughout 2023, as we have seen in 2022. If you take a look on Slide 11 of the presentation, you will see that our adjusted return on equity for the third quarter of 2022 was about 20%, that it went up to 40% in the fourth quarter. So we expect to continue to see those trends throughout 2023, but healthy levels of profitability, nevertheless. Two things I would highlight, however. As you look at Nu Mexico and Colombia, we continue to invest, and we will continue to invest in both of those countries as we have invested in Brazil. It has taken Brazil almost now 9 years, 10 years to get to today's profitability levels. We think that Mexico and Colombia will still take a few years, but we will be able to shorten that cycle there over the coming decade. However, as I mentioned in my opening remarks, Gustavo, we will not manage the company trying to optimize for next quarter or next 2 quarters ROE. We will optimize the results for the long term, yet the business model in Brazil shows very kind of vivid signs of profitability that we expect to continue to showcase to analysts and investors as we evolve.

**Gustavo Schroden:** Great. Great, Lago. And just a follow-up here, specifically on the ROE that you mentioned from the investments that you mentioned in Mexico and Colombia. We could see that your capital allocation in Brazil is about 1.7 billion out of 4.9 billion total or consolidated. My question here, what's your expectations of a capital allocation in other countries, such as Mexico and Colombia, I would say, in 1 or 2 years? Or maybe when do you think that Mexico and Colombia will be at the same maturity of Brazil. I'm just trying to understand here the capital allocation. Because my understanding is important, especially when you analyze the ROE. So I'm just trying to get a sense here, your capital allocation in -- and what would be the potential equity overall here or potential ROE on a consolidated basis?

**Guilherme Lago:** No, absolutely. Let me try to provide some guidance -- or not guidance, I'll provide some color on those questions. I would draw your attention to Page -- Slide 35 of our presentation. There, you can see our capital position. First and foremost, we do believe that our business plan in Brazil, Mexico and Colombia is full funded. We have plenty of capital, plenty of liquidity to support the growth, organic of Brazil, Mexico and Colombia over the coming years. We do appreciate, however, that Mexico and Colombia, can be more friendly intensive than is in Brazil, especially because of the working capital cycle of credit card in those countries and also because of how much interest earning is used in credit cards. So in Mexico and Colombia, the working capital cycle, I pay merchants in D+1, D+2, whereas I pay merchants in Brazil in D+27. And the percentage of the credit card books that is allocated to interest earning portfolio there is higher than it is in Brazil. For those 2 reasons, it is more funding intensive for us to operate in those 2 countries, and we will have to develop very soon our deposit base in Mexico and Colombia. And eventually, those will become countries in which they will also be more capital intensive with higher levels of return on assets there.

**Jörg Friedemann:** And our next question comes from the line of Marcelo Telles at Credit Suisse. Okay. So it seems that we are having problems with the line of Marcelo Telles. So let's move on to the next question. And the next question comes from the line Pedro Leduc at Itau.

**Pedro Leduc:** I wanted to get your thoughts a little bit on loan book growth and vis-a-vis provisions -- provision expenses. How you're seeing NPLs evolve, this quarter ticked up a bit. There's some seasonality here as well. Stage 3 formations have been high, coverage down. As I model 2023 here, I can definitely see the strength of NII offsetting a slower loan book growth, even though some growth, yes. But I struggle to see provision expenses coming down as a percentage of the loan book this year or near term. Does that make sense.

**Youssef Lahrech:** Yes. Pedro, this is Youssef. Thank you for the question. So taking your question in parts. So with respect to provision expense, I would point you to the appendix of our earnings presentation, Page 48, I believe, kind of breaks down the drivers of that. And as in past quarters, it's driven predominantly by growth, about 90% of it is driven by growth. Now when you look at credit quality and NPLs beyond what I provided in the earlier remarks, I think it's important to kind of distinguish the dynamic of NPL 15 to 90, the early indicator, short-term delinquencies from 90 plus. So 15 to 90 decreased sequentially. That's very much in line with seasonal patterns. 90-plus increase -- 90-plus as a stock metric, right, it accumulates for credit cards all the way up to a year after entering delinquency buckets. And so we've seen kind of the behavior on these 2 metrics pretty much following expectations. So going forward, it's hard for me to give you very precise guidance given that the pattern of delinquencies will depend on several factors. Part of that is the quantity and mix of our own originations. Part of that is more macro drivers, but -- what I can tell you is from a seasonal perspective, we expect, as usual, Q1 to be a seasonal peak in delinquencies following the trough in Q4 and then Q2, Q3 tend to be more normal. So that's what I expect the seasonal pattern to look.

