2022 INVESTOR DAY

TRANSCRIPT

May 23, 2022

JPMORGAN CHASE & CO.

MANAGEMENT DISCUSSION SECTION

Mikael Grubb

Head of Investor Relations, JPMorgan Chase & Co.

Good morning, everyone. I'm Mikael Grubb, the Head of Investor Relations. On behalf of the Operating Committee and all the other people who have worked tirelessly to make this event possible, it is my great pleasure to welcome you to our 2022 Investor Day.

Whether you're in the room or joining us via the webcast; a shareholder, large or small; a sell-side analyst or one of the other stakeholders invited here today; I do believe the hours spent with us today will be very valuable in understanding the strategic direction of the firm. You'll get the chance to hear from and interact with our deep bench of business leaders, the ones who build the systems and technology, design our products and deal with the clients and customers on a day-to-day basis.

So with that in mind, I will get off the stage in just a bit. But before that, a few logistical pointers, first on Q&A. There is a lot of information in today's presentations, and we want to make sure that you hear it all before opening up for questions. And given that Jamie will give his remarks at the beginning of today's agenda, the session this afternoon will be exclusively dedicated to Q&A with him, the rest of today's presenters and other senior business leaders.

Second, if you are a fixed income investor, please note that we've also updated our investor materials under the Fixed Income tab on our Investor Relations website. Third, the survey, please fill it out when you get it. But you're, of course, always welcome to contact me directly. Lastly, please make sure to check out the disclaimer about forward-looking statements. We have quite a few of them.

So with that, please silence your phones, sit back and enjoy the presentations. And let's welcome to the stage our Chairman and Chief Executive Officer, Jamie Dimon.

Operator: Welcome to the stage, Jamie Dimon, Chairman and CEO of JPMorgan Chase & Co.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

Good morning, everybody. I am absolutely thrilled we're here. I think it's unbelievable we skipped it. We should have done this earlier. I know several of you had mentioned that to review a lot of things have happened. It's been two years. We had a 15% unemployment. We had CECL. We did a bunch of acquisitions. We never described it to you all, and you're going to get it here at infinitum. So you can see exactly what we're doing and why we're doing it.

It's very important for us to do this for a shareholder, I think it is respectful to do this. We always learn a lot and we've always prided ourselves on being completely transparent. And the other thing is, we benefited enormously from doing it ourselves. It's a great internal discipline to make us think like shareholders think all the time and not just how we do budgets, et cetera. We have a very compelling story. You saw that sizzle reel, I mean, I would buy that stock. This company has been on the march nonstop through COVID, through ups and downs, investing relentlessly. We've continuously grown. We gained share almost every year in most of our businesses. And while there are some risks, there are also absolutely huge opportunities.

First and foremost, I just want to go through a bunch of principles. We run the company to serve customers, all of it, balance sheet, how we operate every day, whether it’s consumer or wholesale businesses. We have – but we have to meet all of our requirements and protect our customers, their data in good times and bad. We do terrorism work, tax evasion work, cyber work. We handle Russia, we're trying to handle and wind down in Russia in a way that we're doing exactly what the government, the Western governments wants us to do and doing it properly and trying to meet CRA requirements, social requirements, and you saw a whole bunch of stuff here. Jeremy's just going to give you a little bit of detail, but we're very proud of what we're doing in diversity, equity, sustainable finance, things like that, reasonably and quite responsibly.

We've always been honest about our results. It's just our – how we run the place, we give you the good, the bad, the ugly. We acknowledge when we miss things. We know we're not perfect. We're never going to get everything right. I pointed out before certain things that other companies have done, some fintech companies, where they did stuff we could have done, and we didn't. That's okay because we did a lot of other stuff. And so operational discipline is a sine qua non. When you look at the folks doing presentations up here, I hope you see that running through operational discipline.

We've always believed that the ABC: arrogance, bureaucracy, complacency leads to stasis and death. And so you could be absolutely sure we are devoted to make sure that doesn't show up here. We try to analyze our own results, good and bad. We earn good returns and we've earned good returns after making proper investments. It's easy to earn good returns, not making proper investments. We've always earned good returns while making these investments, including technology.

We've always invested through the cycle. I pointed out to people over and over, just – not just the analysts in the room and shareholders, but our own team, there are good expenses and bad expenses. Bad expenses are things which lead to bureaucracy, waste, corporate statism, things like that. Good expenses are new branches, new bankers. Things which are going to pay off for a long period of time.

There're also good revenues and bad revenues. We know uniquely that you can build certain businesses and it will destroy the company in the future. And I'm going to mention on that later what we're doing to manage our risk right now. You're going to see a tremendous amount of detail on investments, branches, bankers, things like that and on technology, which are a little bit harder to measure sometimes. We've made a huge amount of progress in innovation and digital, cloud, AI, modernization – we don't like the word, but I'm going to use it, is kind of a necessary slog. And we're working through it. We're well on our way.

We have earned 17% return on tangible equity all the past years. There's a very good chance we're earning it this year. And if there's a benign environment and it's your job to pick the environment, I'm going to talk about the environment in a second, it could be 17% plus next year. And we've managed risk. I always talk about high quality earnings just to give you an example, okay? We have very good margins in most of our businesses, but our MSR has very little FHA servicing. That's a risk if you have FHA servicing. We always identify one-time gains and losses so you could see what are – we consider our regular earnings are. We are mostly prime in our businesses – prime card, prime auto, prime mortgage, et cetera. You're going to hear about our real estate underwriting. There is almost no spec underwriting. It's very conservative, we're quite careful. The bridge book is down. We manage our exposures. We've got nickel – is kind of down 50%, fully margined. I would put it kind of in the normal market risk at this point. And so, we actively manage all these things.

We have to deal with reality, okay? And I think for management teams not to. So, I've pointed out in my Chairman's Letter – 20 years ago, we didn't have to deal with all the shadow banks, all the fintech and the big tech. We do now. That's the reality. We're not worried about it. We're not afraid about it. We're simply recognizing it. We've done quite well. And we expect to continue to do well. But we have to innovate at speed and at pace like they do. And, of course, our bank competitors are very strong now, too. I wish I could make them do a bad job, I can't. So, they've obviously done well. I applaud them for all that. But we're actively and, again, you can see 100 examples which I hope gives you a lot of comfort.

I want to make a few comments on current political and economic environment. These are not contradictory. They're different than in the past. We have a strong US economy fueled by monetary and fiscal stimulation that you've never seen before. So, it's different than a strong economy and the consumer is in very good shape even today, which means if we go into recession, it may be different than prior recessions, but that strong economy being met by two countervailing forces, both of which you've never seen before, okay? High inflation, QT, and obviously the Fed's going to try to meet it. We don't know the outcome. That's your guess. But we can have a good scenario all the way to a bad scenario. And the war in Ukraine, the humanitarian crisis, the impact on the global economy, roiling the global oil markets, REIT markets, commodity markets, et cetera. Wars have unpredictable outcomes. We're prepared for that. We have to be, because our job is to serve our clients through thick and thin, through good times and bad times.

Strong economy, big storm clouds. I'm calling them storm clouds because they're storm clouds. They may dissipate. If it was a hurricane, I would tell you that or a tsunami like we had 2007 or 2008. They may not dissipate. So, we're not wishful thinkers. Obviously, we want it to turn out well, but we can handle all of that. Our fortress balance sheet and by that, I mean not just a balance sheet, but margins, earnings, growth, management, quick response, conservative accounting, all these things put us in position to deal with all that.

I want to give you a couple of specific comments. NII, we're going to – you're going to see a lot of assumptions in NII. We give you the best we can – implied curves, you've got deposits lags, margins, competitors, swaps duration, all that stuff and we're just going to give you the best we can. Obviously, it's a pretty good story.

Expenses, hopefully, we said it's going be the same $77 billion we mentioned last time. We don't know what inflation is going to be next year. I don't know how the people are dealing with it. Right now, we think it might be 5% if you have a big recession. It might not be. We don't know. Investment opportunities come and go, like in Card, they might be there. They may not be there. If there are really good returns, we seize them. And so, we're trying to be very thoughtful about that. Again, trying to invest continuously throughout all time. And so structural expenses, investment opportunities we don't know.

Credit – credit, again, is not contradictory. Credit looks really good. We've never seen it this good. We've told you we're overearning on credit. We're losing like $3 billion a year, a lot of it's credit cards which you're going to hear about on charge-offs, a norm would be six or seven and we know that, just like we're underearning on NII. And so, we expect over time it'll go back at least to a norm and we just don't know when, you're going to get it from Marianne, and there's probably still lag quite a bit.

CECL, just to point out, last time we put up reserves, we weren't giving anyone a different estimate than anyone else. We just said we thought the odds of a bad outcome went up. CECL is probabilistic based – five scenarios, you have to weigh and measure it, they're hypothetical, that's all it was. I just want to point out, I got the number this morning.

Last recession, in the first quarter, in the second quarter of 2020, we put up $15 billion for CECL. In the next four quarters we took down $15 billion and that's CECL. It kind of swings all over the place, it creates a little capital uncertainty and things like that. And we're prepared for that, too. And managing capital, RWA, unknowns like G-SIB, Basel IV, securitization rules and stuff like that, huge possible opportunity to manage this over time. And obviously our capital hierarchy has kind of always been the same. Pay your dividend consistently, invest in the company, organic growth is hard but very good, acquisitions are very good, you're going to hear specifically about them and then stock buyback, et cetera, that's the last thing. And if you look at these acquisitions, probably it's very important to me and we think about capital strategy, most of them are very capital-light. So, we're not going to do a lot of acquisitions, things that add to G-SIFI capital. We're going to do other things, which I think are very good for the company and each one of them also protects our businesses elsewhere. And liquidity, we have a huge amount of liquidity.

You've all pointed out, we have like $1.6 trillion or $1.7 trillion of bank reserves, treasuries, mortgages, other – other highly marketable securities, some of which count for highly liquid – highly qualified liquid assets. And we have to maintain a huge amount. We do have the ability to reinvest some of that at a point in time. We're being conservative because of all the things I just mentioned.

Jeremy is going to mention that deposit outflows are a little unknown, Basel IV is a little unknown, liquidity, that's all. One point we'll reinvest that; those are not earnings lost. Those are earnings delayed. And we're not going to do things – we try to protect the company from the fat tails. We're not going to do things today, to hit NII targets and regret it down the road. So, we're trying to be very careful and we're using some of our liquidity to manage some of those exposures.

And last, we're completely comfortable and confident. I hope after you see all this, you are too. We're prepared for whatever happens in the future. Everything we do is based on the success of our people. You're going to see the – a lot of Operating Committee members here up on stage today. They're outstanding. I don't think you have many companies like this that have built-in succession, built-in capability, brain power. I wish you could see all the people from JPMorgan here. They're all that way. They're all just quality people, honest, hardworking, they give a damn, et cetera. I'm blessed to have Daniel Pinto as the President and Chief Operating Officer of the company with his extraordinary brain and capabilities helping manage now, across the whole thing as we grow this company. And so, I hope you have all the confidence I do. You're going to see all the senior leaders give their presentations.

