
4Q21 FINANCIAL RESULTS

EARNINGS CALL TRANSCRIPT

January 14, 2022

MANAGEMENT DISCUSSION SECTION

Operator: Good morning, ladies and gentlemen. Welcome to JPMorgan Chase's Fourth Quarter and Full-Year 2021 Earnings Call. This call is being recorded. Your line will be muted for the duration of the call. We will now go live to the presentation. Please stand by.

At this time, I'd like to turn the call over to JPMorgan Chase's Chairman and CEO, Jamie Dimon; and Chief Financial Officer, Jeremy Barnum. Mr. Barnum, please go ahead.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Thank you, operator. Good morning, everyone. The presentation is available on our website and please refer to the disclaimer in the back. It's slightly longer this quarter to cover both our fourth quarter and full-year results as well as spend some time talking about the outlook for next year.

Starting with the fourth quarter on page 1, the firm reported net income of \$10.4 billion, EPS of \$3.33 and revenue of \$30.3 billion and delivered an ROTCE of 19%. These results included a \$1.8 billion net credit reserve release which I'll cover in more detail shortly. Adjusting for this, we delivered a 17% ROTCE this quarter.

Touching on a few highlights, as we suggested last quarter, we have started to see a pickup in loan growth, 8% year-on-year and 3% quarter-on-quarter ex-PPP, with a significant portion of this growth coming from AWM and Markets. But we're also seeing positive indicators in Card as well as increasing revolver utilization in C&I. And it was an exceptionally strong quarter for Investment Banking particularly M&A as well as another good quarter in AWM.

On page 2, we have some more detail on the fourth quarter. Revenue of \$30.3 billion was up 1% year-on-year. Net interest income was up 3% primarily driven by balance sheet growth partially offset by lower CIB Markets NII. And NIR was down 1% largely driven by normalization in CIB Markets and lower production revenue in Home Lending mostly offset by higher IB fees on strong advisory.

You'll notice that we've added some memo lines to this page this quarter to show NII and NIR excluding Markets as well as a third line of stand-alone Markets total revenue which, as we said before, is more consistent with the way we run the company. We'll be keeping this format going forward, and you'll see later that this is how we will talk about the outlook. If you look at things on this basis, the drivers are the same, but the numbers are a little different. NII excluding Markets is up 4%, NIR excluding Markets is up 3% and Markets is down 11% on normalization. Expenses of \$17.9 billion were up \$1.8 billion or 11%, largely on higher compensation, and credit costs were a net benefit of \$1.3 billion reflecting reserve releases.

Looking at the full year results on page 3, the firm reported net income of \$48.3 billion, EPS of \$15.36, and record revenue of \$125.3 billion. We delivered a return on tangible common equity of 23% or 18% excluding the reserve releases.

And then on to reserves on page 4. We released \$1.8 billion this quarter, reflecting a more balanced outlook due to the continued resilience in the macroeconomic environment. Our outlook remains constructive, but our reserve balances still account for various sources of uncertainty and potential downside as a result of the remaining abnormal features of the economic environment.

On to balance sheet and capital on page 5, we ended the quarter with a CET1 ratio of 13%, up slightly, and reflecting nearly \$5 billion of capital distributions to shareholders including \$1.9 billion of net repurchases.

With that let's go to our businesses, starting with Consumer & Community Banking on page 6. CCB reported net income of \$4.2 billion including reserve releases of \$1.6 billion. Revenue of \$12.3 billion was down 4% year-on-year and reflects lower production margins in home lending and higher acquisition costs in Card, partially offset by higher asset management fees in Consumer & Business Banking. Many of the key balance sheet drivers are in line with the prior quarter. Deposits were up 20% year-on-year and 4% sequentially, and client investment assets were up 22% year-on-year, about evenly split between market performance and flows. Combined credit and debit spend was up 27% versus the fourth quarter of 2019 with each quarter in 2021 showing sequential growth compared to 2019. Within that, travel and entertainment spend was up 13% versus 4Q 2019, though we have seen some softening in recent weeks contemporaneously with the Omicron wave.

Card outstandings were up 5% year-on-year but remained down 8% versus 4Q 2019. However, it's promising to see that while revolving balances bottomed in May of 2021, since then they have kept pace with 2019 growth rates. In Home Lending, loans were down 1% year-on-year but up 1% quarter-on-quarter as prepayments have slowed. And it was another strong quarter for originations, totaling \$42.2 billion, up 30% year-on-year. In fact, it was the highest fourth quarter since 2012, driven by increase in both purchase and refi volumes. In Auto, average

loans were up 7% year-on-year and up 1% quarter-on-quarter. After several strong quarters, the lack of vehicle supply resulted in a decline in originations to \$8.5 billion, down 23% year-on-year.

So overall, loans ex-PPP were up 2% year-on-year and sequentially driven by Card & Auto. And expenses of \$7.8 billion were up 10% year-on-year on higher compensation as well as continued investments in technology and marketing.

Next, the CIB on page 7. CIB reported net income of \$4.8 billion on revenue of \$11.5 billion for the fourth quarter. And for the full year, net income was \$21 billion on record revenue of \$52 billion. Investment Banking revenue of \$3.2 billion was up 28% versus the prior year and up 6% sequentially. IB fees were up 37% year-on-year, primarily driven by a strong performance in advisory, and we maintained our number one rank with a full year wallet share of 9.5%. In advisory, we were up 86%, and it was the third consecutive all-time record quarter benefiting from elevated M&A volumes that continued throughout 2021, specifically from mid-sized deals. Debt underwriting fees were up 14% driven by an active leverage loan market primarily linked to acquisition financing. And in equity underwriting, fees were up 12% primarily driven by our strong performance in IPOs.

Moving to Markets, total revenue was \$5.3 billion, down 11% against a record fourth quarter last year. Compared to 2019, we were up 7% driven by a strong performance in equities. Fixed income was down 16% year-on-year, reflecting a more difficult trading environment early in the quarter, especially in rates, as well as continued normalization from the favorable trading performance last year in currencies, emerging markets, credit and commodities.

Equity Markets were down 2% on \$2 billion of revenue as continued strength in Prime was more than offset by modest weakness in derivatives. For the full year, Equity's revenue was \$10.5 billion, up 22% and an all-time record.

It was a particularly strong year for both investment banking and markets, and looking ahead, we do expect some modest normalization of the wallet in 2022. However, for purposes of the first quarter in Investment Banking, the overall pipeline remains quite robust.

Payments revenue was \$1.8 billion, up 26% year-on-year or up 7% excluding net gains on equity investments. And the year-on-year growth was from higher fees and deposits, largely offset by deposit margin compression. Security services revenue of \$1.1 billion was flat year-on-year.

Expenses of \$5.8 billion were up 18% year-on-year predominantly due to higher compensation as well as volume-related and legal expenses. And credit costs were a net benefit of \$126 million driven by the reserve release I mentioned upfront.

Moving to Commercial Banking on page 8. Commercial Banking reported net income of \$1.3 billion and an ROE of 20%. Revenue of \$2.6 billion was up 6% year-on-year on record Investment Banking revenue driven by continued strength in M&A and acquisition-related financing.

Expenses of \$1.1 billion were up 11% year-on-year largely due to investments and higher volume- and revenue-related expenses. Deposits were up 8% sequentially on seasonality. Loans were down 1% year-on-year and up 2% sequentially excluding PPP. C&I loans were up 4% ex-PPP, primarily driven by higher revolver utilization and originations in middle markets and increased short-term financing in corporate client banking. CRE loans were up 1% with higher new loan originations offset by net payoff activity. And credit costs were a net benefit of \$89 million driven by reserve releases with net charge-offs of 2 basis points.

And then to complete our lines of business, AWM on page 9. Asset & Wealth Management reported net income of \$1.1 billion with a pre-tax margin of 34%. Revenue of \$4.5 billion was up 16% year-on-year as higher management fees and growth in deposits and loans were partially offset by deposit margin compression.

Expenses of \$3 billion were up 9% year-on-year, predominantly driven by higher performance-related compensation and distribution fees. For the quarter, net long-term inflows were \$34 billion and for the full year were positive across all channels, asset classes and regions totaling a record \$164 billion.

AUM of \$3.1 trillion and overall client assets of \$4.3 trillion, up 15% and 18% year-on-year respectively, were driven by strong net inflows and higher market levels.

And finally, loans were up 4% quarter-on-quarter with continued strength in custom lending, mortgages and securities-based lending, while deposits were up 15% sequentially.

Turning to Corporate on page 10. Corporate reported a net loss of \$1.1 billion. Revenue was a loss of \$545 million, down \$296 million year-on-year. NII was up \$160 million primarily on higher rates, mostly offset by continued deposit growth. And NIR was down \$456 million primarily due to lower net gains on legacy equity investments. Expenses of \$251 million were down \$110 million year-on-year.