**Pedro Leduc:** Sorry, if I may follow up, the outlook for provision expenses vis-a-vis loan book growth on a relative basis for 2023, exactly coming down gradually as the year goes? How are you guys seeing that?

**Youssef Lahrech:** Yes. Peter, I expect the -- what we've seen in past quarters and in Q4 to continue, which is provision expense will primarily be driven by the growth in the book, the bulk of it as you've seen on Page 4 is driving back growth. And again, it's the quantity of growth, but also the mix. So there's slightly different dynamics between credit cards, unsecured lending and we want to introduce security will change the mix a little bit as well over time.

**Jörg Friedemann:** And our next question comes from the line of Thiago Batista at UBS.

**Thiago Batista:** Congratulations on the results. I have a question about the amazing 40% ROE that you provided for the inoperation. If -- or do you know what would be the profitability if bank rules regarding capital were already implemented. So what would be the ROE with, let's say, the fully loaded of the capital requirement in Brazil. And as a follow-up, if the payroll loan business should be diluted or not for those ROE.

**Guilherme Lago:** Thiago, this is Lago. Thanks so much for your question. the ROE numbers should not change much in the new regulation because as of the end of 2022, we were already operating at an all-in basal already looking at the conglomerate between 9% and 10%. So it should be -- this should increase gradually from 2023 throughout 2025, but we are not operating with a much lower capital base than auto financial institutions would have been had they opted for the prior regulation. So we can certainly work with you after the call on trying to fine-tuning from 9.5% to 10.5%, but it should directionally not change much, the levels of returns that we are getting as of today, largely because we are massively overcapitalize in

Brazil. If you take a look at our financial statements in the very last page, you're going to see that the capital ratios of our financial institutions is above 20%. The financial -- the capital ratios of our payment institutions above 20% as well. So I think that's my attempt to address your first question. On your second question, no, I don't think that the payroll loans should be dilutive to our overall ROE. We are assuming that we're going to have levels of return on equity and return on tangible equity that are in line or higher with the return on equity that we posted in the fourth quarter of 2022. But I'm not sure if question those 2 things.

**Thiago Batista:** Very clear. Don't need.

**Jörg Friedemann:** And our next question comes from the line of Neha Agarwala from HSBC.

**Neha Agarwala:** Congratulations on the results. I'd like to talk about asset quality a bit. Could you give us a sense of what would be the asset quality, the NPL ratio in today? With the older methodology, if that's possible. And we've seen the early delinquencies come down during this quarter, which is a good sign. Does this mean you're feeling a bit more comfortable regarding asset quality? Or are there pockets of valuability that you continue to remain cautious about? And how do you see that impacting originations in the coming quarter? into 2022, you're very clear that you would probably like to maintain originations at a level of 5 billion every quarter. Should we expect that to be accelerated in 2023? And what do you see the risks regarding that acceleration?

**Youssef Lahrech:** So let me address first your question on the impact of the write-off methodology change we did at the end of the second quarter of last year on NPLs. As we've reported in past quarters, you should think about the impact of 90-plus NPL as a reduction of 220 basis points in the quarter. So it's pretty consistent with past quarters on that. Now with respect to NPL trends, as you pointed out, there's been question 215 to 90.
Some of that was seasonality. Some of that was the improvements we drove throughout the year in our underwriting particularly with respect to personal loans. As we mentioned in past quarters, we took a bit more of a cautious stance given the uncertainty throughout the year, and we've seen very positive results from that both in terms of the repricing we've done on the top line as well as NPLs. And so all in all, we feel pretty good about what we're seeing from a risk-return standpoint and that drove the sequential increase in originations, as Lego pointed out, of around 10% in personal loans itself. And so we're pretty encouraged by these trends. Again, it's hard for me to give you very precise guidance on a going forward basis, but we're -- so far, we're kind of comforted about what we're seeing on those.

**Neha Agarwala:** Sorry, I did not get the 90-day NPL ratio under the old methodology, what would the number be approximately? Do we have that?

**Youssef Lahrech:** Yes. Yes. So just to refresh on how the new methodology works. So -- and it affects primarily personal loans, whereby the timing of write-off moves from 360 days to 120 days. This is per IFRS principles on expectation of recovery. So when you're moving the write-offs, you're basically moving whatever was from 120 days to 360 days of delinquency to write off. So that tends to decrease 90-plus NPLs. And as I indicated, that decrease is around 220 basis points of decrease between -- moving from the old to the new methodology. And that's been consistent across quarters since we made that change. I don't know if that was clear.