But first, I'm going to hand it over to Jeremy, who'll give you overview of the company. Thank you.

Operator: Welcome to the stage, Jeremy Barnum, Chief Financial Officer.

Jeremy Barnum

Chief Financial Officer & Member-Operating Committee, JPMorgan Chase & Co.

Okay. Thank you, Jamie. It's great to be here today. And I think I speak for the whole Operating Committee in saying that we're happy to be here rearticulating the strategy and telling you more about what's going on inside the businesses. And as Jamie just said, we've been collectively reminded of the value to us from an internal perspective of having to get on stage to do this. Today's focus is on completing the process that started at extended fourth quarter earnings of sharing more detail about our strategy and investments. Our business leaders will tell you about how they are investing and innovating to position the firm for continued success.

From my perspective, I'm going to briefly cover our strategic principles, operating model, speak about ESG and some related topics, and then provide a financial outlook, including updated framing on our investment categorization, which will serve as a jumping off point for the businesses' discussion of their investments. Let's get started.

You've seen this picture before. The framework outlined here supports our operating model: complete, global, diversified and at scale. We run this company for the long-term and our businesses ground their strategy to this overarching framework so that we can deliver for our clients in all environments and generate strong returns for our shareholders over the long-term.

To highlight a few things on this page. We have exceptional franchises, and we aim to be customer centric and easy to do business with. Our operational resilience enables us to serve our clients through any market environment as the pandemic proved. As much as you'll hear about technology today, we are a people business and we strive to be an employer of choice for the best people from every background and experience, including in technology. And for the entire history of our company, we have always understood that our long-term success is linked to sustainable business practices in the broadest possible sense. The current focus on ESG and sustainability therefore fits naturally into this framework.

More on ESG in a minute, but now turning to the next page. At the core of our strategy is holding ourselves accountable to high standards at a very granular level. We strive for excellence, which we measure by comparing ourselves against best-in-class competitors at the sub-line of business level, and the result of that has been consistent share gains over a long period of time.

Here you can see the strength of our franchises. We are ranked number one in US retail deposits, credit card issuer and primary Business Banking. And we have taken share in all three areas since 2011. We are ranked number one in global investment banking fees, global markets revenue and dollar payments, and we have also taken share in those areas over the last 10 years. Our private bank is top rated, and we have grown client assets, advisors and our share of active AUM. We are the number one multifamily lender and middle market book runner. And throughout today's presentations, you will hear how these individually strong franchises also work together to serve our clients holistically. A point worth emphasizing is that despite the strengths we show here at an aggregate level, there are some pockets in all of our businesses where we don't have leading positions. And those pockets of relative weakness represent share gain opportunities.

On this slide, you can see the full breadth and depth of the franchise. On the left, we have generated a growing top line that has been remarkably stable and less volatile than that of our peers and a large portion of non-financial companies as a result of our diversification. And the last two years have served as a powerful reminder of how the resilience of the company's performance enables us to be confident even in challenging times and stay focused on the strategic landscape, while still delivering very good returns. Being global is one of our core strengths. We run a cross-border business that helps companies operate globally and expand outside their domestic markets. And we serve global investors and wealthy individuals seamlessly in more than 100 markets around the world. The completeness of our offering and our ability to serve clients with market-leading products and services in any environment is a key competitive advantage. And importantly our scale brings very significant operating efficiencies.

Before I cover the historical financial performance, let me take a second here to point out that in light of the large reserve builds and subsequent releases over the last two years, some of the numbers in today's presentations will strip out those changes. The numbers on this page show periods where we have earned both above and below our targets, as you would expect. But over the last decade you can clearly see the power of the platform to produce strong, steady financial results through cycles. We have produced robust net income growth and we've delivered an average ROTCE of 15% and 8% annualized growth in tangible book value per share. And not only is our performance consistently strong, but it is also better than our peer average.

Now, a few thoughts about the overhead ratios. Our focus is on maximizing returns and investing in high ROI opportunities and the overhead ratio is an output of that. At the line of business level, the overhead ratios give us confidence that not only do our franchises have strong competitive positions, they are also highly efficient compared to standalone peers. When we look at it at a firm-wide level, we can see the benefits of scale and the operating leverage that we have. And I will note that for the last five years, our [average] overhead ratio has been 56%. And despite our core view that overhead ratio is an output not an input, I will say that we do expect it to come down as the environment continues to normalize, even as we continue to invest.

So stepping back, the combination of the strength of the platform with our historical financial performance makes us feel very confident about the day-to-day competitive position of our businesses. But turning to the next slide, we are clear-eyed about the competitive threats that exist and the dynamism of the environment. Both traditional and non-traditional firms are trying to chip away at our leading positions. Jamie covered this in his opening remarks, and the slide speaks for itself, but it's worth highlighting a few things.

Traditional banking competition is as strong as ever. Fintechs are building both digital and physical banking products that are exceptionally easy to use. Non-bank financial institutions continue to try to disintermediate banks in both consumer and wholesale markets, and big tech firms have ubiquitous platforms and massive amounts of data that they are eager to deploy in financial services.

We also need to manage constant industry change and emerging risks to ensure the safety and soundness of the company while continuously re-examining our strategy. Regulatory changes still aren't done. Cyber threats continue to evolve. Technological innovation is accelerating. And the increasing focus on ESG creates both new challenges and new opportunities.

Sustainable business practices also means recognizing that stewardship of our internal and external control environment is non-negotiable. It is a core principle of the company that we will never compromise on our obligation to ourselves and to the system to ensure that we can operate safely and soundly for the benefit of all stakeholders. Our size and scale enable us to protect and support our customers, safeguard the financial system, and transmit government policy, whether it's implementing an exceptionally complex set of multi-jurisdictional sanctions on Russia, funding more than 400,000 PPP loans, or offering delayed payments and forbearance on more than 2 million accounts. Our investment in our control environment is an essential part of helping us discharge our responsibilities.

Now, it's important to say that constructive engagement with our control environment is one of our most important cultural values and is in fact an expectation of every employee of the firm. But on this page, we've narrowed the focus and are showing some examples of the teams we have fully dedicated to risk management and controls. And in that context, I want to point out that, especially in the face of inflation and increasing competition for talent, doing this well at an institution of our scale is a very significant resource commitment.

We're not complaining about this and we don't apologize for it. It's table stakes to be the company that we are and our ability to deploy appropriate resourcing to our control environment is an underappreciated benefit of scale. These strengths are part and parcel of our commitment to ESG on the next page.

Our businesses are all making progress helping clients with their sustainability goals, and they'll highlight some of that today. But let me just point out a few overarching items. In 2021, we made progress on our $2.5 trillion 10-year Sustainable Development Target and financed or facilitated $285 billion to help address climate change and contribute to sustainable development, including $106 billion in support of our $1 trillion climate objective specifically in sustainable transportation and renewable energy, $117 billion across nearly 600 transactions and development finance and $61 billion towards supporting homeownership and affordable housing, small business, education and healthcare. And on the right-hand side of the page, you can see our commitment to advancing racial equity both in the community and at JPMorgan Chase. By the end of 2021, we had deployed or committed more than $18 billion towards our five-year $30 billion Racial Equity Commitment.

That concludes the overview section of the presentation. Now, let's talk about the outlook. We expect full-year 2022 NII ex-markets to be above $56 billion, which takes into account Fed funds reaching 3% by year-end, in line with the current forward curve; high single-digit loan growth this year, excluding CIB markets and PPP; and modest securities deployment, with ample liquidity to invest more under the right conditions. Given these dynamics, we expect the fourth quarter run rate NII to be approximately $66 billion and that run rate serves as a good launch point heading into next year.

In terms of 2023, we don't know what the year will bring, but based on the forward curve, the competitive environment, our assumptions around loan growth and our outlook for deposits, there is upside to the $66 billion in a benign environment.

Moving on to our outlook for expenses. Our 2022 outlook remains roughly $77 billion, and I'll note that you have enough information on this page to reconcile with what the businesses will talk about later. And specifically in the later presentations, you will get more detail on the $3.5 billion increase in investment spend.

In terms of 2023, it's too early to provide formal expense guidance. But based on what we can see right now, it might be a little higher than the approximately $79.5 billion that's in your models, mainly as a function of the current inflation outlook, which, of course, may change.

Looking at the underlying details, structural expenses will be higher year-on-year driven by compensation inflation. We are constantly generating internal efficiencies and we continue to look for more. But we also need to do what is necessary to attract and retain talent across the company. Changes in volume and revenue related expenses will be driven primarily by performance related compensation. So this is one we would like to see higher because it means performance is better.

And on the investment front, based on what we know today we don't expect an increase like 2022's. But with respect to investments such as card marketing that produce high confidence financial returns, the opportunity set and therefore the level of spend will be dependent on the environment. At the same time, it's also important to note that these investments are re-decisioned nearly from zero every year. So we have quite a bit of flexibility.

Now, coming back to 2022 to give you more details about our investments. As I mentioned earlier, today is the culmination of the process that started at fourth quarter earnings to explain and give more detail about our investments for 2022 and beyond. In the presentations that follow, you will hear a lot of detail from our business leaders about how they think about investing in their particular businesses. But let me highlight some common characteristics of our investment process across the company.

Many of our investment decisions are based on a quantitative bottoms-up process, driven by people in the field who are serving clients and who are closest to the opportunities. And where relevant, we calculate specific investment returns and times to break-even. At the same time, we make some top-down strategic decisions about where we're going to push in areas that represent longer term opportunities as well as investments that we see as non-negotiable to keep the firm operating safely and efficiently. No matter what the nature of the investment, we have robust governance to ensure that the outcomes we get are the ones we were expecting when we approved the investment. I'm not going to take you through all the numbers on the page. The businesses will present quite a bit of detail on their numbers shortly. But let me take a second to frame out how we think about the categories.

On the left, you can see our total investment spend broken down by business. In the middle we show you what part of that involves technology, which will be described in detail by the businesses and by Lori coming up shortly. And on the right, you see non-technology investments broken out between at the top, the more predictable and easily measurable categories of Bankers, Advisors, and Branches as well as Marketing. And at the bottom, New and Expanded Businesses, including Commerce and International Consumer, as well as Digital, Data, AI, and Product Design and a catch all Other category. You'll note that we have also called out a couple of specific items: the impact of acquisitions, which you'll hear more about today; and a small R&D category, which is important to the future of the company as we invest for the next generation and try to stay on the cutting edge of technological developments.

And just to make sure we cover everything, the $600 million in investment spend that's in Corporate consists primarily of international consumer, which Sanoke will cover, and some technology investments that we don't allocate into the businesses.