So with that, as we close the books on 2021, we think it's important to take a step back and look at the performance over the last few years through the volatility of the COVID period and then pivot to discussing the 2022 and medium-term outlook.

So turning to page 11. What stands out is the stability of both revenues and returns through a very volatile period, especially when you strip out the reserve build and subsequent releases in 2020 and 2021.

If you look at the revenue drivers on the bottom left-hand side of the page, you see overall revenue growth with some significant diversification benefits. NII ex-Markets was down nearly 20% on the headwinds of lower rates and Card revolve that we've discussed throughout the year. This was partially offset by significant NIR growth ex-Markets, largely from higher IB fees and AWM management and performance fees. And we also saw strength across products and regions and CIB Markets as the extraordinary market environment in 2020 did not normalize as much as we expected in 2021. So, when you look across the company, we saw consistent, modest revenue growth as well as good performance in the areas that we control, notably staying in front of our clients to serve them well and managing our risks effectively, resulting in quite stable returns, once again proving the power of the JPMorgan Chase platform.

So, turning to the next page. The strong revenue performance and consistent returns have further bolstered our confidence in forging ahead with an investment strategy designed to ensure that we're prepared for the long term. On the left-hand side of the page, you can see the expense drivers from 2019 to 2021. The first part is structural, and while the growth of 2% is modest over the two-year period, that includes some COVID-related effects that we would see as temporary, including, for example, lower T&E spend and elevated employee attrition and we do expect some catchup in those effects as we look forward.

Then the middle bar is \$3.4 billion of growth in volume- and revenue-related expenses. Some significant portion of that is driven by increases in incentive compensation primarily from Investment Banking, Markets and Asset & Wealth Management, the major areas where we have seen exceptionally strong results and where changes in compensation are more closely linked to changes in performance. And remember, we've seen a lot of market appreciation and strong flows in AWM and CCB, so don't assume all of this is CIB as you look forward because there are some versions of the world where the markets and fee wallet goes one way and AWM goes the opposite way.

And then this bar also includes volume-related non-comp expenses such as brokerage and distribution fees, some of which are true expenses and some of which are bottom line neutral because they're offset with revenue gross-ups.

Then the last bar of \$1.7 billion, as previewed with you this time last year, is a result of our investment agenda which we've been executing largely according to our plans and consistent with our long-standing priorities. You can see the breakdown of the total investment spend on the right-hand side of the page. \$9.6 billion growing to \$11.3 billion across the categories that we've often discussed.

We're continuing to broaden our footprint and expand our distribution network. Then marketing, where the significant increase in spend as part of the reopening in the second half of last year resulted in a full-year spend comparable to 2019. And tech which we've broadened to include tech adjacent spend reflecting our recognition that tech means more than just software development and encompasses data and analytics, AI, as well as the physical aspects of modernization such as data centers.

And what's really powerful to note here is our ability to make these investments, which are quite significant in dollar terms and are designed to secure our future, while still delivering excellent current returns.

So, over the next few pages, let's double click into some of these investment areas to see what we're doing starting with examples of marketing and distribution on page 13.

We've expanded our reach across the US and are thrilled to be the first bank in all contiguous 48 states, an important milestone in our branch market expansion plans. We also continue to expand internationally, including 13 international markets as part of our commercial bank expansion, China and both our CIB and AWM businesses and in the UK with Chase UK where we've seen exciting progress since we launched in September although we expect this to be a multiyear journey before having a measurable impact on the firm overall.

We continue to hire bankers and advisors in Investment Banking, Private Banking and Wealth Management, really across all of the wholesale and consumer footprint where we believe we have opportunities to better penetrate geographies and sectors to continue to grow share. And as I just said, the point of our investment strategy is to secure the future of the company, so we're not making short-term claims about share outcome causality, but as you can see at the bottom of the page, our market shares are robust and growing broadly across the company.

Turning to page 14, in addition to all of our distribution-related investments, a critical foundational component of our strategy is technology where we spend over \$12 billion annually with about half of that being investments or as we sometimes call it "change the bank" spend.

It's important to understand what's in the investment category. About half of that is foundational and mandatory, which includes regulatory-related investments, modernization, and the retirement of technical debt, in addition to other key strategic initiatives to help us face the future. On the left-hand side, you can see some more detail around this. Modernization, which includes migration to the cloud as well as upgrading legacy infrastructure and architecture, data strategy that enables us to extract the value that exists in our proprietary dataset by cleaning it and staging it in the right ways and then deploying modern techniques against it, attracting and acquiring top talent with modern skills, and a product operating model which is obviously a popular buzzword these days.

But if you look through all that, it reflects the simple reality that the best products get delivered when developers and business owners are working together iteratively with end-to-end ownership. Underpinning all of this is our continued emphasis on cybersecurity to protect the firm and our clients and customers, as well as maintaining a sound control environment.

Moving to the right-hand side, the other half of the investment spend is to drive innovation across our businesses and with our client-facing products. We believe it's critical to identify and resolve customer pain points and improve the user experience, and we're attacking the problem with a combination of building, partnering, and buying.

And so a few examples of that. On the retail side, we've been able to digitalize existing product offerings with applications like Chase MyHome and launched our cloud-native digital bank with our recent Chase UK launch. On the wholesale side, we've continued to innovate on our Execute trading platform, commercialized blockchain through Onyx, and are building out real-time payments capabilities. In addition, our modernization allows us to more efficiently partner with or acquire more digitally centered companies, and you can see several examples of this on the page.

So taken together, our strategy and investments are critical to ensuring that we can compete with the most innovative players out there, whether we're the ones pushing the envelope of innovation or responding quickly to the creativity of our competitors, but doing so at scale.

With that, let's talk about the outlook and the year ahead starting on page 15. As you'll remember from Daniel's comments in December, the 17% that we have talked about as a medium-term ROTCE target is not realistic for 2022. We do expect to see some tailwinds to NII, including the benefit of the latest implieds, and the expectation that Card revolve rates will increase. But the headwinds likely exceed the tailwinds, as capital markets normalize off an elevated wallet and we continue to make additional investments, as well as the impact of inflationary pressures. However, despite these potential challenges for the near-term outlook, we do continue to believe in 17% ROTCE as our central case for the medium term, as rates continue to move higher and we realize business growth driven by our investments.

So let us try to give you more detail around forward-looking drivers that could be headwinds or tailwinds. So first, the rate curve. Our central case does not require a return to a 2.5% Fed funds target rate, as the current forward curve only prices in six 25 basis points hikes over the next three years. Assuming we realize the forward curve, from there, we see the outcomes as being relatively symmetric, with plus or minus 175 basis points of ROTCE impact as a reasonable range relative to our central case. And of course, there are obviously any number of rate paths to get there, which could produce different outcomes over the near term.

In this illustration, the downside assumes that rates stay relatively constant to current spot rates, whereas upside would be driven by a combination of a steeper yield curve and more hikes, together with a more favorable deposit repricing experience. And of course, what we are evaluating here is the impact of rates in isolation on NII. But for the performance of the company as a whole, credit matters a lot, and the reason why rates are higher will have an impact on that.

In Markets and banking, we feel good about the share we've taken, and there are reasons why the beginning of a rate-hiking cycle could be quite healthy for fixed income revenues in particular, at least in the sense that it might provide a partial offset to what we would otherwise expect in terms of post-COVID revenue normalization. In our central case, Markets and banking normalize somewhat in 2022 relative to their respective record years in 2020 and 2021 and resume modest growth thereafter. The downside case assumes a return to 2019 trendline levels, with sub-GDP growth rates, whereas the upside case assumes continued growth from current elevated levels.

As we've been discussing in Consumer, the big surprise as we emerge from the worst moments of the pandemic was the lower level of Card revolve, even as spend has started to return. In our central case, we assume healthy sales growth on the back of continued economic recovery and strong account acquisitions, and that, combined with relatively constant revolve rates, generates a strong recovery in revolving balances.

But there are those who worry about a permanent structural shift in consumer behavior, which could be a source of downside, and in that scenario, revolving balances could stay depressed relative to the long-term pre-pandemic averages, resulting in approximately 50 basis points of downside relative to our central case. Of course, there could be an upside case where revolving balances recover much faster, but we believe the risks here are more likely to be skewed to the downside.

And then let's touch on inflation for a second, which is obviously increasingly relevant. On balance, modest inflation that leads to higher rates is good for us. But under some scenarios, elevated inflationary pressures on expenses could more than offset the rates benefit, which could represent around 75 basis points of downside. And while it's not on the page, another key driver is capital, where even though we remain hopeful, our central case assumes no recalibration of the rules and that we will operate at a higher CET1, reflecting that we finish the year in the 4.5% G-SIB bucket, which equates to a 1% increase from G-SIB in the central case, although as a reminder, that does not become binding until 2024.

This is a good opportunity to point out that QE deposit growth and growth of the overall financial system, proxied by GDP growth of the factors in the original 2015 rule release, combined, represent two full G-SIB buckets. So in the absence of those, we would still be in the 3.5% bucket.