**Neha Agarwala:** Okay. Okay. I was -- I just wanted to confirm about the 220 basis points difference. That's perfectly okay. And regarding asset quality, if you could just elaborate at this point, like it seems like things are getting better. Early increases are coming down. What worries you regarding asset quality? Is there any particular exposure that varies you? Or are you just cautious about the macro and trying to take it slow, keeping an eye on asset quality.

**Youssef Lahrech:** Yes. So on that, I mean, I think it's helpful to kind of take a step back and and rewind the clock a little bit to where we've come from through the pandemic period. So what we saw is starting in the second half of 2020, very low levels of delinquency abnormally low because consumers were saving money, there were government interventions and so forth. And for a bunch of reasons, we were an abnormally little delinquency territory. And it was very clear that the trend was going to be normalization and move upwards of delinquencies. I personally think that cycles largely played out, and we're now in a new part of the cycle. And so it's a little bit more of a higher uncertainty part of the cycle. And for us, the stance is to be cautious. We're not worried about particular pockets, but we're always prepared to adjust our underwriting based on anything we see in our monitoring, we've actually built our underwriting system to be able to iterate very dynamically, very quickly adjust if we see things play out different from our expectations in either direction. But I would say in the last 2 quarters and particularly in Q4, we've seen relative signs of stability, and we've seen NPLs come in fairly close to our expectations.

**Jörg Friedemann:** And our next question comes from the line of Jamie Friedman at SIG.

**Jamie Friedman:** Let me echo the congratulations. I just wanted to follow up on some of the previous questions, including those from Neha. So Lago, when you were walking through Slides 18 to 20, I thought that the suggestion, I don't want to exaggerate was that there could be an acceleration in originations. I realize you don't give guidance, but if we could -- everybody seems to be asking about the same thing. So I guess, what is it maybe, Lago or Youssef, that would make you more confident in opening the credit box? Because it seemed like in '22, just to kind of revisit what happened. The box was opened, then it was closed and it was reopened then it was closed. So anyway, is this -- where are we in the is it -- and what would make you more confident lending again?

**Guilherme Lago:** Jamie, thank you so much for the question. Let me try to address and then I'll also invite Youssef to complement. I think there are a few aspects that he addressed in his response to Neha that would help us here as well. But I think if you take a look at our presentation Slide 18, you're going to see that the growth that we have had is of no basically 2 as I mentioned in my opening remarks. Number 1 is credit card. Credit card has grown over the past year at a clip of about almost 70% year-on-year. And we continue to see very strong support in its growth throughout the first quarter of 2023. We believe that we're going to have another strong year at 2023 as a whole. In personal loans, as you can go to Slide 20 and now referring to some of the comments that Youssef have made earlier in the call, we were, in fact, a little bit cautious throughout 2022. We waited for a few quarters for delinquency to stabilize. We have seen delinquency stabilizing in the third quarter, but primarily in the fourth quarter. And if you take a look in the fourth quarter, we have already started to accelerate the originations of personal loans. It went from about BRL 4.6 billion to BRL 5 billion, so no more or less 10% growth. all else constant, by which I mean if we continue to see no losses and delinquencies playing out as per our expectations, you should expect to see ourselves growing a bit more the originations of personal loans throughout 2023. Now in 2023, you should also expect to see our launching secured personal loans, mostly public payroll loans, which should be an additional growth engine for our loan book throughout 2023 and 2024. But Youssef, I'm not sure if you have anything to add to Jamie's questions.

**Youssef Lahrech:** Yes. Jamie, just to add a couple of things to that in terms of how we think about the credit box and tightening or loosening. I mean, we operate always working backwards from booking every loan, every credit grants to be NPV positive throughout the life of the loan and to pass fairly strict conservative resilience requirements. So typically, we want every cohort of customers to be able to sustain a doubling of risk and still be above hurdle returns. And so that's what we work backwards from and we kind of observed in our monitoring, the latest behavior of our latest cohorts and kind of adjust accordingly. So it's unusual that we make there wholesale changes to our underwriting scorecard at any given point in time. It tends to be much more dynamic, much more gradual, much more tweaking around edges unless there are extraordinary events. So I think you're seeing a little bit of that in the fourth quarter with the increase in personal loan volume. And again, if performance continues to come in for our expectations, that trend should continue. The other thing to think about is beyond tightening, loosening of the credit box, what impacts our underwriting or our origination is the quantity of customers we have been able to us to underwrite, and in particular, the quantity of customers for whom we have a lot of data. So if they're already

PBA customers, primary banking account of customers, that gives us a lot more confidence and a lot more certainty in terms of being able to underwrite them for credit card or higher limits or for personal loans.