Now, turning to credit, we've gotten a lot of questions on our outlook since our first quarter reserve build. So let me clarify a couple things that Jamie also mentioned at the outset. As we said then, we aren't seeing anything different from what you're seeing. The build in the first quarter was a function of increasing the probability of bad outcomes, not a change in our fairly positive outlook for the next few quarters. Since earnings, the economic outlook has changed a bit. Our own economists for example, have just revised down their US GDP forecasts. Despite this, we don't currently expect much change in the allowance for this quarter.

But the more important point is the outlook for charge-offs. Marianne will give more detail on consumer credit in her section, but big picture, the near-term credit outlook especially for the US consumer remains strong. And in fact, we are now projecting that the unusually low level of card charge-offs will persist into next year. And just remember, that given that our loan growth outlook is quite positive, you should expect all else equal to see some reserve builds coming through purely as a function of loan growth.

Moving into capital for a moment. We've been consistent in saying that the increases in capital requirements in the last few years are not justified by increases in risk, and therefore the framework should be recalibrated. But as we sit here today, that's not happening. So we have to retain capital to increase our CET1 ratio. With the G-SIB requirement increasing to 4.5% over the next two years, we are using a CET1 target of 12.5% to 13% as of the first quarter of 2024.

Now, we should remind ourselves that this is a highly adaptable company. The number of significant new regulations that we have implemented and absorbed over the last 10 years without damaging our profitability is a testament to the resilience of our business model. So until rules become final, we will continue to optimize our balance sheet as aggressively as we can and focus on generating returns from our best-in-class businesses.

While we're talking about capital, in the first quarter, a series of relatively independent factors all consumed capital and collectively resulted in a larger-than-expected drop in our CET1 ratio. On the left-hand side of the page, we've shown, using analyst estimates, how despite starting from a slightly lower point than we had expected, the huge amount of distributable earnings that we have after dividends. So the point of the slide is nice straight line building approximately 10 basis points per quarter as a result of the huge amount of distributable earnings that we have after dividends.

Of course, in reality, the quarter-by-quarter trajectory will always be influenced by market volatility and its impact on RWA, the evolution of the rate curve, and the closing of acquisitions. And when we look at buybacks, your estimates are roughly accurate for this year, except for some of that buyback capacity will be used instead for the likely closing of existing cash acquisitions.

But given the earnings growth, we expect to easily be able to meet the future CET1 target. And in addition, on the right-hand side of the page, you can see that the combination of the strong capital generation with our CET1 starting point positions us to weather a stress similar to the one we saw in the first quarter without compromising our ability to serve our clients.

So to finish up, let's talk about ROTCE. We are reconfirming that we have confidence in this franchise's ability to produce a 17% ROTCE through the cycle. And as you know, this is not an aspirational target. It's a target that we have often been above and sometimes been below throughout our recent history. So in closing, we are confident in our ability to grow and gain share, and we are optimistic about continuing to generate leading financial performance, including as Jamie said at the outset, this year, where from what we can see now in the current environment, we may well generate a 17% return in 2022.

Thank you, and let's welcome Lori to the stage.

Operator: Welcome to the stage Lori Beer, Global Chief Information Officer.

Lori A. Beer

Global Chief Information Officer, JPMorgan Chase & Co.

Good morning, everyone. It's great to be here with you today. We believe that technology is a key differentiator for our business and a competitive advantage for our company. As our business continues to evolve, how we deliver technology is as important as what we deliver. Today, I'm going to walk you through how we are investing to deliver technology at a global scale with speed that enables business growth. You heard Jeremy discuss the breadth of our business and to support this, we must deliver technology at a global scale that is unmatched in the industry and has the ability to adapt, to rapid changes. Our technology is supported by 55,000 technologists, 92% are employees. This is important because it demonstrates the value we place on our talent delivering differentiating technology.

Our global technology workforce manages over 6,000 applications, 2.7 million virtual CPUs and over 500 petabytes of data. Our security capabilities also have incredible scale. We collect and process over 40 billion security events daily, applying intelligence and automation to find and respond to the events that matter most. Our technology has demonstrated scale and agility, enabling our business to lead among our competitors which increasingly includes fintechs and other tech natives.

Our technology strategy supports our business objectives and we are focused on four key areas: First, delivering best-in-class products, platforms and experiences in our business segments. We build products and platforms that provide economies of scale and deliver seamless, multi-channel experiences while rapidly delivering new features. Second, strengthening our software development capabilities and infrastructure, we are investing to modernize our infrastructure and applications so we can deliver at speed and scale, refactoring our applications to be cloud native and migrating to the cloud. Third, unlocking the power of our data, the breadth and the depth of our data is the competitive advantage if we want to embed AI in everything we do. To deliver this, we need to make our data easily accessible to our data scientists and leverage a platform built for speed and re-use, so we can experiment and deliver value faster. Finally, but critically important, protecting the firm and our customers and clients. We embed security and privacy in our products and platform, which allows us to do so efficiently while ensuring we are adhering to our standards and regulatory requirements.

Now that I've laid out our strategy, let me talk about our investment in technology. The numbers on this slide directly tied to what Jeremy discussed. Our total $14.1 billion in technology spend includes $6.7 billion in investments. Technology spend as a percentage of revenue has remained fairly consistent over the past several years at 10%, which is better than our peers. Most of the expense growth since 2019 is investment spend. In our 2022 outlook, 50% of our spend represents investments in our strategy.

Our total investment spend is $6.7 billion, as I mentioned. Of this, $4.1 billion directly supports delivering customer and client experiences, and product development. Our line of business CEOs will cover this later. The remaining $2.6 billion sits across three of our other strategic focus areas and represents investments in firm-wide platforms, which I will cover in more detail.

And as you can see, our run the bank costs have remained relatively flat. Let's talk about how we were able to achieve that. Our run the bank expense includes items such as infrastructure, software licenses, and application support. As our business has grown and we have invested in digital capabilities, we have kept this expense relatively flat. On the right, you will see the infrastructure run the bank expense is only growing at 2%, while volumes have more than doubled. Our ability to scale this in a cost-effective way is critical as we continue to digitize our business and scale AI, both of which will increase infrastructure capacity requirements. We've been able to slow growth in infrastructure expense and scale efficiently because of our investments in firm-wide infrastructure platforms, including the private and public cloud. We regularly benchmark and we believe our infrastructure unit cost is best-in-class.

So now let's go into more detail in our investments. As I mentioned, our $4.1 billion of our investments are within our lines of business. The CEOs will cover this in greater detail. But I do want to touch on a few examples. In CCB, we are investing in a personalization engine that powers individualized experiences and insights that will help consumers make the most of their money.

In payments, we are investing in e-commerce capabilities like wallets, express checkout, and embedded banking that solve the critical needs for small businesses and the marketplaces that use them. A lot of companies talk about modernization and cloud migration. We started on this journey early because we saw the value and the opportunities it presented. As you see, we already have some exciting products and platforms that are benefiting our customers and clients today that are built on modern technology, including the public and private cloud.

The rest of my presentation will cover the remaining $2.6 billion in our investments. These are foundational to deliver new features at speed while creating efficiencies and scale across our businesses. Over the next few slides, I'm going to talk about modernization and software delivery excellence and why it's important. Modernizing our applications and infrastructure is critical to our long-term success. Our investments in modernization drive speed and scale in our business and allow us to maintain and manage resiliency.

With our application modernization, we are executing across four key areas. First, by refactoring applications, we can take full advantage of the cloud. This enables our businesses to move fast while being cost-efficient and resilient. It is not just about moving applications to the cloud. It's what you do with them and how you run them once you get there. This is a heavy and necessary lift, but we are focused on the areas that have the highest business impact, and the applications which will see the most value by moving to the cloud. Second, by replacing select applications with industry-leading software-as-a-service or SaaS solution in areas such as HR, CRM and service management. Third, by building cloud native banking systems. These core banking systems are critical to the firm, which is why we include them in our modernization strategy, while others may not. And lastly, by decommissioning redundant applications. We have already decommissioned over 2,200 applications since 2019 with 550 more to go.

Now, let me talk about infrastructure modernization. We have a multi-cloud strategy that leverages our internal private cloud and multiple public cloud providers. This allows us to leverage the best capabilities suited for the type of application and its needs. As an example, applications that require more variability in hardware, like risk calculations or AI, are more suitable for the public cloud. Applications with a higher dependence on other applications and our data centers are likely suited for private cloud until they can be refactored. As public cloud capabilities continue to evolve, we will adjust our strategy to strike the right balance between private and public cloud. With our infrastructure, we completed the buildout of our private cloud and have enabled one public cloud provider with two more in progress. About 30% of our infrastructure spend is on cloud. Having said that, if we define cloud the way others have, and include virtual servers, we are nearly at 50%.

In parallel, we are also migrating our applications to new state-of-the-art data centers, which will enable us to consolidate our data center footprint from 33 to 17. We are 40% of the way there. This approach gave us an early start on our modernization journey and our cloud migration. It has also made our infrastructure more efficient as we discussed earlier. We have line of sight into an incremental 15% to 20% cost efficiencies. This is primarily driven by refactoring our applications to use on-demand infrastructure on the cloud and data center consolidation.

Now, let's talk about software delivery excellence. This is important because modern engineering practices, when combined with application and infrastructure modernization, is what drives productivity at speed and scale. This is why we define cloud the way we do. As I mentioned earlier, we operate at a scale unmatched in the industry with over 40,000 software engineers delivering 30,000 releases a month on our modern tool chain. We are very focused on increasing engineering productivity and speed of feature delivery. By investing in our core software development tools, we can deliver these benefits at scale across the firm. Our tools automate the software delivery process across build, test, and release of features. It also automates the validation and evidence of controls.

We've onboarded nearly 60% of our applications to our modern software development tools, with a target of 80% by the end of this year. This level of automation and modern tools will make us 20% faster and the delivery of features to our customers and clients and will drive at least 10% improvement in engineering productivity in the next three years. And our ultimate goal is to double that.

Let me highlight a few examples where we have seen significant impact from our modernization efforts. First, we wanted to improve the speed, cost, and scalability of our Athena platform, which is the foundation of our Markets business. The platform processes millions of trades and completes billions of risk calculations daily. Through our modernization work, we delivered a 30% reduction in risk calculation times and an 80% reduction in calculation cost per hour. This was accomplished by refactoring the risk calculation application and running it on AWS which allows us to scale from 0 to 14,000 servers on demand.

Our second example is Chase.com, which serves our digital customers. It requires frequent updates and 24/7 availability. Our modernization work has already yielded benefits. We are seeing high availability and a 50% reduction in run-time costs. We achieve these results by refactoring the application to take advantage of a multi-cloud architecture, leveraging both our private cloud and AWS. All Chase.com customers will migrate by year-end.

The third example highlights our strategy to leverage software-as-a-service providers where appropriate. For capabilities like requesting technology or managing incidents, we leverage ServiceNow, an industry leading platform that replace 24 custom service management platforms. It has already delivered $50 million in savings and allows us to deliver new capabilities significantly faster.