With that in mind, any recalibration could be a tailwind, and each 1% change in the CET1 level is worth about 150 basis points of ROTCE. And to be clear, for simplicity, we have assumed a normal credit environment in the analysis on the page. So when we take a step back, 17% remains our central case in the medium term, but over the next 1 to 2 years, we expect to earn modestly below that target.

In light of all that, let's talk about near-term guidance on page 16. We expect NII, excluding Markets, to be roughly \$50 billion in 2022, up approximately \$5.5 billion from 2021. As I mentioned upfront, this is a change relative to how we've previously guided, as we feel that the ups and downs of Markets NII can be a distraction when the vast majority of that variation is likely to be bottom-line neutral. Looking at the key drivers of that for 2022, there are a few major factors.

Rates, with the market implieds suggesting approximately three hikes later this year, and the recent steepening of the yield curve, we would expect to see about \$2.5 billion more NII from that effect. You can see at the bottom right, we've shown you the third quarter earnings at risk and an estimate of what we would expect to disclose in the 10-K, reflecting the year-end rate curve and changes in the portfolio composition. And as we note in our quarterly filings, there are lots of reasons to be careful when trying to use EAR to predict NII changes under real-world conditions. But at a high level, if you look at the numbers on the bottom right and what's happening to the yield curve recently, you should find the \$2.5 billion increase relatively intuitive.

Then, balance sheet growth and mix, where we are expecting higher spend and new originations to drive revolving balances back to 2019 levels, and also benefiting from securities deployment towards the end of 2021 and into 2022. And partially offsetting both of those factors is the roll-off of PPP. So, while we do expect NII to increase year-on-year, depending on the path of rates, it may take a couple of years to return to the full NII-generating capacity of the company.

Turning to page 17, as we said at the outset of this section, we are in for a couple of years of sub-target returns. Despite this, we are going to continue to invest, and we're not going to let temporary headwinds distract us from critical strategic ambitions. And so looking at adjusted expenses, we expect roughly \$77 billion in 2022, an increase of about \$6 billion year-on-year, or 8%.

And before we go into the breakdown, it's worth noting, while the year-on-year increase is eye catching, a meaningful portion of it is actually the annualization of post reopening trends from the second half of 2021 across various categories. So starting with the first bucket on the page which is the structural expense increase. As I alluded to earlier, we are seeing some catchup this year, both from the impact of inflation in our compensation expenses as well as higher non-comp expense with the resumption of T&E.

Then, volume- and revenue-related expenses. Remember, that this is both comp and non-comp. From a comp perspective, to the extent we are assuming some normalization of capital markets revenues, there should be a tailwind here. But keep in mind a couple of points. The normalization assumption for Markets and IB fees at this point is pretty modest, and our assumption for AUM is for modest increases. At the same time, we have the impact of volume growth on non-comp both in Wholesale and in Consumer which is offset by lower auto lease depreciation. And most importantly, we are adding another \$3.5 billion of investments which I would note includes the run rate impact of our acquisitions as well as some of the run rate effects that I just mentioned and reflects similar themes to the ones I discussed earlier.

As I wrap up, it's another good moment to stop and note how privileged we are to have the financial strength and the earnings-generating capacity to absorb these inflationary pressures while also making critical investments to secure the future of the company. So in closing, on page 18, we're happy with what we've been able to achieve over the last two years, not only the business results, some of which are highlighted here on the page, but also continuing to serve our customers, clients and communities and importantly executing on our strategic priorities.

As we look ahead, we will continue to invest and innovate to build and strengthen this franchise for the long-term. And while there may be headwinds in the near term as we continue to work through the consequences of the pandemic, we've never felt better about the company and our position in this very competitive dynamic landscape.

So with that, operator, please open the line for Q&A.

QUESTION AND ANSWER SECTION

Operator: Thank you. Everyone, please stand by. And our first question is coming from the line of Erika Najarian from UBS. Please proceed.

Erika Najarian

Analyst, UBS

Q

Hi. Good morning. Jeremy, my first question is for you, and it's on page 16. And it's a two-part question on this guidance. The first is could you help us size the timing and magnitude of deposit data that you presume in the \$50 billion number as well as the size of securities deployment?

And the second part to that question is clearly we're missing that white box, right, in terms of CIB Markets contribution. And if you could give us sort of rails to think about CIB Markets in light of your comments about more modest normalization versus the idea that this business is naturally liability sensitive.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Right. Okay. So three questions in there. Let me take them one at a time. So beta, at the end of the day the reprice experience is going to be a function of the competitive environment. But for the purposes of working through the guidance, I can tell you that we're assuming that this hiking cycle is going to be generally similar to the prior hiking cycle, all else equal. The environment is a little bit different in some important respects.

So, I think the system this time around is flushed with deposits, is flushed with liquidity in a way that it wasn't before, so that could at the margin make the reprice a little bit slower. On the other hand, the competitive environment is different especially with some of the neo bank entrants and that could go in the other direction. So it will be what it will be, but for the purposes of the guidance we're assuming a reprice experience that's similar to what we experienced in the prior cycle.

In terms of deployment, obviously deployment is going to be a situational decision, but if you're looking at the \$4 billion bar on page 16, securities deployment is a modest contributor to that \$4 billion number. The bulk of it is the loan growth narrative, particularly in Card.

And then in terms of Markets NII, the whole point of not guiding explicitly to Markets NII is to avoid getting distracted by the noise there, which can come from a lot of really kind of irrelevant places like interest rate hikes in Brazil and cash versus futures positions, which is the example I like to give. But big picture, if you need something for your model or whatever, there's a couple things we could suggest. So if you look at the supplement, we've actually been disclosing the Markets NII number for some time in the supplement. So you actually have a pretty decent time series of that number over time. If you regress that thing against the Fed funds rate, you'll actually see that there is a pretty clear negative correlation there, and so you can draw some conclusions from that.

But I just will point out that like in any given moment, relatively small changes to the mix of the Markets balance sheet can really change the NII quite significantly even in an environment of no policy rate changes. So it's sort of like a health warning against putting too much emphasis on that projection.

Erika Najarian

Analyst, UBS

Q

Very clear. Thank you. My second compound question is on capital. If you could give us an update, I know that January 1 is the adoption date for SA-CCR. If you could give us an estimate on the impact to CET1 and just to clarify that 17% medium-term ROTCE does take into account that your G-SIB surcharge is 4.5%?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. So let me do the second one first. So in short, yes. So as I said in the script, we are not assuming any recalibration in that 17% target. So that does mean 4.5% G-SIB in the equity component of that number. In terms of SA-CCR, the impact of SA-CCR adoption was about \$40 billion of standardized RWA, so I think if you do the math that's like 10 [sic] (30) basis points of CET1.

Erika Najarian

Analyst, UBS

Thank you.

Q

Operator: Our next question is coming from John McDonald from Autonomous Research. Please proceed.

John E. McDonald

Analyst, Autonomous Research

Hey, Jeremy, want to follow up on that. Maybe a broader discussion of how you're managing the capital constraint with SLR and the rising G-SIB. And what does it mean for balancing share buybacks, which obviously reduced this quarter, preferred issuance and other levers that you have?

Q

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Yeah. So as you know, John, in terms of share buybacks, that's at the bottom of our capital stack. So to the extent that we're seeing robust loan growth, other opportunities to invest in the business, as well as potential M&A opportunities, those are all going to come ahead of buybacks. And so I don't want to sort of guide on our buyback plans for next year which, under SCB, as you know, are really quite flexible as a function of the earnings generation outcomes, the capital build. But you can kind of draw your own conclusions in terms of the growth in the minimums that we see in the future as well as the loan growth as well as some of the investments that we're making. And frankly, we're kind of happy about that. We want the capital to be used that way rather than being used for buybacks.

A

John E. McDonald

Analyst, Autonomous Research

Okay. And then as the follow-up, maybe compound follow-up, the new CET1 target or way you expect to kind of run this year, if you could clarify that. And also, any color on the modest normalization of the FICC and equities wallet that you could flesh out?

Q

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Yeah. So in terms of the target, I said previously that 12% was not off the table, and that remains true. Depending on the outcome of the rule set, depending on the Basel III end game, depending on all the various components, you can see a world where 12% remains the minimum. But as you can see, as I said in the response to Erika a second ago, the 17% target assumes something closer to 13% as a function of the expected increases in G-SIB and some other factors, so we're kind of going to operate in that type of the range throughout the year with obviously the flexibility that we have.

A

Oh, and then, sorry, you also asked about normalization of markets and IB fees. I mean I would say if you'd asked me in the middle of the year, we were talking a little bit about thinking that a reversion to 2019 run rates was a thing that, like, could happen in theory. The way we feel right now, our central case is obviously that we will see some normalization from exceptionally strong performance both in IB fees and in Markets, but I think we're expecting that normalization to be a little bit less, like nowhere near all the way down to the 2019 levels, partially because the banking pipeline is really very robust. We feel good about the kind of organic growth in equities and some of the share gains there. And then in fixed income, we've already seen a decent amount of normalization there actually, and as the monetary policy environment evolves next year, that could actually create some tailwinds for that business.