**Jörg Friedemann:** And our next question comes from the line of Eugene Simuni at MoffettNathanson.

**Eugene M. Simuni:** I actually wanted to ask a question on your 2023 priorities. Specifically, it was very helpful to hear, I think, David, in the beginning of the call, you got called out a couple, I think, strategic areas that you're looking to focus on in 2023, including secured loans, affluent segment. Obviously, Mexico and Korea. I wanted to ask from a product angle, some new product launches or maybe the products that are early in their development that you're focusing on for 2023? What's the top 2, 3 products there that we really should be watching this year?

**Jag Duggal:** This is Jag Duggal. I'm the Chief Product Officer at Nubank. And let me take a swing of your question and complement what David said and reinforce some elements of it. There are a series of launches that we are really happy with that either recently happened or are pending. First, I'll reinforce a couple that both David and Lago have mentioned. We are excited at Nubank year-by-year to go after the largest profit pools in the markets that we operate. So we started with credit card and moved over the last couple of years into unsecured lending. And now we're excited to move into secured lending, which is the third largest profit pool in the country, starting with a big focus on loan secured via public payroll. We also have investment backed loans, which we've recently launched and looking to build out our secured loan portfolio. So just reinforcing that point. You also mentioned and David mentioned the focus on building up a deposit base in Mexico and ultimately, in Colombia as well by opening up our bank account product, in both of those countries this year. That will be important in its own right as part of broadening our product offering for our customers and also to help drive funding for credit as those markets evolve. A few other products that I will mention. First, one that we launched a little while ago, but is now getting to the point where we're starting to make it available to more customers is our credit card product for small businesses, our credit card product, which again allows us to, a, address the credit card market; but b, also broaden our offering for small businesses and build out the other side of our network. And the other product that I would mention to you is the product we just announced publicly, I think it was yesterday, which is auto insurance. And again, it's just an example of us rounding out our product portfolio, particularly for customers who are in the middle and upper parts of the income spectrum. So that stands out. And we're also continuing to work on scaling up our Money Boxes, which we've talked a lot about, and our ultraviolet off-market credit card, which is showing a lot of promise in the last several months. So those are a few of the things that I would highlight for you.

**Jörg Friedemann:** And our next question comes from the line of Alexander Markgraff Bank.

**Alexander Markgraff:** Maybe first, just on the credit portfolio. I wanted to ask just on Slide 19, the 12% receivables mix of installments, obviously, kind of above market. Just curious as to where you're comfortable or kind of targeting that 12% to trend in the near term and long term.

**Guilherme Lago:** So on the growth in interest-earning receivables and credit cards. So this was the product of us basically launching a number of new features to -- for customers to be able to finance purchases, to finance payments, whether they be barcode payments and payments is just one of the latest features we've added, and we've seen a lot of success and strong adoption, really strong behavior from the future. So it wasn't really that we were working backwards from a particular number, but really seeing strong customer adoption of these features and very strong economics from those. Going forward, we're continuing to test and introduce new features. So hard for me again to give you specific guidance on where that number is going to land, but we've been pretty happy with the customer adoption and the performance of those features we've introduced on credit card financing.

**Alexander Markgraff:** Okay. That's helpful. And then maybe just 1 more kind of macro related questions. Just some kind of help or commentary on how you're thinking about potential TBV tailwinds and headwinds for '23. I'm not looking for guidance, but just more generally speaking, how should we think about some of the puts and takes for '23 on TBV?

**Guilherme Lago:** So look, I think if you look historically on TPV over the next -- over the last 3 years, the market has grown at 30% to 35% per year. Part of that was basically a recovery of TPB the TPV pre-COVID. I think now we are getting to a point in time in which market expects the aggregate TBV of the market to grow at anywhere close to low double-digit rates for 2023, 2024. Should be -- that should not be the growth rates that one should expect from our cards business. We should expect from our cards business to grow materially higher than that as we expect to continue to gain market share in both credit cards as well as prepaid/debit cards. We have been gaining market share over the past 2 years at a pace of about 150 to 250 bps per year. We should expect to continue gaining market share strongly over 2023 and 2024.

**Jörg Friedemann:** Thank you, Lago. Thank you, everyone. And this concludes today's call. On behalf of Nu Holdings and of our Investor Relations team, I want to thank you very much for your time participation in our earnings call today. We are very excited to continue growing and strengthening our position in Brazil, Mexico and Colombia. Over the coming days, we will be following up with the questions received by our platform. So please do not hesitate to reach out to our team if you want to make any further questions. Thank you, and have all a good night.

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**Operator:** The Nu Holdings conference call has now concluded. Thank you for attending today's presentation. You may now disconnect