Now that I've walked through some examples, let me summarize how all of this translates into efficiencies across our $14.1 billion spend. This is a different lens on this slide into our total spend across labor and infrastructure, which will help us highlight the opportunity. Over the next three years, our investments in modernization and software development will translate into a $1.5 billion in productivity and cost efficiencies. This is driven by a 10% improvement in productivity across our technology workforce and 15% to 20% cost efficiencies in our infrastructure spend. Keep in mind the demand on technology will continue to be high as businesses grow. Some of this productivity could help us fund future investments, and the balance will flow to the bottom line.

Let's move on to the next area of our strategy – data and AI. As you saw upfront in the presentation, we've an incredible amount of data and we already have several hundred AI use cases that we are executing on. For those that are already in production, we have a line of sight to over $1 billion in value. We are making investments to further accelerate our adoption of AI in order to scale this to several thousand use cases, and we are becoming more efficient as we do, doubling our impact per dollar spent over the last few years.

We also invest in AI research to help us solve some of the most complex challenges that have yet to be solved. While our CEOs will share more details on the impact AI is already having on their business, I do want to highlight one of them. As much as 50% of Euro Stoxx 50 option client flow is now priced with an AI model. This is a win for our Equities business which has improved its time to deliver quotes by up to 80%. Critical to scaling AI is making our data available for our data scientists. Our investments in our data platforms make this possible. These platforms provide the tools to migrate data to the public cloud, making it easy for data scientists to access data in real time.

Training AI models can require a lot of data and compute power, and the public cloud allows us to scale infrastructure in a cost-effective way. Our platforms also support reusable model libraries, making data scientists more productive. The breadth and depth of our data is a competitive advantage. With these platforms, we can unlock the power of our data, reducing the time to market for AI models by 70%.

Now, let's talk about the final area of our strategy – cybersecurity. This has been a priority for us for almost a decade, and our capabilities are best-in-class. Our investment in automation and controls have enabled us to maintain steady investment levels despite the dynamic threat landscape and the need to protect new technologies such as cloud and blockchain. We embed security controls directly into products and platforms so that our engineers can be more productive, allowing them to focus on features that grow the business.

Additionally, we leverage technology to improve our overall cybersecurity posture. For example, we saw this play out in our response to Log4j. We build protections in less than an hour and fixed the majority of our application portfolio in less than seven days. We differentiate our products through a security and privacy by design mindset, where we include keys, security, fraud prevention and privacy features upfront, not as an afterthought. You see this with Chase Security Center. This gives our customers visibility into which cards are stored in digital wallets and which devices have access to their accounts. We are also very engaged in helping to shape cyber policy. We're working closely across public and private partnerships to protect the overall financial services ecosystem.

I know I've covered a lot. So let me summarize the key takeaways. Our technology enables business growth and delivers at a global scale that is relatively unparalleled across the industry. We are focused on disciplined execution of the four areas of our strategy. First, delivering new customer and client experiences in product development. Again, you will hear more about the impact of these investments in delivering revenue growth and growing market share from the business CEOs. Second, through modernization and by optimizing our software development capabilities, we expect to realize $1.5 billion in productivity and cost efficiencies over the next three years. Our track record gives us confidence that this is achievable.

Our benchmarking shows we are already delivering best-in-class infrastructure unit pricing. We've offset the growth of infrastructure spend while the volume has more than doubled. We've already placed 30% of infrastructure spend on cloud and 50% if you include virtual servers. And the examples I shared we've seen the opportunity to further optimize infrastructure spend as we invest in refactoring our applications. We've seen improvements in our engineer productivity, and we have line of sight to an incremental 10% improvement opportunity. In addition to cost efficiency, we are improving the speed of delivery of new product features by refactoring our applications and using industry-leading software development tools.

Third, we are unlocking the power of our data by leveraging our firm-wide data assets. We've demonstrated successful delivery of AI across the firm and have line of sight into $1 billion in value. We have a bold ambition to broadly leverage AI in many more ways. So, we're delivering data platforms that allow us to accelerate the delivery of production AI models by 70% and do so in a cost-effective way. Finally, we will always invest whatever it takes to protect our customers, our clients, and the firm. Through automation and intelligence, we've been able to keep our investments relatively flat, as the threat landscape has shifted, and we've needed to accelerate our response to new threats.

So, in conclusion, I want to emphasize that we are well-positioned to leverage our technology as a key differentiator for our business and a competitive advantage for our company. Thank you.

Operator: Welcome to the stage, Jenn Piepszak, Co-CEO of Consumer & Community Banking.

Jennifer A. Piepszak

Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

Good morning, everyone. Marianne and I have been talking to you about the CCB franchise from different seats for many years now, but we're particularly excited today as this is our first opportunity to do it together. So first, we'll cover an overview of our financial performance and the investments we're making, which will help frame the rest of the session. I'll then cover Banking and Wealth Management in more detail, and Marianne will cover Payments, Lending, and Commerce.

So, we wanted to start with our strategic priorities, the true north for the business. There are lot of words here on this page and we've chosen them carefully. These guide how we run our businesses, so you really won't see them change over time. On number one, everything we do starts with the customer. We're focused on meeting the financial needs of all customer segments and continuing to grow households. We do that by delivering experiences that our customers love through our branches, bankers, and digital channels and our continued investments in data and technology. So, on to number four, operating a disciplined risk and control environment, as you heard from Jeremy, is the price of admission. But risk platforms are also a driver of responsible growth, and we know that we can only deliver an exceptional customer experience if we deliver an exceptional employee experience. As they say and I often repeat, culture eats strategy for breakfast, and we focus every day on being the place where everyone wants to work. And getting all of this right is what has enabled us to deliver best-in-class financial performance over time and we're confident that will continue.

So, let's take a look at our financial performance at a high level. On the left, since we last met two years ago, we've grown customer relationships across each of our businesses, which, of course, is the catalyst for everything. In the middle, deposits grew over 50% and investment assets over 40%. But for reasons that you're all too familiar with, mortgage prepayments and broad de-leveraging, loan balances were down 9%. And on the right, I'm going to talk about revenue and expense in a moment. But it's worth noting that a 26% ROE, excluding loan loss reserves, as you can see on the bottom right here was a strong performance, particularly considering the impact of lower NII. And that's because of the scale and diversification benefits of our businesses.

So, now taking a closer look at revenue on the next page. Starting with the impact of macro rates, deposit margin compression alone reduced revenue by nearly $8 billion over the last two years. At the same time, we were able to drive nearly $3 billion in volume related growth on the back of that scale and diversification I mentioned earlier. Moving on to revenue margin, which excludes deposit margin, here we're modestly higher as we were able to offset roughly a billion of competitive margin compression, broadly defined, including product refreshes and partner renewals in card as well as policy changes like overdraft.

Looking forward, higher rates are driving deposit margin expansion and NII growth. And as you can see on the right, of the $56 billion 2022 NII outlook that Jeremy shared upfront, $38 billion of that is CCB. This represents an increase of $5 billion over 2021 and that will grow to $10 billion when looking at our fourth quarter run rate, which clearly would more than offset the macro rate impacts of the last two years. While we're not guiding to overall revenue for this year or next, this material increase in NII is helpful context as we dive deeper into expenses.

So, let's start with the overall change in expenses from 2019 to our 2022 outlook looking at the key drivers on the right-hand side of this page. First, you'll see that our volume and revenue-related expense is down slightly, which may not be intuitive. Underlying this was a little more than $1 billion of core expense growth, including higher banker and advisor incentives, which is more than offset by auto lease depreciation. And then our structural expenses are up approximately $800 million, with the biggest component of this being wage inflation, which we're seeing across our businesses. Of course, the big focus of our session is investments, which are expected to be up $3.3 billion from 2019 and Marianne is going to take you through that in more detail in just a few minutes.

Stepping back, we wanted to provide some competitive context on our financial performance. ROE is the primary way we measure ourselves. And while not all peers disclose returns at the segment level, we are best in class relative to those who do. We don't manage to an overhead ratio. As we always say, it's an output, not an input. But given our increase in expenses over the last two years, we thought it would be instructive to look at competitive comparisons here as well. Relative to our peer group, our overhead ratio is in line, but, of course, a lot of factors drive that, including business mix.

So, as you can see on the right side of this page, we compared our largest businesses to relevant peers. In Banking, our overhead ratio is three points higher than the comparable segment of our closest peer. However, as you know, overhead ratio is a function of both revenue and expense. On revenue, our rate paid on deposits is about the same. However, our reported margin is lower given every bank has different approaches to transfer pricing. So, if you simply normalize for just this one thing, our efficiency ratio would be meaningfully lower. And below that in Card, even making what we believe to be a conservative adjustment for the accounting differences in marketing spend, you can see we compare quite favorably to our best-in-class peer.

We've delivered this strong performance in part by driving meaningful operating leverage in the business. While there are many ways to look at it, at a high level, our total expenses per account excluding investments have declined by 4% since 2017, even as we have absorbed inflationary pressures. And before I turn it over to Marianne, just a few more points on efficiency. On the right-hand side, we broke this down by our largest businesses. In Consumer & Business Banking, a key driver is our branch network. We have reduced this cost per account by 12% since 2017 as we have generated strong account growth, seen a shift to digital for day-to-day transactions and consolidated branches in response to changing customer demand. In Card, one of the largest cost drivers is operations and fraud. Here, we have reduced this cost per account by 36% since 2017, as we have improved machine learning capabilities and reduced customer call volumes.

And with that, I'll hand it over to Marianne to cover investments.

Marianne Lake
Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

Hi. So, I'm going to dig deeper into investments on this page and to orient you CCB represents $7.5 billion of the firm-wide $15 billion of investments that Jeremy mentioned, and we're up $3.3 billion since 2019. So, our story as you can see, is quite simple and compelling. There are three key areas of investment. The first is $2.8 billion in technology and product, which I'm going to come back to on the next page. The second is distribution, including marketing, which is principally the cost of new customer acquisitions that flows through expense. But note that while there is $2.2 billion of marketing here in investments, our total gross cash marketing is closer to $7 billion and I'm going to review that in detail later. Distribution also includes expanding our branch network with new builds since 2017, which will breakeven within four years. And Jenn is going to review the whole strategy around our branch network.

So, our third category, is our two growth businesses. First, Wealth Management and this represents 1,100 advisors added since 2017. And again, they'll breakeven in four years. And then second is commerce of about $900 million, about 40% of this spend is deal integration costs and amortization. And I'll talk later about the acquisitions and about our travel strategy. This will remain for another couple of years, after which it will largely be in our rearview mirror. The other 60% here is mostly travel-related operating expense, which we're showing here for transparency, but that's cash flow positive this year.

Stepping back, we have a high degree of confidence in the business cases for our investments and discipline in when this spend matriculates out of investments into our run rate. So, for acquisition marketing, as Jeremy said, we re-decision each year from zero. In fact, we re-decision every quarter and every month. And for our longer-term investments, we move them to run rate expense when they become cash flow positive, which means when taken together that about half of the 2022 investment spend here, excluding technology and product, gets to be re-decisioned within a year. However, in a healthy and growing business, you should expect we will continue to reinvest.