John E. McDonald

Analyst, Autonomous Research

Got it. Thank you.

Q

Operator: Next up we have Glenn Schorr from Evercore ISI. Please go ahead.

Glenn Schorr

Analyst, Evercore ISI

Q

Hi. Thank you very much. I wonder if I could ask a little follow-up on the expense side. Slide 17 is great, tells a lot out. First, I'm curious on – if I overgeneralize and say 40% you've called structural comp normalization of T&E, 60% investment – and thank you, I just saw the further breakout in the bottom of the slide. But the question I have is how much of that 60%, the Card volume, the investments – has investments made? In other words, you made 11 either M&A deals or investments over the last, like, 15 months. How much of that is related to that coming through the P&L or straight up brand-new investments for 2022 entering for all those items that you've listed below?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Right. Okay. I think I get your question, Glenn. So number one, to the extent that we've done some M&A over the last 15 months, as you allude to, and that that has introduced some expenses into the run rate, the run rate impact of that is in the \$3.5 billion.

It's a relatively modest contribution. Off the top of my head I want to say it's probably like \$300 million or something like that. So could be a little bit more depending on some factors. So that's one point. The other point is that there are different types of investments here. So if you look at, for example, the change in the marketing expense and the marketing investments that come through marketing expense in Card, a lot of the decisioning of that actually happened as part of the reopening in the middle of the year. So that's actually already in the run rate, whereas other aspects of the investment agenda are obviously things that we're executing now, expanding in places, hiring people, hiring technologists to do things that we need to do. So hopefully, that answers your question.

Glenn Schorr

Analyst, Evercore ISI

Q

Think so. And maybe if I can just ask a very general question. I think people get normalizing capital market and a higher investment spend and that has got you falling short of the 17% over time target. The question – the simple question I have is, is the fact that you mentioned multiyear shortfall, is that a function of timing of NII going full run rate with the timing of capital markets fall off and the higher denominator as you just mentioned with John's question?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

So, Glenn, your line is breaking up a tiny bit, but I think I basically hear your question, and I think the simple answer is yes. So in other words, we're sort of saying that as the environment continues to normalize in a variety of ways, so that includes policy rate normalization, rate curve normalization, as well as run rate normalization in Markets revenues with the sort of some background expectation of growth there, Markets and Investment Banking revenues, with a background expectation of growth. And when all of that plays out, and is finished playing out, we believe we should be back to 17%, all else equal. So you can kind of see it's not that long if you know what I mean in terms of like what the current forwards imply about when you get back to a sort of more normalized policy rate environment.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

And, Glenn, I'd just like to add, we don't really know about 2023, and I'd be very cautious in that. Plus, I expect more interest rates increases in the implied curve. And obviously, the world's very competitive. I also want to point out that a 17% return on tangible equity, if we can get that for the rest of our lives, would be exceptional. Reconfirming that that's kind of what we think we can do is pretty good.

Glenn Schorr

Analyst, Evercore ISI

A

Thank you for all that.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

By the way, I would take 15% on tangible equity for the rest of my life if I can guarantee that.

Operator: Next up we have a question from Ken Usdin from Jefferies. Your line is open. Please proceed.

Ken Usdin

Analyst, Jefferies LLC

Q

Thanks. Hey. Good morning. I wanted to ask you just a couple more questions on loans. You mentioned that you're starting to see some better activity. I wanted to just ask if you can kind of just flesh out what you're seeing across corporate lending, commercial lending, noticing that the wholesale-related commitments were actually down 3% sequentially. So can you kind of just talk us through what clients are saying and doing? And just how strong can that rebound on the corporate and commercial side could we see as we go forward?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Sure. Yeah. So in terms of C&I loan growth, as I said in the script, we are seeing an uptick in revolver utilization rates, especially in the commercial bank. And it remains sort of skewed to the smaller clients, but we are starting to see an uptick in that, actually even in the bigger clients. So that's, I guess, an encouraging sign.

One of the things I've heard from the folks who run those businesses is that one driver of that is CEOs and management teams who have been burned by low inventory levels, as a result of the supply chain problems wanting to run higher inventories. And that is maybe driving higher utilization there, which as a result, while it would, I guess, theoretically be a relatively permanent increase in utilization, is not a thing that you can sort of project forward in terms of compounding the growth.

But at the same time, we're also hearing really quite a bit of confidence in the C-suites, and all else equal, that should be positive for C&I loan growth. But clearly, the levels there are modest still in a world where capital markets have been exceptionally receptive to investment grade issuance, in particular, and more recently to high yield issuance throughout the sort of pandemic period. And so people are well funded from capital markets issuance.

Ken Usdin

Analyst, Jefferies LLC

Q

Okay. Second question is just on fees. There are couple of zigs and zags in mortgage banking, security servicing, which were both down a little bit more than expected and Card did get a little bit better. Can you just kind of give us a little bit of color on the drivers of each of those, please? Thank you.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah, sure. So there's a lot of stuff in there. So let me do mortgage and Card. So in mortgage, you'll see that if you sort of try to do a margin calculation by taking the production revenue and dividing it and so on, you do see an apparently significant drop in margin there. So there's a few drivers of that. One is the margins were actually slightly elevated in the prior quarter as a result of the timing of the flow-through of the loan-specific pricing adjustments. So that's one factor.

In addition, you actually – we did – despite the fact that it was an exceptionally strong overall quarter for originations and for funded loans, as we started to see higher rates towards the end of the quarter, we did see the dynamic that you would expect in terms of drop in saleable new lock volume, and so on. So that's little bit of a factor. And then there's this sort of the normal organic dynamics where you tend to see margin compression in mortgage with rates selling off a little bit.

So you have a bunch of factors driving a slightly lower number there, but the overall mortgage environment is quite healthy. And obviously, with higher rates, we expect things to be weaker next year. We're still predicting a \$3 trillion mortgage market next year, which by historical standards is very robust. So that's that part.

And then in Card, I imagine that you're looking at the Card income line, where we had a significant drop last quarter, and this quarter the number is also sort of relatively depressed relative to what we had two quarters ago when it was quite high. So you'll remember that for Card income, we had a sort of one-off item last quarter depressing the number. This quarter we have another sort of one-offish type item, which is the impact of the Southwest co-brand renegotiation, which is public. So that's contributing to the Card income line and to the revenue rate a little bit.

But it's important to note that in the background of all this is the impact of the customer acquisition amortization contra revenue expense, which as you know amortizes over 12 months. And so as I mentioned earlier, as part of the big sort of increase in customer engagement, as

part of the re-opening in the middle of the year, we ramped that up quite significantly, 100,000 point offers in the market, and stuff like that. And so that's coming through the number.

So as a result, when you look at the sort of full-year revenue rate for Card of around 10%, we actually see that as a reasonable central case for next year, with the sort of elevated marketing and customer acquisition amortization being offset, obviously, by expected growth in NII with the revolve narrative that we've laid out.

While we wait for the next question – yeah, sorry, no, go ahead, go ahead.

Operator: So that question is from Jim Mitchell coming from Seaport Research.

Jim Mitchell

Analyst, Seaport Research Partners

Q

Hey. Good morning. Just – you guys are doubling the investment spend, so clearly seeing success in the prior efforts. So can you just give us a little bit big picture discussion on what you're seeing from a return on investment standpoint and what timeframe, because I think you kind of alluded to 2023 still being a little bit subpar on return. So does that mean the payback is a little longer and you still expect significant growth in investment spend in 2023?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah, sure. So I mean at some level, the question that you're asking is this perennial question of how can we be sure that the investments that we're making are paying back and on what timeline and how do we measure that. And it's interesting. We were just talking about card marketing. I think of that as a continuum. You have a continuum of investments that start with card marketing where every dollar that we put into card marketing investment is part of a very sophisticated, extremely data-driven, highly measurable set of decisioning to ensure that all of those are accretive and when we have sort of measurable outcomes in the short term. So there's a lot of signs there, and it's pretty precise, and you get feedback pretty quickly.

At the other end of the continuum is tech modernization-type stuff, which is a big part of the theme right now, and those things are things that are just – we obviously need to do them. If we don't do them, we'll be clunky and inefficient and hamstrung in the future when we're trying to compete. And it's impossible to prove, in some narrow financial sense, that there's a tangible return payback from that, but we know that they're absolutely mandatory.

So, when we think a little bit about the revenue outlook in our kind of normalized run rate, we are certainly assuming that many of the investments that we're making now and that we've made over the last couple years will produce the revenues that we expect in that time horizon. But a lot of what we're doing is not of that nature, and in some sense, those are actually the most important investments because they're the hardest decisions to make.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

And some are very basic. Opening 400 branches is \$800 million a year, obviously the payback comes over time. Adding thousands of salespeople, kind of know pretty much what the payback is, but obviously it comes over time. And so it's a whole mix. And just think about it as expenses that you should expect will go up a little bit in 2023.

Jim Mitchell

Analyst, Seaport Research Partners

Q

Right. That's the top one. Then just a follow-up on just on the NII, I think futures markets are now pricing in four hikes. I think you have three in your assumptions. If we do get four hikes starting in March, is that a material change to the NII outlook for this year in your models?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. So if you look at the bottom left-hand side of page 16, footnote 3, in extremely small print, you will notice that the implied curve that we use is from January 5th. So you can take that curve, and whatever the current curve is and use the table on the bottom right and add a long list of caveats that I won't give you and draw your own conclusions. But, I mean, it should be a modest increase, modest additional tailwind, very modest.

Jim Mitchell

Analyst, Seaport Research Partners

Okay. Thanks.

Q

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

While we wait for the next question, I said something inaccurate before. I realize I wasn't that confident when I said it. The \$40 billion standardized RWA increase in SA-CCR, if you do the math, is obviously not 10 basis points of CET1, it's 30 basis points of CET1. So, correction coming through there.

A

Operator: Next, we have a question from Betsy Graseck from Morgan Stanley.

Betsy L. Graseck

Analyst, Morgan Stanley & Co. LLC

Hi. Good morning.

Q

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Hi, Betsy.

A

Betsy L. Graseck

Analyst, Morgan Stanley & Co. LLC

Okay. So a couple of questions, first, on the NII outlook, could you give us a sense as to what's embedded in that with regard to your thoughts on how balance sheet shrinkage at the Fed, right, the QT, is going to impact the liquidity pool, and then how much of that liquidity pool you currently are assuming is going to get redeployed into the more duration in your forward look?

Q

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Yeah. Sure. So, I mean, I forgot exactly what the market's assuming about the start of QT at this point, QT2 as they're now calling it. But from last time I looked closely, there was expected to be a pretty long lag between sort of the end of the hiking cycle and the beginning of QT2. Maybe people are now starting to accelerate that. But in any case, the important point is that as a result of the acceleration of tapering, the amount of balance sheet growth is ending pretty quickly, and therefore, the impact on system-wide deposit growth should be quite modest this year.

A

And our assumptions are consistent with that. In other words, we're not assuming lots of deposit growth next year, because, ultimately, that's going to be primarily as a function of the Fed balance sheet size. But obviously, we are still assuming modest growth rather than reduction as a function of QT, if you know what I'm saying.

And so then in terms of deployment, you can see in the supplement that we already did some deployment this quarter. It was primarily in the front of the curve. So we're still being quite cautious about really buying duration. But – and if you look at, again, page 16, you notice that we call out securities deployment as a modest driver of that \$4 billion increase that's tagged as balance sheet growth and mix. So it's reasonable to assume that we might do a little bit of duration buying if the rate curve develops as the forwards predict. But it shouldn't be too dramatic.

Betsy L. Graseck

Analyst, Morgan Stanley & Co. LLC

Okay. Thanks. And then my second question is just on the investments, the \$3.5 billion that you've got incremental here. And I assume that this is built up bottoms up from business unit leaders' requests to do everything that you mentioned in the call. And my question here is, what percentage roughly, like just gut numbers, but what percentage are you giving them this year? In other words, did they ask for 7%, you're giving them 3.5%, and we should expect another uptick materially in 2023? I know, Jamie, you mentioned \$77 billion is the run rate that we

Q

should grow from next year. But I'm kind of asking a slightly different question, which is how much of what they need are you giving them this year? And a subset question is, at what point does this fully fund your ability to get into the cloud for US consumer?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Okay. Can I answer that question. We do not sit at a table and tell people, you can only do X. We sit at a table and ask people what do you want to do. So think of it as it's 100% within our capability. Because some things we just simply can't do. You can't attack 14 funds at the same time or something like that. That's number one. So we want to make those kinds of investments, each one goes through kind of rigorous process as is necessary. Some of them are table stakes.

I do remember sitting around the table one day and people talking about digital account opening and doing NPV. I was like just don't do an NPV, just get it done. It's like – that's just serving your client properly and stuff like that. And like I said a lot, I mean, Jeremy mentioned, it's 400 branches in the United States, it's 13 sites overseas, it's more countries, it's more products, it's all the things we should be doing that you'd want to do if you owned 100% of the company. So it may not be what you would do if you have to meet NII next quarter of X, Y, or Z or something like that, so...

And the second part of your question wasn't that. It was – oh, the consumer digital and stuff like that. We're not going to start giving you real numbers and all that. But that is a march. That's a journey and it's hard, and we want to get there as soon as possible. Pieces and pockets have already gotten there. So there's certain applications and certain datasets already running on the private cloud, some are in the public cloud, some parts of the company ahead of other parts of the company. That's a lot of work. And there is, you guys have pointed out, a little bit of what I call bubble expense in there. We're not going to disclose that either because then we just got to start disclosing 84 other bubble expenses. Those are our responsibility, and to the extent we have opportunities to do more, we will do more because we have extraordinary capability.

And I think, I just also want to point out, Jeremy mentioned the assumptions around capital. I mean, SLR, G-SIFI, and multiple of the other calcs should be recalibrated, okay? Even the regulators say these things should be recalibrated for the global size, the global economy, would you put capital against treasuries and capital against Fed deposits, and let's see what happens. So on that, we're kind of conservative, we're not really expecting a lot of relief. But even some of the folks yesterday that were being questioned, Fed prospects were being questioned about SLR and acknowledged that there are issues around SLR that are not good for the markets.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

And, Betsy, the only thing I want to add to that, which I was going to basically say the same thing, this whole like ask for 10 and hope to get 5, I mean, we would – we aim to manage the company much better than that. So I certainly don't have that type of authority. That's not the way it works. And I think the important point is that what actually happens is a ton of scrutiny of the investment agenda two or three levels down in the organization with a lot of discipline there. So, that's where the conversations happen about whether this makes sense to do now, whether it's the right priority now, whether we have the capacity to do it, whether in the cases where the returns are measurable, whether it's producing the right returns, and that's really part of how we operate the company and part of the discipline of the day-to-day.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

If I can give you another example, if we can spend \$2 billion more and get to the cloud tomorrow, I would do that in a second.

Betsy L. Graseck

Analyst, Morgan Stanley & Co. LLC

Q

But the step function that we see this year, I mean, given the pace of competition and the impact of everything that's going on, it's possible we could see this type of step function again?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

It's possible. But if it happens, it will be for a good reason.

Betsy L. Graseck
Analyst, Morgan Stanley & Co. LLC

Q

Right.

Jamie Dimon
Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

I've written about the competition. There's global competition, there's nonbank competition, there's direct private lending competition, there's Jane Street competition, there's Citadel competition, there's fintech competition, there's PayPal competition, there's Stripe competition. It's a lot of competition, and we intend to win, and sometimes that means you got to spend a few bucks.

Betsy L. Graseck
Analyst, Morgan Stanley & Co. LLC

Q

Yeah. All right. I got it. Thanks.

Jamie Dimon
Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

And I want to emphasize, too, embedded upon that, as we've always said, we want to be very, very competitive in pay. There's \$1 billion in merit increase. There's a lot more compensation for our top bankers and traders and managers who I should say, by the way, did an extraordinary job in the last couple years delivering this stuff. We will be competitive in pay. If that squeezes margins a little bit for shareholders, so be it.

Operator: Next up we have Steve Chubak from Wolfe Research.

Steven Chubak
Analyst, Wolfe Research LLC

Q

Hey, good morning. So want to start off with a question on capital. Quarles highlighted in his swan song speech the potential for Basel IV implementation increasing capital requirements as much as 20% for select banks. While we haven't seen a formal proposal from the Fed, I was just hoping you could provide just some preliminary thoughts how you're handicapping the risk of higher RWA inflation ahead of Basel IV adoption, and to what extent is that contemplated in the updated ROTE guidance?

Jeremy Barnum
Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah, so, Steve...

Jamie Dimon
Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Don't give too much...There's like eighteen different things -

Jeremy Barnum
Chief Financial Officer, JPMorgan Chase & Co.

A

This is fine. It's a perfectly reasonable question. So, okay. So, here we go. So when you look at the current state of the so-called Basel III end game or Basel IV proposals, and you look at the RWA components of them in isolation, you've got the change in the credit conversion factors, which always equals a tailwind; you've got the fundamental review of the trading book, which is quite complicated and is going to depend institution by institution, but is potentially for some folks a headwind; and then you've got the introduction of operational risk capital into standardized RWA.

And if you look at sort of central case estimates of all those things in a simple way, you will conclude that there's a bunch of RWA inflation. But - couple things. First, this all takes place in the context of the global regulatory community, or at least in the US, saying that the system has enough capital. It doesn't actually need more capital. And it's important to realize...