Zoning in then on technology and product and starting at the bottom, you can see that the driver of growth in spend over the last three years is in our modernization agenda, including infrastructure, applications, and data. Our core platforms are monolithic applications that were built many years ago, but they are fit for purpose. They have high performance and they served our scale businesses very well. But it's also true that the benefits of a modern ecosystem, more loosely coupled on highly scalable and elastic infrastructure, is also real in terms of speed to market, on-demand capacity, and resiliency. So, we're two years into a five-year journey here with our move to an agile organization, positioning us very well to execute. And we would expect this level of spend on modernization to remain elevated in the near-term, but we're making real progress. 40% of applications, including our mainframes, have already moved to our new data centers, and our primary customer facing site Chase.com is live in the public cloud as Lori said. And on data, while we're in the first half of our journey to the cloud, we have made significant progress replatforming to on-prem scalable machine learning environments, which has allowed us to invest in high priority AI and ML use cases that are delivering a lot of business value today.

Moving up, as I said, we operate in a fully agile product structure with close to 100 products and services, delivered by dedicated design, product, data, and technology teams. And their backlogs are defined by our business priorities, including customer experience, innovation, and optimizing the total cost of ownership against which they're constantly prioritizing. About 10% of product development spend is against customer engagement, principally in our digital channels, about 30% on features and innovation, and the other 60% on platforms and utilities that form the chassis of the whole business. And about half of our product development spend pays back within five years. So, we're going to bring much of that to life throughout the rest of the presentation. But it is in large part because of all of these investments that we've been showing remarkable consistency in growth and returns over the last decade.

With our pre-tax profits excluding reserves growing at a 5% CAGR, notwithstanding that 2021's performance was cyclically low. We grew client balances with an 8% CAGR and gained notable share in both our Banking and our Card businesses. And looking forward, we're excited about doing the same for the next 10 years.

And so with that, I'm going to hand it back to Jenn who's going to start taking you through it.

Jennifer A. Piepszak

Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

So, I'll start with an overview of our Banking businesses and then double click on our investments in the branch network and wealth management. In Banking, both consumer and business, we’re the clear market leader. And we'll continue to build on this position by leveraging deep customer insights to strengthen our offerings to be the bank for all. And on branches, we know they serve as the storefront for the entire firm. They are what makes us local. Here, we're only starting to realize the benefits of the investments we've already made and will continue to invest for the future and optimize our existing footprint. Lastly, in our US Wealth Management business, we've established a strong foundation and are focused on growing the business by adding advisors and strengthening our digital capabilities.

So, let's start with Banking on the next page. We have continued to drive core household growth, which, as I said earlier, is the catalyst for everything. We now serve more than 28 million consumer bank households and that's up 15% since 2017 on the strength of our model to acquire, engage, and retain primary bank relationships. It's also worth noting that we've had strong traction with younger generations with Millennials and Gen Z, now representing 45% of our customer base. And we grew Business Banking clients by 37%, maintaining our leadership position during a period of rapid small business formation. And we now serve more than 3.5 million Business Banking deposit clients across the country.

So, stepping back, you're all aware of the macro tailwinds on deposit balances. But more importantly, because of the investments we've been making in the franchise, we were well-positioned to grow more than any other bank and gain 120 basis points of share over the last two years. And by the way, that's a record even for us. Given our success in acquiring new households and the strength of our relationships with existing customers, we grew to 1 trillion in deposits and based on the common industry reading of FDIC data became the number one retail bank.

We aspire to be the primary financial partner to our customers and that's reflected in the services included on the left-hand side of this page. Many of these will be intuitive to you, but we don't often step back and look at the aggregate value we deliver. We pay close attention to the competitive threat of fintechs, but no fintech can match the breadth of these solutions or the trust and security we provide. This comprehensive value proposition together with the services we offer across Payments, Lending and Wealth Management is what customers care about and why they choose us as their primary bank. It's also in part why deposit betas were lower in the last cycle than they had been historically and could look that way in this cycle too. And I'll come back to this later.

And our customers show us how much they value these services through their strong omnichannel engagement, which you can see on the right. We now have more than 46 million mobile active customers across CCB, up 35% since 2019 and over 50% of them use one or more of our financial health tools. 70% of our customers visited a branch in 2021 and 20% met with the banker to discuss their financial needs. And these numbers are consistent, even for younger generations. While we feel great about our momentum, we know this work is never done, which is why we're developing value propositions to serve distinct needs of our customer segments. We know that we have an opportunity to continue to grow share among younger customers and those with lower incomes. And we have an opportunity to deepen our wallet share with affluent clients and small businesses.

Here are just a few examples of how we're addressing these opportunities. For families, Chase First Banking delivers a youth debit card and mobile experience with parental controls. This makes Chase the platform for kids to begin their financial journey and grow with us over time and allows for parents to introduce their children to financial literacy all within their existing Chase Mobile app. For low-to-moderate income customers, we've had great success scaling Secure Banking, our low-cost checking account. And we're just getting started as there is more we can do to address their needs, including making it even easier to get started with Chase and manage their day-to-day cash flows. And for affluent clients, we've been focused on scaling Chase private client by addressing their needs, through relationship benefits and elevated servicing. And looking forward, we're focused on ways we can strengthen the value proposition and serve more clients by adding advisor capacity, which I'll talk about later.

So, onto small business. We serve a diverse set of Business Banking clients covering nearly every industry and ranging in size, generally up to $20 million in revenue. And we do that by tailoring our value propositions and coverage models, which you can see here on this page. For smaller, less complex businesses, we've launched Chase Business Complete Banking to provide banking, card and payments acceptance in one integrated bundle, making it easier for our clients to access the services they need and focus on what they care about most, running their business. For larger clients, we've optimized our coverage model through better tools and processes and now manage 26% more clients since 2019, while delivering a record client experience, which gives us confidence to further scale this model. And we know that client needs also vary by industry, which is why we're investing in tailored solutions like Customer Insights, which helps our clients understand their customers and performance by harnessing the power of our unique data assets from both our issuing and acquiring businesses and Takis will touch on this later. These examples of segment strategies, both business and consumer, are just illustrative of our broader approach to deeply understand and serve distinct needs across all customer segments.

And we know it's also important to meet our customers in their channel of choice. As you can see here on this slide, customers are using self-service channels for more of their day-to-day needs across account opening, servicing, and money movement transactions. We strengthened our model by investing in digital channels to provide more services and improve customer experiences, driving more than a 10 percentage point increase in customer satisfaction since 2019, while at the same time achieving record high customer satisfaction in our branches. And as I mentioned earlier, the overall branch network cost per account is down, in large part due to these trends, which allow us to serve more households per branch.

To wrap up on our Banking businesses, we know when we get all of this right, this is what it looks like. Our goal is to be the primary operating account for our customers and we're doing just that. These primary relationships are highly satisfied, they are loyal, and they are engaged with Chase across products and we don't take that for granted.

Looking ahead, we remain focused on meeting our customers' needs, which we do by providing them with leading services and experiences in their channel of choice, tailored to their distinct needs. And in a rising rate environment that's an important place to start. We didn't lose primary bank relationships in the last cycle and we don't plan to this time. Our strategy is to compete on value and convenience, not just price. And we have a range of options to capture money in motion, including CDs and our Wealth Management business. And since I know it's on your mind, our base case for beta is that it's likely to be structurally lower as it was in the last cycle. However, this cycle is obviously already different in that the implied suggest will peak more quickly.

We do expect, though, that there will still be lags and re-price even if we ultimately hit a higher level of rate paid than the last cycle. And that's likely to last for some time. Of course, this will depend on the path of rates, system-wide liquidity, competition for deposits, and customer response. And on a related note, deposit growth, higher rates, and accelerated consumer spending will generally mean lower retail deposits, which we think we can offset through organic growth. Therefore, we expect deposits to be flat to modestly higher from here. More importantly, through this cycle and beyond, we will continue increasing customer engagement, growing households, and capturing higher wallet share to extend our leadership position.

So, now a double click into our investment to expand and optimize our branch network. But first, a quick video so you can get a feel for the culture and energy in our branches.

Like I said, our branches are our storefront and the people in our branches are the greatest ambassadors for our brand. None of us would be here in this room if there wasn't a banker talking to a client in one of our branches right now.

Our branches are key to why customers choose Chase, how we deliver exceptional omnichannel experiences, and how we identify and serve more client needs over time. Branches open the majority of new-to-Consumer bank relationships and also influence customer choice across channels. For example, as you can see here on the left, digital deposit production is six times higher in markets where we have an established presence. Branches also remain an important part of our client service model. 36 million unique customers walked into one of our nearly 5,000 branches last year, and more than 75% of our balances are still held by customers who regularly use our branches. And while that stat really hasn't changed over the last few years, we do see that customers are engaging with our branches differently. While teller transactions are down, banker meetings and calls are up meaningfully. And as a result, our bankers are identifying and serving more client needs with banker productivity up 20% since 2017.

And how does this work? The people in our branches are an integrated team of experts who work together to identify and serve client needs locally. Our bankers are a highly skilled workforce, supported by strong tools and client leads to drive engagement. And when a team works well together within a branch, the results are really hard to replicate. Over 85% of our first-time investors come from banker referrals, over 75%

of our Business Banking clients start as a Consumer Banking customer, and about 50% of consumer mortgage originations come from our branches. And it's this powerful partnership that has helped drive that 120 basis points of share gain I mentioned earlier.

Most often our bankers identify opportunities through their regular engagement with our clients, but we're seeing referrals in multiple directions, hence the circle on the right. For example, a Home Lending advisor who brings in a new client through a relationship with a local realtor can leverage our mortgage relationship pricing program to encourage his or her client to meet with a banker during the home buying process. And by the way, being a part of the JPMorgan Chase franchise makes the circle even bigger. Small business clients can graduate to Commercial Banking and Consumer Banking clients can move to the Private Bank. So whether you're an individual or a business, you just can't outgrow us.

To support the evolving role of branches, we're updating our physical environments and tailoring execution to meet the needs of local communities. A great example of this is our community strategy. Here, we're focused on building trust in underserved communities through tailored roles, branch formats, and engagement. We started by adapting our branch team model, including the introduction of senior business consultants who mentor small business owners, community Home Lending advisors, and Community Managers who are local ambassadors who build relationships with community leaders and non-profit partners. Community centers, which are the flagship locations for our strategy, are unique branches that have more space to host grassroots events and are hyper-local in every way. And already you can see the scale of this activity here at the bottom of the slide. But more importantly, we're committed to driving long-term impact measured by things like helping people improve credit, save, and plan for the future, and helping small businesses thrive so they can grow revenue and hire more employees. We know when we get this one right, we are embedded within the community and every customer can say “Chase is the bank for me”, which we know is critical to becoming the bank for all.