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

...which by the way, anyone who does any real analysis at all would come to that conclusion.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. And so it's just important to realize, Steve, that as you know, obviously, there are additional tools. So the most important one of which is how the standardized output floors interact with the introduction of operational risk capital and to standardize RWA, and then in turn how that interacts potentially with the Collins floor, as well as more generally the fact that there are opportunities to tweak potential double counting and the stress capital buffer against FRTB and so on and so forth.

So the point of all this is that there are more levers and tools here than just the overall RWA inflation, and the way we see the world, we don't expect the Basel III end game in and of itself to increase the dollars of capital that we need to carry as a company.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

And you were conservative in saying it's the 4.5% G-SIB.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Exactly. And we are allowing the G-SIFI increases to flow through to the medium term ROTCE assumptions.

Steven Chubak

Analyst, Wolfe Research LLC

Q

Thanks for clarifying that and for not punting on the topic of Basel IV. Just for my follow-up here...

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

...can I just point out, we will very very aggressively manage those things when we know the actual numbers. Like, very aggressively manage them.

Steven Chubak

Analyst, Wolfe Research LLC

Q

Fair enough, Jamie. You certainly have the track record that supports that. Just for my follow-up on card payment normalization, how are you thinking about the trajectory for card payment rates? And just maybe to speak to your confidence level that we see card payment rates return to pre-pandemic levels just given the emerging threats from BNPL that you cited and still elevated personal savings rates?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. Sure. So I still, to be honest, get a little bit confused between payment rates and revolve rates and all these various ratios, but I think it's a little bit simpler if you just take a step back. You look at the revolve rate and you look at the overall level of revolving balances and what we sort of expect for that.

So there's a few things to note. So the revolve rate, having dropped quite a bit has more or less stabilized. There's a little bit of a blip in the fourth quarter as a function of holiday spend and maybe some Omicron stuff, but broadly, it's stabilized. In the meantime, the growth in overall card loans has now, for several quarters in a row, produced modest growth in revolving card balances. And our central case for next year basically assumes that that trend stays in place.

So what's important about that is that we're not assuming some sort of aggressive return of the revolving rate to the pre-pandemic levels. We're simply assuming that it stabilizes and that overall card loan growth, therefore, contributes its fair share of revolving loan growth. And so

the kind of central case that we put on the page for the balance sheet contribution to NII growth in 2022 has, very roughly speaking, revolving balances getting back to the pre-pandemic levels by the end of 2022, roughly.

Steven Chubak
Analyst, Wolfe Research LLC

Q

Thank you for taking my question.

Jeremy Barnum
Chief Financial Officer, JPMorgan Chase & Co.

A

And sorry, Steve. I think you had another – was there another part of that question that I forgot?

Steven Chubak
Analyst, Wolfe Research LLC

Q

No. No. That's sufficient. That's perfect.

Jeremy Barnum
Chief Financial Officer, JPMorgan Chase & Co.

A

Okay. Great.

Steven Chubak
Analyst, Wolfe Research LLC

Q

Thanks so much, Jeremy.

Operator: Next, we have Matt O'Connor from Deutsche Bank.

Matt O'Connor
Analyst, Deutsche Bank Securities, Inc.

Q

Good morning. As we think about the 17% medium-term target, can you help frame what you think or what's being assumed on the efficiency ratio and then maybe on credit cost as well, please?

Jeremy Barnum
Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. Sure. So in terms of credit cost, as I said, we're assuming a roughly normal credit environment at that point. So that would mean card charge-off rates back into the sort of low to mid 3s type of thing as we said, pre-pandemic, we were assuming we would get to, especially as we underwrite some slightly higher loss vintages over time.

Jamie Dimon
Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

And building reserves as the loan books grow.

Jeremy Barnum
Chief Financial Officer, JPMorgan Chase & Co.

A

Importantly. Yeah. Exactly. So I mean I would just broadly describe and consistently with the way we're describing it, which is kind of medium-term guidance in a normalized environment, that the charge-off environment should, in turn, be normal. So that's that.

And then you're kind of asking me I guess about the overhead ratio a little bit. So personally, I kind of don't love that measure. I think it's more of an output than an input. And more often than not, it's driven by revenues not expenses. And more often than not, in the short-term, the revenue number that's swinging is a function of the rate curve. So essentially, the overhead ratio just becomes a proxy for the Fed funds rate, which makes it not a great management tool for the company.

But having said that, in the assumptions that we're using to build up that 17% rate, we do get back to something like a 55% overhead ratio. But as Jamie said before, if that number has to go up to deliver the right returns in the long term, it will. Like, we don't consider it to be a constraint.

Matt O'Connor

Analyst, Deutsche Bank Securities, Inc.

Q

Okay. Then, obviously, the math implies, to get back to 55% you have kind of outsized operating levers for a few years, right? I mean because I think the efficiency ratio goes the wrong way again in 2022, so a couple years of pretty big operating leverage, right?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

You've got to do your own models, okay?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. I think for me, in a world where there are inflationary pressures, there's a lot of post-pandemic effects in the numbers, and we have some critical investments to make. The notion of operating leverage at the level of the company's overall numbers, for me becomes just not terribly meaningful. I'm not sort of criticizing your question. I understand why you're asking, but it's just kind of not the way we think about it.

Matt O'Connor

Analyst, Deutsche Bank Securities, Inc.

Q

Okay. And I was just curious about, Jamie, you're mentioning you still think rates will go up more than expected. Obviously, expectations have moved up quite a bit. And I'm just wondering kind of what's basing that opinion. And on a side bar, do you think the long end will go up more? Or if it hasn't gone up yet, why will it from here? Thanks.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Yeah. Well, firstly, we prepare for all eventualities here. We're not kind of guessing at one. But the consumer is very strong. And with all respect to the fact there are people suffering still and COVID and all that, the fact is in spite of Omicron, in spite of supply chains, 2021 was one of the best growth years ever. And 2022 looks like it could easily be 3.5% or 4% which is actually pretty good. The consumer has \$2 trillion more in their balance sheet. Their home prices are up, asset prices are up, jobs are plentiful, wages are going up which is good for them. We're not against that and sharing the wealth, a little bit of America's recovery, with everybody.

So the consumer is in really good shape. They're spending, I mean Jeremy took you through the numbers, 25% more than spending pre-COVID, 25% more. And that number drives all the order books for everybody else, whether it's goods and services, and obviously there's bouncing around between goods and services and all that kind of stuff like that. Businesses equally are in very good shape with cash and capability and confidence levels high. What are they seeing? They're seeing their order books go up. More cars, more motors, more patios, more home improvements, more homes, more demand. We have a shortage of homes in America.

So you see the table is set pretty well for the growth with obviously the negative being inflation and how that gets navigated and stuff like that. So my view is there's pretty good chance there will be more than 4. Okay? It could be 6 or 7. I mean, I grew up in a world where you pole vault the rates up and just raise interest rates 200 basis points on a Saturday night. And this whole notion that somehow, it's going to be sweet and gentle and no one's ever going to be surprised, I think, is a mistake. That does not mean we won't have growth. It does not mean unemployment won't stay in a good position and stuff like that, so.

And the other fact is it may very well be possible that they're long rates, and I'm a little surprised how low they've stayed but that the long rates may react more to the actual QE and then QT. And so at one point, the Fed's going to be letting run off \$100 billion or whatever number a month they're going to come up with and there you may see loan rates react a little bit to that. Particularly what I just said about growth and demand for capital and stuff like that, that also tends to drive 10-year bond rates and all that. So all things being equal, if you look at the company, and it's a very important, we have huge firepower to grow, to expand, to make loans, to extend duration.

And you look at capital and liquidity. I just want to point out, \$1.7 trillion. These numbers, I've never seen a bank with them, so. And you look at percentages, not just gross amounts, \$1.7 trillion of cash and marketable securities, \$1 trillion of loans. Okay? There's \$500 billion or \$600 billion of those cash or marketable securities that could be deployed in higher-yielding assets or loans when and if the time comes depending

on all these capital constraints and stuff like that we have to deal with. And those are extraordinary numbers. There's \$2.5 trillion of deposits. And we don't like taking risky deposits, so those are – they may go down a little bit in QT and all that.

But look at how this balance sheet's funded. I've never seen a bank balance sheet like that. And think of that as kind of firepower over time as you navigate through the world. And so we're in pretty good shape. And if I could own 100% of the company, it'd be private.

Matt O'Connor

Analyst, Deutsche Bank Securities, Inc.

Q

Can I just sneak in, based on all that? I was thinking like the expense pressure or increase that we're seeing at JPMorgan or expect to see in 2022, do you think this is indicative of the broader market as you talk to leaders outside of banks and they see the pipeline of volumes? Do you think there's going to be material surprises on expenses for the broader market? Thank you. And then I'll stop here.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Yeah. I would expect that. Because almost every CEO is talking about wages and certain inflation and stuff like that. But I just – I don't want to be a CEO – please don't say I'm complaining about wages. I think wages going up is a good thing for the people who have their wages going up. And businesses simply have to deal with changes in prices. So if commodity prices go up and down, mozzarella goes up and down, wages go up and down, CEOs shouldn't be crybabies about it. They should just deal with it. The job is to serve your client as best you can with all the other factors out there. And so I'm not opposed to it. But I do think you'll see more people seeing wage pressure, et cetera and some have more ability to offset than others. It hasn't stopped us from doing anything. Zero. None. Nada. We're not cutting back on growth plans or bankers or markets or countries because there's some wage inflation.

Operator: Next, we have a question from Ebrahim Poonawala from Bank of America.

Ebrahim Poonawala

Analyst, BofA Securities, Inc.

Q

Good morning. Just two very quick follow-ups. One, Jeremy, in terms of capital deployment, just talk to us about inorganic growth. Is there any likelihood that you look at any larger M&A transactions, use your currency at any point this year? And should we see a slowdown or a letup in the pace of inorganic fintech investments that you've been on over the last year? If you could address those two?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Can I just...

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Go ahead.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

So the large transactions, like over billions, unlikely. But we'll always look. We're always open-minded. We're looking all over the place for things that fit in and stuff like that. And then the pace of fintech investment and stuff like that, that won't change at all.

Ebrahim Poonawala

Analyst, BofA Securities, Inc.

Q

That's good. Can you...

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

My version of that, which is consistent with Jamie's, is that we continue to be interested in looking at M&A, and we're doing that. Obviously, yeah, very large deals aren't realistic. And the fintech investment part is definitely part of the stuff that we're looking at when we look at deals.

Ebrahim Poonawala

Analyst, BofA Securities, Inc.

Q

That's helpful. And just double-clicking on something, Jamie, that you mentioned. You've talked about Venmo, Square, banks leaving the ground open for fintechs over the last few years. Just talk to us, to the extent you can, how these investments, clearly the market is focused on near-term expenses, ROTCE pressures, but talk to us two years or three years fast-forward, how do you feel about JPM as a franchise competing with big tech, fintech head-to-head?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Great. But it's battle engaged. I mean some of these people do a very good job. I think there's certain things we or banks should have done, so we should be a little self-critical, but we have the capability, the economies of scale and all these things. What we're not going to do is hamstringing ourselves to meet an overhead target. That's just not even on the cards, so. And we have assets and strength. Look, competition is very bright. I mean they're bobbing and weaving. They're not changing, and they're not static. And I think sometimes people act like they're static, but they're not static, so. But if we do a good job like today on Consumer, I'm sure that's all you Chase customers, free trading, lot of ATMs. You've got better and better service and more navigation bars, more offers, more travel, more rewards, more – and you've got more of that coming. And we've gotten friendlier in overdraft. We've gotten – and that's just one business. That's true for every single business.

So I can look at it the other way around, too. If you're competing with JPMorgan, that could be pretty tough competition. Like take Chase UK. We've been very, very clear. And that costs us money, and a lot of you want payback tomorrow and stuff like that, we're not ready to disclose those numbers, but we are there for the long run. We're going to be adding products and services and countries for the rest of our lives. Okay? So I doubt, over the long run, we'll fail. We may not become the best digital bank in the UK or somewhere in the short run.

Ebrahim Poonawala

Analyst, BofA Securities, Inc.

Q

That's helpful. Thank you.

Operator: Next, we have Mike Mayo from Wells Fargo Securities.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

Hi. Jamie, I hear you're ready to do an LBO on JPMorgan, that you're so confident.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Yeah, I think you'd help me raise the equity capital.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

Well, that's what I'm trying to figure out here. It's a little frustrating, this call, because the guidance you've given has given all the bad news without any targets. I mean you're saying we have to wait two years for the 17% ROTCE despite the booming economy. You're guiding for the second year in a row of negative operating leverage. I get it, that's not how you run the company. But \$15 billion of investments, that's up one-half over the last three years, and that \$15 billion is enough to capitalize the 11th largest US bank.

So I mean you gave us that, but you didn't tell us what to expect from all this investment in terms of what specific market share gains are you targeting, what specific revenues do you expect, when do you expect that. Can you put some more meat on the bones here because just at \$5 billion of investment spend, look, it worked, you gained share. At \$10 billion of investment spend, it worked, you gained share. But now you're

going to \$15 billion, and it might not always work so well. So can you, again, put more meat on the bones? The stock's down 5%. The feedback so far is like you're spending the rate hikes for investments over the next 10 years. That's great. You're in there for the long-term, but a lot of the investors aren't planning to invest in a 10-year horizon.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Michael, I feel your pain and your frustration. It is very possible in 2023 we'll have a 17% ROTCE. It depends on how we deploy our capital; it depends on fixed income markets; it depends on a bunch of stuff like that. So with the 400 branches that we're building, those things will get to contribution profitability just like we expect. The thousands of bankers we're adding in private banking and Chase Wealth Management we're pretty sure we'll get to breakeven just as we expect, but that takes a couple of years.

And so, yeah, we're not going to tell you all of those things. And we already mentioned some of the tech stuff is just, kind of we have to do it and there's a little bit of bubble expense in that. There's even a little bit of bubble expense in the new headquarters and so we're pretty comfortable we're doing the right things, and we're being a little conservative. Like Jeremy was talking about the card stuff, the return. I told our folks that we're going to have card growth this year, but they were skeptical.

The American consumer is very strong. Our products and services are very good. Chase, we call it now self-directed investing, has \$55 billion. I think Robin Hood has \$80 billion the last time I saw it or something like that. We're not sitting here bragging about our product because I would tell it's not good enough yet, but we've got \$55 billion without us doing virtually anything or no marketing and no real stuff like that. So there's a lot of stuff coming. You know the competition we have to face. Some of these acquisitions we made will contribute to profit, maybe not exactly in 2022, but – and I mentioned the deployment of the balance sheet. We're pretty conservative with the deployment of the balance sheet. That may not always be true.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

I'll follow-up and then I'll re-queue after my follow-up. But as it relates to technology specifically, Jeremy, you talked about retiring technical debt, and so that's kind of playing defense. But also on the offensive side, where are you investing for tech where you would expect some more revenues? You talked about digital banking in the UK. Are you also going to Brazil? What other countries are you targeting for that?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah, I mean it's funny. I wouldn't actually describe retiring technical debt as playing defense. I mean I think that's actually a great example of the whole point of this conversation which is that retiring technical debt is an easy thing to not do if you're playing defense focused on short-term targets. But if you're playing offense for the long term, it's exactly this type of decision that creates some of the frustration that you are articulating that's critical for the long-term success of the company. So that's, I mean...

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

So we spent \$2 billion on brand new data centers, okay, which have all the cloud capability you can have in private data centers and stuff like that. We're still running the old data centers. Now we're not going to get involved and every time we talk to you all explain every part of the pancake buildup of expenses going in and expenses going out, but all this stuff going into these new data centers, which are now completely up and running, well, some are, but most of the applications that go in have to be cloud-eligible. Most of the data that goes in has to be cloud eligible.

We're running a whole bunch of major programs, which I don't think we disclosed, on AWS, and we're working with Google and Microsoft to run some of the stuff in the cloud because we want to have multiple cloud capabilities. And this year, roughly 30%, 40%, 50% of all our apps and all our data will be moving to cloud-related type of stuff. This stuff is absolutely totally valuable. I mean, I can't – if you sat in this room and looked at the power of the cloud and big data on risk, fraud, marketing, capabilities, offers, customer satisfaction, dealing with errors and complaints, prospecting, it's extraordinary. You actually see some of that already in how we manage stuff.

Like for example, with all the fraud and all the cyber and all the ransomware, our fraud costs were down this year. There's a reason for that. It's because we've deployed huge capabilities in those things. So, we have to do those things, and that's a march, and it will be hugely valuable for us, and you'll see some of that benefit, which is why we're comfortable that we'll continue to grow and expand and earn, like I said, 17% return on tangible capital, I would take that. If I could push a button and give you that for the next 20 years, I would take it. And also, if I did it for the next 20 years, that number would probably be like a big part of the GDP of the United States of America.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Okay. I'll re-queue for my follow-up.

Q

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

Okay.

A

Operator: We have one last question...

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

Michael asked another very good question about market shares. We expect to go up in retail deposit market share, investment market share, private banking market share, fixed income market share, equity market share, investment banking market share, global market share, payments market share, and securities services market share, commercial banking market share, and what did I miss? I'd be surprised if any of them go down. And we're not going to give you the number.

A

Operator: As per now, we have one last question from Gerard Cassidy from RBC Capital Markets.