Now to talk about our broader footprint. We have a proven, data-driven approach to continue optimizing and extending our branch network. In our mature footprint, as you can see on the left-hand side, we've gained nearly 210 basis points of deposit share while consolidating over 850 branches since 2017. We know that branch share and deposit share remain highly correlated and as you can see in markets such as New York, LA and Chicago, we've been able to capture materially more deposit share relative to our branch share over time. And now, as you can see on the right-hand side of the page, we've taken that proven model and invested in more than 500 new builds over the past four years, already driving $20 billion in incremental balances. 300 of that 500 were in new markets like DC, Boston, and Philly. It's still early days, but we've demonstrated we can successfully enter new markets and grow organically. We're going to continue to invest in new branches and high opportunity markets and are confident we can grow deposit share in line with or better than branch share over time as we have the mature markets. This proven model is allowing us to double down the momentum without sacrificing efficiency.

And speaking of momentum, these investments we've made in our network position us to drive growth for decades to come. Our current deposits per branch are impressive, particularly when you compare them to the industry. But when you take into account that more than 20% of our branches are less than 10 years old, which means they're not fully seasoned, you can better understand the upside of the investments we're making today. And it's worth mentioning that many of these newer branches are in large markets like the ones I just mentioned in cities like Minneapolis and Baltimore. Another way to think about this is that we are number one in retail deposit share with only 80% of the portfolio being fully seasoned. And the other 20% represents significant potential from here. To put that in context, when our branches that are less than 10 years old grow to look like those in our mature network with more than $200 million in deposits per branch, we would add an incremental $140 billion in deposits. Not to mention the other opportunities in Lending and Wealth Management. And again these expenses are already in our current run rate. So, all of this is to say as we think about our branch network and this embedded opportunity we wouldn't trade our portfolio, our network, our hand for anyone else's.

Looking ahead, our goal is not to have the most branches, although we might, but to have the right branches in more communities serving the financial needs of our customers. We've already expanded our coverage of the US population by nearly 20 percentage points while reducing our total branch count to just under 5,000. This isn't a binary choice between digital and branch. It's about creating omnichannel experiences to meet customers when and where they want. And it's because of this that each branch can reach more households. In fact, the average branch in our network now serves 25% more households than it did in 2017. This is why we believe we can continue to pursue growth opportunities extending our network to 85% of the US population while keeping branch counts about flat. Jamie talks about getting to 20% deposit share and given the US banking market remains one of the most fragmented in the world, we expect that some bank is going to get there, and we’d bet on us.

So, now let's take a look at our Wealth Management franchise. At our last Investor Day, we had recently carved out US Wealth Management as its own business to give it more focused investment and attention. This business serves clients through advisors who are in our Chase branches and offices as well as through our Self-Directed platform. We're focused on capitalizing on the opportunity by leveraging the entire JPMorgan Chase franchise, which includes our branches, bankers, digital channels, and our world class Asset and Wealth Management business that you'll hear about from Mary later.

So, starting with our Full-Service business, our 4,700 advisors manage more than $600 billion in assets across 2.4 million accounts. Here, we're focused on scaling our branch-based model to deepen with existing Chase clients who have over $4 trillion in investment dollars with other providers. On Self-Directed investing, we launched in 2018 and already have nearly $60 billion in assets. The key to scaling here is by driving adoption with the 60 million customers who regularly log into our digital channels. While we currently have less than 2% market share in these businesses, we have a solid foundation, momentum, and a strong relationship with millions of Chase customers who already trust us with so much of their financial lives.

Now, let's take a closer look at our Full-Service business, where our branches provide a key strategic advantage in two ways. First, 50% of advisors come from other branch roles. This means they're already familiar with our branch model and as a result can hit the ground running. They also have lower attrition, higher satisfaction and help create a more diverse advisor base. Second, it's also the primary driver for client acquisition. As I mentioned earlier, over 85% of first-time investors come from banker referrals. And we've seen that adding investments to a deposit relationship is powerful. These clients have five times more of their balances with us and also have twice the revenue and lower attrition. The results of this model speak for themselves as you can see on the right. In just the last two years alone, we've grown our Full-Service clients by 12%.

In an industry that is constrained by advisor hiring, the key to winning is growing your advisor base efficiently and effectively and our branches allow us to do just that. We have been able to add 1,100 advisors since 2017, which includes a record high of over 300 in 2021. And on the point of growing advisors efficiently, our advisors break-even in four years, acquire an average of 30 new clients per year, and have strong retention. We've only just begun realizing the investments we've made in advisor hiring since 2017 with the potential to add an incremental $130 billion in assets when they fully season. And because we know this model works, we're planning to continue to scale with the target of 6,000 advisors in 2025.

As we pivot from one Chase asset the branch to another, the Chase Mobile app, we'll now take a look at our Self-Directed business. We launched in 2018, and since then we've scaled quickly to 1.3 million clients with an average account balance of around $50,000. The product is free and easily accessible within the Chase Mobile app, providing our clients with a single place to manage their banking and investing needs. And we've seen these clients generate 50% more revenue and have almost twice the digital logins. It's probably a lot more than that over the last few weeks. Looking ahead, we're focused on adding core features like fractional shares and enhancing the user interface to improve the client experience and drive further adoption.

And as we think about investors across the wealth continuum, there is a growing segment of clients who are looking for low-cost advice and aren't well-served by existing channels. With that in mind, we're introducing a new remote device channel called Personal Advisors. Clients will be able to connect remotely with a team of advisors to help them set goals-based plans, tied to the best investment strategies for their needs. This is in pilot now and will roll out more broadly towards the end of the year. Looking ahead here, we're planning to scale this channel to capitalize on anticipated industry growth and meet client demand.

And in support of all of our channels, including Personal Advisors, we're also launching Wealth Plan, an omnichannel goals-based planning tool right in the mobile app. So, for a glimpse of what's to come here, let's roll the video.

Wealth Plan may not be the first, but will be differentiated in the unique way it will connect clients and advisors virtually to collaborate and build plans in real-time as you just saw. And it will also act as another lead generator for the entire Chase ecosystem, providing key information on our clients' goals so we can provide them with more personalized solutions.

So, to wrap up on Wealth Management, we will continue to leverage the power of our branches and digital assets to create value for our clients and meet them in their channel of choice. We're confident that the investments we're making in the Wealth Management business position us to win across the wealth continuum. We're setting an outlook of $1 trillion in assets by 2025, which you can see here on the right, but that's just the beginning. As our investments season, we expect to earn more of that over $4 trillion wallet that I mentioned earlier. And before I hand it back over to Marianne, I want to leave you with two things. In these investments, both the branch network and advisors, there's future operating leverage and growth embedded in our current run rate. And second, these investments are long-term, but predictable. So, we have high confidence in their returns and their ability to set the franchise up for decades to come.

With that, I'll hand it back over to Marianne.

Marianne Lake

Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

Okay. So, thank you, Jenn. I'm starting here on page 34. Across Payments, Lending, and Commerce, we are starting from a position of strength. We believe we are the leading Consumer Payments franchise in the US with over $5 trillion of volume. In Unsecured Lending, we continue to be the number one card issuer in both spend and lend with number one top of wallet positioning. In secured Lending, in home and auto, they performed very strongly over the last two years, acting as natural hedges to the overall franchise and each delivered a 23% return on equity last year. Finally, in commerce, our goal is to use our two-sided platform to introduce our customers to brands they love while delivering unique content and experiences. And Payments is at the center of all of this.

We already have an award winning and diverse Payments franchise with more than 65 million active customers, over a third of whom are highly engaged, transacting more than once a day. And at the bottom, you can see that these highly engaged customers interact with our digital assets more than four times frequently and also are more satisfied. Making things easy for our customers is something we obsess over.

We believe in customer choice, and our payment credentials work everywhere, in every venue, every time. On the top left, you can see that total payments volume is up over 30% over the last two years. In e-commerce, 70% of spend is Card on File, which means our customers just click to pay. And we're also gaining share of digital payments within our customer base and on our platforms. And we're doing all of this as we modernize our payments infrastructure. 80% of payment transactions are already migrated and speed to market to deliver new capabilities is 20% faster. And our real-time fraud platforms have resulted in $100 million of lower net fraud losses over just the last two years, but more importantly have delivered a better customer experience.

So, on this page, I'm going to spend a minute on payment innovation. We're all in, but we'll be data-led, and we're going to closely monitor the experiences that our customers love. So, what's the data telling us? It's telling us that new and emerging payment venues still represent less than 5% of all spend, including leading digital wallets and Buy Now Pay Later. Yes, they are growing, but they're growing from a small base and in both cases they are leveraging the mature card payments ecosystem. And I like our hand as the largest issuer in those venues because as they grow, we grow. From a consumer's perspective, existing payment methods work. They are easy, secure, reliable, and they provide access to funds and credit effectively real-time 24/7. But they also provide consumers with real value, including robust protections today and consumers should expect those same protections tomorrow. And that's the bar that the innovation will need to meet. We invest heavily in protecting our customers from fraud and being their advocate and their backstop in merchant claims and disputes. So, we're not seeing cannibalization of our core business, but neither are we complacent.

There's definitely a place for new payment methods, but they will likely only scale when they provide equivalent value and protections and we expect to be at the center of that. Which brings me naturally to our Credit Card business. As I said, we remain number one in both overall spend and lend and we maintained our share across both during the pandemic with record customer retention. And if you look at the charts, our financial performance has been very strong. Active accounts are up 23% since 2017 and spend trends continue to be strong across categories, having more than fully recovered, with sales volume up 44%. Against this, the elevated payment rates and the de-leveraging that we saw in revolving balances somewhat persisted and balances remain below pre-pandemic levels. But there is good news, as we've seen loan growth since the middle of last year with 11% growth year-on-year in the first quarter of 2022. And for context, that's 4 percentage points higher than we were seeing in 2019. So, we are seeing the acceleration in loan growth that we were expecting and revolving balances are up 8% from the trough.

Revenue is therefore down versus 2019 on lower NII. But importantly, this was more than offset by better credit. And so, risk adjusted revenue was up even versus 2019 by 4%. And here too, we're seeing acceleration with 10% year-on-year growth in the first quarter of 2022. The net result of which is that pre-tax income grew and the return on equity improved to 35% in each of the last two years. And we never stopped investing.

We believe we have the best products and the best partners and it shows in the strength of our market share at above 22%. We refreshed our entire branded card portfolio over the last two years. And these products are resonating and performing well with branded card new accounts in the second half of 2021 up 20% since 2019. And in the same timeframe, we also executed on a whole partner renewal cycle, positioning our co-brand business to be resilient and sustainable with 93% of co-brand sales contractually extended to 2027 or beyond, giving us distribution and revenue certainty for years to come. And the costs of these product refreshes and renewals was more than offset by revenue margin expansion.