Gerard Cassidy

Analyst, RBC Capital Markets LLC

Thank you. Good morning, Jeremy and Jamie. Jeremy, I'm trying to figure out what the discussion topic's going to be first quarter of 2023, when we talk about fourth quarter numbers. And I think it might have more to do with credit than we're hearing about on the call today. Can you share with us the underwriting standards that you guys are using compared to what they were at the height of the crisis back in 2020? I'm assuming they're easier today because the economy is stronger. But also, can you compare them to 2019? How does it look today versus what you guys were doing in 2019?

Q

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Yeah, sure. So I think broadly for the company, there's no really large change in our credit risk appetite and therefore in our underwriting standards. I think I alluded a little bit to this earlier, which is there's a subtlety in the Card business, where, if you remember, pre-pandemic, we had talked about Card charge-off rates being at 3.25% and maybe trending a little bit higher over time as a function of some underwriting of some slightly higher risk vintages, still well within our credit box, still within our overall credit risk appetite, but just a slight shift in the composition of the portfolio there.

A

So, that happened back then, and we just didn't see it flow through because of, obviously, the extraordinary dynamics that we experienced with the pandemic. And now we're exiting the fourth quarter this year with a Card net charge-off rate, and I forgot the exact number, but something like 1.2% or something, so...

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

Which you'll never see again.

A

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Obviously, exceptionally low. So the question then becomes like – and then I think somewhere in your question there was also about like when we sort of leaned into the reopening, how did we modify the credit box and the standards? And the answer to that is that we returned it essentially to the pre-pandemic level. So we were obviously very confident in light of what we were seeing about what consumer credit conditions were.

A

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

It got tight a little bit, and now it's back to where it was in 2019.

A

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Exactly. Exactly.

A

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

None of that was completely material to results. But one of the things in Jeremy's slide we should point out, we've been overearning on credit for years. And we expect that eventually to normalize. You could argue how fast and what time, but credit card has been numbers we've never seen in our lives. Middle market's been lower than ever. Wholesale's been lower than ever. Mortgages have been lower than ever. Cards, they're all low. Eventually they're going to normalize. And then we kind of build that into our models.

And the other thing is with loan book, and this is very important for your own modeling, just assume as the loan book grows, we will add reserves pretty much proportionate to the growth of the loan book, all things being equal. Now we got CECL and all this stuff like that, but – so that's a flip to the negative obviously for next year, that one item.

A

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

Yeah. And so, Gerard, to your point about the fourth quarter next year, right, I mean, one lens to look at that through is what do we think the trajectory of normalization of Card net charge-offs is through the course of 2022. And I don't want to get into too much specific guidance there, but the numbers that we're putting on the page roughly assume that we get back to that kind of like low 3s around the end of 2022 or early 2023 in terms of Card net charge-offs. So, yes, on the one hand, maybe we'll be talking a lot about the fact that those numbers are going up, but they will have actually gone up exactly in line with our expectations...

A

Gerard Cassidy

Analyst, RBC Capital Markets LLC

Great. And just as a quick follow-up, Jamie and Jeremy, you talked about the balance sheet the way it is today and all that liquidity. And I think, Jamie, you said \$500 billion could be put to use. How long will you guys – will it take you to get to a balance sheet and a mix of business that looks like you would have thought back in 2019 before this whole pandemic started and the balance sheet did what it did?

Q

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

I think we're going to wait. I mean, again, some of those things are outcomes of decisions you make based on client stuff. But the real fact is we got Basel IV, a lot of changes, and when all that happens, we'll give you a little bit better update how we're going to deploy capital and invest the balance sheet and stuff like that. But we're in no rush to reinvest part of that balance sheet. We'll be very patient.

A

Operator: Mike Mayo would have another question. Mike, your line is open. Please proceed.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Yeah. Thank you. Just more detail on the tech spend, and what I asked before was on digital banking, you're going to the UK. What other countries are you going to? Again, just looking for some more specifics at least on digital banking and other tech areas where you expect a revenue pickup, not just – I mean, you mentioned fraud and AML and ransomware and cyber, and that's table stakes as you would say. But as far as actually getting revenue growth from your tech investments and starting off with digital banking, which new markets are you entering?

Q

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. So on digital banking, we're not going to disclose specific countries that we're going into when.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

There's one we are talking about for next year, I think, just one.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. I mean, I think just to validate Mike's question, as you know, we have made this investment in C6 in Brazil.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Right.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

So, Brazil, it's not exactly the same. It's not a de novo build by us, but we're there. We're engaged. It's a significant investment, and Brazil's like a very interesting country from a consumer banking perspective. The digital play there is quite interesting. So that's one example. And obviously, we're thinking about additional places to go, and we'll let you know when we do it.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

Okay. And the other tech investments where you could expect additional revenues, what would that include? I mean, for example, with your marketing and the degree you're using AI and big data for what kind of improved take rates do you have, or just, again, looking for more specifics where you can provide it?

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. I mean, I don't know, I'm personally not a big fan of these types of like anecdotal individual like tech stories. I mean, there's cool stuff, like we're doing some AI-enabled lead optimization stuff in AWM for example. So, I could come up with a list of like 20 things like that. But in reality, it's really much more about the embedding of the modernization and the digitization of the whole ecosystem as part of customer engagement and competition and making the company more efficient and all that type of stuff.

Examples were like I spend \$10 million on X that's technology as opposed to like branch build or banker hiring as Jamie says, and you can then attach a tangible revenue outcome to that. I'm sure we have some of those examples somewhere. I don't have them with me. Maybe we can talk about them next quarter. But I generally think that that's sort of – gets into a lot of anecdotal stuff that distracts from the big picture.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

Okay. Last one. What is your total tech spend again? I thought it's on the deck. How much of that is to run the bank versus change the bank? And then as it relates to the cloud specifically, what do you expect? That was a bold move to move Chase, the core bank, to the cloud. What do you expect that to save once that gets done? Thank you.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

Yeah. So couple things. If you go back to my prepared remarks, so it's like \$12-ish billion, a bit more, 50/50, run the bank, change the bank. And within the change agenda, half again is kind of modernization-type stuff as opposed to features and products. So it gives you a little bit of a guide.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Hey, Mike. I'm going to give you one example, which may be a little helpful on this tech platform thing. I think these numbers are accurate. We did this a while ago. Card runs on mainframe, which is quite good. We have one of the most efficient, most economic, 60 million accounts, et cetera. It's been updated for years. But it's a mainframe system in the old data center.

When it gets modernized to the cloud, the cost savings by running that and marginalizing it will be \$30 million or \$40 million a year. That isn't the reason we're doing it.

The reason we're doing it is once you get that to the cloud, that the databases that it uses to feed its risk, marketing, fraud, real-time offers and stuff like that become accessible to an enormous amount of machine learning. So that you can, when Mike Mayo is going home on a Friday night, we can offer you – we know what you like to eat, eat at a steak house, you eat here, immediately offers and for stuff that is 10 times what it is today. And so that's the real value.

The value isn't the immediate cost save that you've gone from – you're saving \$30 million running this application here. I want the \$30 million. And the other thing it allows you to do is to augment that mainframe system. When you touch a mainframe system, you've got to be a little careful when you go into it and make some modifications. So like in the old days, you used to modify that mainframe system four times a year, big releases and stuff like that, of course for multiple reasons. Now you can go in and modernize a little piece of it every week, every day. And so that's why it's so important to do this. And it's also makes it why it's hard to quantify the benefits and the costs.

Jeremy Barnum

Chief Financial Officer, JPMorgan Chase & Co.

A

But, Mike, just to pick one example I guess from a business that I know you know well. If you look at Teresa's Securities Services business, it's an interesting example of the way the investment relates to the strategy.

So in that business, as you know, historically, winning new mandates, especially in fund services administration, tended to involve significant correlated large increases in expense as you had to onboard a lot of fund accountants. And so that was typically the dynamic there, and I think a lot of the investment that we're making there is to make that business a little bit more scalable in that respect so that when we win new business, it's a little bit more accretive. So that's kind of an interesting example of, is that tech investment that produces more revenue? I mean, I guess. I would describe it as investment that means that when we win the revenue, it's more profitable, for example. At the same time, we're also building out some really great capabilities in there in terms of data and stuff like that which maybe will help us win more mandates.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

And then we got to end this call because we've got some other stuff that we've got to do. Just for example, this is an important one, and Teresa deserves all the credit for this. We are now using JPMorgan's Investment Banking derivative capability to help clients who use derivatives for custody, to value them and stuff like that. A lot of people simply can't do that. And of course, believe it or not, a lot of portfolios now, they're using more and more what you and I would call derivatives as part of the portfolio management. That costs time, it costs money, it's on the cloud, it's hugely valuable to Teresa having a competitive advantage.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

All right. Thank you.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Folks, thank you very much for spending some time with us. Good luck to everybody.

Operator: Everyone, that marks the end of your call for today. You may now disconnect. Thank you for joining. Enjoy the rest of your day.

Disclaimer

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