On the right-hand side, we're pursuing several areas for growth. While we have a healthy 17% share in business card and we're clear number two, our number one competitor's share is decently higher and that share is our opportunity. To that end, later this summer, we are launching Ink Business Premier, a new Pay in Full product designed to meet the needs of larger businesses. This is testing well with our customers today, so we're confident in the product market fit. At the bottom, we're investing in flexible pay-over-time lending solutions. We launched My Chase Plan during the pandemic. We're ready to scale and we have broader aspirations. We are aiming to get to 20% share of outstandings over the longer term and together these opportunities will help us get there.

When it comes to launching new products, our ability to scale is proven. We don't have to be first to market. We can take the time to study customer behaviors and you can see a few examples on the left-hand side of this page of products that we launched on our platform and how quickly they scaled. And to prove the point, zoning in on Installment Lending on the right, we already have 5 million customers engaged with the products, 90% year-on-year growth rates and we're just getting started. Looking at the data, a small but growing portion of our customers are adopting pay-over-time solutions off of us. But they're not showing any particular loyalty to any provider. They want us to provide these services and they are showing enthusiasm for our products when we do.

So, we're focused on expanding Installment Lending through distribution and enhanced capabilities. And on distribution, how better to scale and by bringing all credit card installment solutions to the point of sale with our strategic partners next year and we're starting with Amazon, United, and Southwest Airlines. And on capabilities, we are launching Chase Pay in 4 and the waitlist is open now. It will be available to nearly 30 million of our Consumer Banking customers who will be able to turn it on like a light switch and it will work anywhere that their debit card works. We already have the broad capabilities and distribution that others are seeking, and we intend to bring installment solutions to all methods of payment over time, all in one place in our app.

And so, with that, I would like to show you a video of Chase Pay in 4.

Okay. So, I showed you our leadership positions, I showed you our financial performance, I showed you that we've been consistently investing and innovating and it's working. Importantly, our products are resonating strongly with younger generations who, contrary to popular myth, are not averse to credit or credit cards. In fact, in our base, nearly 60% of spend by Millennials and Gen Z is on our credit cards and they're demonstrating a similar evolution of spend and lend behaviors as previous generations adjusting for age. We did see a dip in credit spend during the pandemic, but the effect was temporary as customers were frequenting debit-centric merchants like grocery. So, it was a mix issue, not a secular trend. And it does not appear to be true that Millennials and Gen Z prefer debit cards over credit cards.

On the right-hand side, you can see that 64% of our branded card acquisitions are Millennial and/or Gen Z, up 20 percentage points since 2015. And here too 45% of our branded portfolio today are Millennial and Gen Z. So, we have every reason to believe that our products will continue to resonate with the next generation of card members.

So earlier, we told you we would cover marketing in more detail. It is our marketing engine, which fuels distribution and growth, in particular in card, marketing is to card what bankers and advisors are to banking, its baseline distribution. We spend every dollar that's strategic and adds shareholder value, spending more or less depending on the market opportunity. On the top left, you can see we reduced marketing acquisition expense by $1.4 billion between 2019 and 2020. This year, we expect to spend a little bit less than $7 billion of gross cash marketing across CCB, up $1.4 billion over the last three years.

As you can see, the lion's share of the spend and the growth is in card. So, on the top right, within Card, acquisitions is the biggest spend category driven by customer premiums, which are amortized over the first 12 months. So, you can see the large step-up in premiums year-on-year in 2021 and given that this spend was backend loaded, it is having an impact on 2022 revenues. But you can also see our acquisition spend this year will be broadly flat and so contra-revenues into next year will be broadly flat. So, the step-up is in our run rate and presents significant future leverage. The second largest spend category here are the product benefits accruing to our existing customers. Think about this like the cost of goods sold. It includes embedded partner benefits, like anniversary premiums or travel benefits like lounge access and Global Entry as well as the cost of plastics. This is an ongoing expense associated with a growing and highly engaged customer base.

So, on the bottom, we put these spend levels into context relative to the underlying business drivers and outcomes. First, acquisitions, which pay back within three years. In fact, to give you confidence, our first quarter of 2019 vintage has now paid back despite the impact of the pandemic. New accounts are up 14%. Cost per account is up 12%, driving overall acquisition expense up 26%. But remember acquisition costs are a one-time expense. Whereas what we get as you move to the right is a 2022 vintage that will deliver 30% plus more revenue per year than the 2019 vintage and this revenue will be higher in perpetuity, ultimately driving the lifetime value net of acquisition costs to be about 1.5 times higher. The decision about premiums is not made in isolation. It's not all about the number of accounts, it's importantly about the behavior on those accounts. And higher premiums here reflect better targeting and improve customer behaviors.

Below this, looking at product benefits up 26%, a reflection of active accounts up 16% and card sales up by more than 30%. But we want our customers to engage with our products and we want them to get full utilization of all of the value and the benefits afforded to them. And this is driving record customer retention 100 basis points better over the last few years and remember that a customer you retain is a customer you don't have to reacquire. We have a long history of delivering on acquisition investments. We follow a disciplined process, and we have a very rich dataset on both response and customer behavior through cycles, resulting in accurate models that improve over time.

So, how are we doing it? Well, we are increasingly leveraging our owned channels and the 11 billion eyeballs a year that come through them. And a great success story here is credit journey, our free credit score and education capability, which itself is delivering about 500,000 accounts annually without paying an affiliate bounty. We are investing in product and customer value, improving our targeting models, automating credit decisioning, and enhancing risk-based pricing and line strategies. And all of this are tailwinds for the performance of future vintages.

And on the right, we had some of our best offers ever in market across the portfolio in the second half of 2021, reflecting our investment strategy, the market opportunity, and the competitive environment. And the offers worked. In the second half of 2021, compared to 2019, we gained 40 basis points share of new acquisitions and in the super prime space where we had our refreshed Sapphire product being offered, we gained 180 basis points of share. So as I said, we consider acquisition marketing as baseline distribution, as we grow, this expense will grow. But we are making each dollar more productive over time.

So, talking about over time, the credit card industry and Chase within it have undergone radical transformation over the last decade. On the bottom left, fierce competition in the premium card and travel space in particular has driven cost per account up and net interchange materially down as more value has been introduced to attract and engage premium customers.

And competition for the scale and distribution of strategic co-brand relationships has also been heightened. And last but not least, in 2021, we had the cyclical impact of lower revolve balances. But as you can see in the middle, we’ve generated pretty extraordinary growth in underlying drivers, with active accounts up 60% and spend volume more than double.

And on the right, we've improved the yield on revolving balances by 360 basis points, even as we've improved the credit quality of the portfolio. But perhaps most impressively, total expense and I mean absolute dollars of expense is flat over this decade, even as we've grown, with operating expense per account down a pretty staggering 35%. So, while revenue has been under secular and cyclical pressure, pre-tax income has grown with a 6% CAGR over this period and returns have structurally improved. We've proven remarkable strategic adaptability and the benefit of scale beyond a doubt.

Looking forward, we will continue to drive channel and marketing productivity. We will fill product gaps, including small business, deliver new travel and commerce strategies, which I'll come to, helping us capture a greater share of our customers' lending wallets, including through installment lending, all driving consistent growth over the next decade, and a 25% plus return on equity, excluding reserves.

So, switching gears, moving on to Home Lending, in Home Lending, there are four parts to our story. First, we have remained committed to building a high quality, lower volatility business over the last five-plus years, and we delivered on that. Starting on the top left with de-risking our servicing book, and today, government and subprime loans represent less than 5% of the portfolio, driving a steady reduction in servicing cost per unit, which you can see in the chart on the bottom left. And our delinquencies are down by more than three times the industry.

And on the top right, we've executed on a program to optimize the balance sheet through loan sales and securitizations, freeing up capital for the firm and increasing returns in the business. And on the bottom right, we maintained discipline in our risk appetite and pricing, and in fact, have been in a net recovery rate position.
Which brings me to the second part of the story, how did Home Lending perform over the last two years?

Originations were up by more than 50%, with strength in consumer and record purchase volumes, both of which will be important as the market transitions. We also delivered record customer satisfaction in the first quarter of this year and a record 23% return on equity last year. We are more convinced today than ever that this is a relationship business and delivers value to the whole franchise through the cycle. Our recapture rate with banking customers is 2 times higher. And when one of our affluent customers gets a mortgage with us, we meaningfully grow deposit and investment balances. In fact, our relationship pricing program drove $9 billion of net new money into the franchise last year.

So onto part three, we are operating in a very different environment today. In fact, mortgage rates reached their highest levels in over a decade. We estimate the market will be above $2 trillion this year, down from over $4 trillion in each of the last two years. That said, on the right-hand side, housing fundamentals over the long run look constructive, and we expect the purchase market to remain solid, with supply constraints supporting continued modest home price improvements. Which brings us to the final piece, our digital strategy.

In February of 2020, we emphasized the need to digitize the end-to-end mortgage process. And rolling forward to today, Chase MyHome, a platform which connects all of our home-related experiences, products and tools is live and it's scaling, and the results are very encouraging. We are seeing rapid adoption across the platform. More than 70% of applications start digitally and 40% of our customers are highly engaged in our digital assets, nearly double two years ago. And those customers have better outcomes.

On the right-hand side, you can see that they have lower cycle times and higher pull-through rates. Our engagement tactics are working. On the bottom left, in March, more than 900,000 unique visitors came through the platform and this number is growing rapidly with a good mix of repeat visitors as well as prospects. The upshots of which is that 30% of funded loan volume is now sourced from Chase MyHome, which is a central part of our lead generation strategy.

Looking ahead, we still have significant opportunity across the home lending value chain in three key areas, lead generation, through continued engagement in our digital ecosystem Chase MyHome; sales optimization using advanced AI and ML to enhance the effectiveness of our sales force; and fulfillment automation, driving more loan volume to streamlined, automated workflows. And you can see on the right, we're already making progress. Together, these strategies will result in a more scalable and efficient business, which will outperform when the market opportunity presents and deliver a 15% return on equity through the cycle.

So, wrapping up secured lending with Auto on page 55. In 2021, the benefits of diversification in our business allowed us to gain share and deliver very strong results, a 23% return on equity here too. Originations were up by more than 30% and the charge-off rate was only 5 basis points. But the macro environment is presenting challenges today. The shortage of component parts and supply chain disruptions have impacted the business since the third quarter of last year, with low levels of inventory pressuring our dealer commercial services and manufacturing businesses. And so, even as retail continues to perform, overall loan growth is modest.

That said, this is also an industry undergoing significant digital transformation and we're ready. We've been investing over the last few years and modernizing the dealer experience by scaling new self-service capabilities, driving higher conversion rates. And we are excited to have launched Chase Finance & Drive, helping us reach our goal to be the number one digital shopping, buying and financing platform to Chase customers. And in March of this year, we saw 500,000 people engage with this platform, up 30% year-on-year.

So, let's take a look at those experiences.

Okay. So I'm going to wrap-up lending with risk. Stimulus, unemployment support, loan forbearance, all provided significant relief to consumers, resulting in increased cash buffers, loan prepayments and a sharp reduction in delinquency and losses across the industry, with improvements across all scores and income levels.

From a higher starting point, portfolios with a higher concentration of lower income and sub-prime borrowers, which does not include us, saw the greatest improvements. And as consumer stimulus and relief has expired, these riskier portfolios are seeing sharper increases on an absolute basis. But relative to their starting point are in a somewhat consistent place, not yet reaching their loan exceeding pre-pandemic levels.

In the charts on the right-hand side, you can see that our portfolio characteristics are very strong, meaningfully de-risked relative to 10 years ago, but 10 years ago was 2012. Compared to before the global financial crisis, it really is night and day. And we've maintained discipline in our risk appetite coming out of the pandemic. We have not expanded our approval rates based on the current artificially low loss environment. Our delinquencies remain well below the industry average and on the whole, our portfolio and our customers are well situated for what the future has in store.

Looking forward, on the left side, we are not yet seeing anything in our data, including in early delinquencies, that would point to an acceleration in credit metrics. Nor are we seeing anything to suggest consumer credit behaviors have structurally changed. Notably in Card, early roll rates stabilized since the trough in April of 2021, but have yet to inflect. So, we continue to expect normalization to take time. Expect full year 2022 card loss rates of less than 2%. In fact, at this point, we are trending below 2021 for the full year. And at this stage, pre-pandemic net charge-off rates will likely be reached closer to the end of next year than this year.

In Home Lending, we continue to expect modest recoveries, given embedded gains in the portfolio and in Auto, net charge-offs also troughed in the second quarter of last year and have increased modestly through the first quarter of this year, reflecting a mix shift in balances, not deterioration.

So, as I've been reading all your reports, I know a credit stress is on your mind, it's always on ours. And so, you can see on this page a stylized stress scenario. The elephant in the room is Card. And so, I'll focus my comments there. In Card, as you know, it is the absolute level and the rate of change of unemployment that matters most and not the macro factors that get you there.

So, in the charts, on the page, you can see a moderate recession with two recovery paths. And we don't have a crystal ball. But if we do face a stress, these cover a range of options. And that said, the 2021 publicly disclosed CCAR severely adverse results remain an instructive data point if you're looking for something worse.

Our shock for this simulation starts in the beginning of next year, unemployment peaks at 8% at the end of the first year. And to keep the math simple, we assumed a static balance sheet at about $150 billion based on the first quarter. And you can see on the right, the range of stress loss above baseline in the table. The results are manageable, $5 billion to $6 billion of two-year cumulative incremental losses.

Of course, the P&L impact in the first year would likely also reflect the pro-cyclical nature of CECL, although potentially muted as our reserve today includes a somewhat higher probability of a recession. And these builds would pan out over quarters.

In the meantime, we actually expect our balances will grow this year and next and deliver incremental revenue. And even in a recession, you might normally expect some revenue and expense offsets to this higher credit, like higher fees or lower marketing.

So, on to our final chapter and commerce, here, we've taken the capabilities and assets we already have across payments, lending, loyalty and offers. And we're making them work better together across customer journeys and on our platform, with a goal to increase top of funnel engagement and earlier consideration for core financial relationships, but also to allow us to generate recurring revenue streams and better economics as we compete more on experience than price.

We are starting where we have the right to play and where we have the assets to win. So, we are starting in travel, home and auto which are our core businesses. In 2021, we already had more than $10 billion of spend through our commerce platforms, and we have more than $10 billion of future purchasing power on our balance sheet in the form of points. And when we partnered with consumer brands that our customers love, we have generated more than $10 billion of spend with them and moved significant share. And you don't have to trust me on this, you can see quotes from our partners on the page.

So, moving onto travel, travel has been the center of gravity for our Ultimate Rewards program for a decade, and remains the most aspirational lifestyle category for many of our customers. And we partner with some of the most admired brands in the travel industry. Travel is at the center of our card business.

In terms of US leisure travel, $1 in every $4 spent is on a Chase Card, and $1 in every $3 spent is by a Chase customer. And the stats for dining are quite similar. But only a small percentage of this spend went through our platform because our assets were not differentiated. But despite that, in 2019, we were already a top 15 travel provider.

We saw an opportunity during the pandemic to own our own destiny in travel, and we acquired cxLoyalty, a proprietary, two-sided travel platform, and Frosch, itself a top ten leisure travel agency, providing us now with the booking engine, the content, the servicing excellence and the concierge capabilities that our customers should expect. And today, we estimate we are a top five US consumer travel provider.

So, a moment on the business case. Along with controlling the customer experience, which is everything, we now have full ownership economics. We have all of the travel commissions. We will be at scale and cross $10 billion of travel volume on the platform next year, with strong underlying growth. And a point of reference, the pre-pandemic Ultimate Rewards growth rate was a 26% two-year CAGR. And obviously assuming a continued benign environment, we would expect to reach $15 billion of volume by 2025 if not before.

Our travel business is cash flow positive today. The acquisitions pay back within six years on strong revenue margins. And for context here, industry commissions mix dependent are about 10%. And now we're getting all of that, whereas previously we were not. The business will require little marketing expense as we leverage our existing customers and channels reinforced by our loyalty program Ultimate Rewards. And so, the net of all of that, we expect a net margin of about 5% plus or minus.

And the strategy, we will launch ChaseTravel.com with Card customers later this year and then we're going to open it up to all of our Chase customers. We will deliver distinctive content and experiences and become a full-service travel agency to our small business and premium leisure travelers. And we will introduce those important customers to our strategic partners, and so the flywheel begins. So, let me bring this to life through our evolving super app and ChaseTravel.com.

So, looking forward here we have 66 million US households, including 5 million small business customers. And now we have 4 million Infatuation dining enthusiasts. We've got industry-leading products, unmatched first party data and a two-sided commerce platform. And our strategy is to expose distinctive content to our broad customer base, making Chase the best way to shop, pay and borrow. Starting, as I said, with travel and introducing our customers to key merchants within our platform at scale.

Okay. That was a lot. You with me? We just have two more pages. Okay. To synthesize what I hope you heard over the last hour. First, we are already market leaders in our core businesses and our investments in distribution through branches and marketing but also in innovation have allowed us to gain meaningful share over the last 10 years and we intend to keep doing so. But we are also investing in Wealth Management and Commerce that will fuel outsized growth in the future and generate new revenue streams. And in both cases, we already have the assets to win.

This is the money page. We believe we can deliver performance others can't because of four competitive advantages. First, the scale of our relationships is everything. And as we deliver experiences and products that our customers love, they scale rapidly. Second, our customers are more satisfied, engaged and loyal, deepening the moat around our businesses. And you can see that in our record retention. Third, we've been consistently investing year after year at levels that most of our competitors cannot and have not. And we have a high degree of confidence in the future returns they'll generate, more than $7 billion of investments this year, in fact, $12 billion if you gross up for all of our marketing.

And this expense, as Jenn said, is in our run rate and is a coiled spring of future earnings power and operating leverage. It bears repeating more than 20% of our branch network is not yet delivering mature returns, but they will. And our Card products and the value embedded in them is attracting more and more customers each year and we're crushing it with the younger generation.

And finally, it is the strength and the diversification of our businesses that has allowed us to consistently deliver best-in-class returns, including a 26% return last year, even at low rates and with a credit profile that will perform in all scenarios, which is why we expect to deliver a 25% plus return on equity for CCB looking forward.

Jenn and I are proud of the performance of the business and of the team, many of whom are here. But we don't take our position for granted. No doubt there will be challenges ahead. But we like our hand against any competitor and obsessing over the customer is our North Star. Thank you.

Sanoke Viswanathan

Chief Executive Officer-International Consumer Growth Initiatives, JPMorgan Chase & Co.

Good morning. I'm here to tell you about our international consumer growth initiatives. In the next few minutes, I'll walk you through the strategic rationale for these initiatives and share some progress we've had to-date.

Consumer banking outside the United States represents a significant untapped opportunity for the firm. As you can see here on the left side of the page, it's a $1.3 trillion revenue pool that's projected to grow at 6% a year for the next several years. Historically, banks have struggled to do well in markets outside their home markets in retail banking. But we think this is changing with digital. There's massive digital disruption happening around the world, and this opens up a window of opportunity for us.

As you can see and you know we've shown it in a gradient on this slide, a growing percentage of the opportunity is already addressable through digital models. And we think this is continuing to grow over the next few years. And digital attackers have also demonstrated a significantly lower cost to serve than traditional banks, benefiting from the ability to scale customers rapidly and not incur the cost of physical branch networks.

The main challenge, of course, for attackers has been – and they haven't made sufficient headway, is in building primary banking customer relationships. Although this is changing, as we have seen through the pandemic-related lockdowns, for us at JPMorgan Chase, we think this is a huge opportunity. We believe we can have the best of both worlds.

With our brands, our balance sheet and our intense focus on high quality customer service, we believe we can acquire and retain a high-quality customer franchise with high lifetime value. To do that, we need to have obviously the right digital and technology capabilities that can go toe-to-toe with the best attackers, and we believe we have this.

This is precisely what we've done to-date. From a standing start in two years, with a great team, we've built and stood up a greenfield digital bank in the UK and we launched it in September 2021. It's too early to you know declare victory, but in the eight months since launch, as you can see on this slide here, the Chase customers in the UK are already maintaining balances in their checking accounts, non-interest-bearing checking accounts, not high-rate savings accounts, twice as much as what we've seen in challenger banks even at the end of our first full year of operations and in many cases even after several years in business.

Let me walk you through our business model assumptions. Note that we are obviously at a very, very early stage in building out a business of sizable scale that will support millions and millions of customers and obviously commensurate earnings power. At this early stage, we feel the right way to think about our business is to think about the cash burn, let's understand it and aggressively manage the cash burn. This is the net loss we are making each year through to break even. For us in 2022, this number is going to be $450 million. And we think this will remain roughly the same in the next few years as we acquire customers and scale the business.

Of course, expenses will grow as we bring in more customers and scale volume. But we're generating revenues that are offsetting these expenses. And as such, we expect PTI to remain about the same. As we look at our models now, we predict to break even in the next five to six years from today and generate significant income thereafter. This is, of course, entirely dependent on how quickly we are able to ramp up customer volumes, engage them and build deep customer relationships.

On the right side of this page, I attempt to show you the cost structure of the business. The blue bit, the light blue bit at the top, this is platform and product costs and brand marketing expenses. It's roughly 70% of the expense base this year. These are largely fixed costs, and these are strategic assets for the firm. Every business of the firm benefits from this and they also benefit from tremendous economies of scale.

The platform can support multiple product segments, multiple customer segments, and can scale to millions of customers at low marginal cost and you can enter additional countries at relatively modest incremental investments. The brand-building efforts we are undertaking will benefit the entire firm, all lines of business in the firm, in the markets we choose to operate in. We are already seeing both platform and go-to-market synergies with many lines of business.

The remainder of the cost, the purple bit, this year accounts for about 30% of the expenses and these are variable. These relate to customer volume, their direct marketing and acquisition expenses, these are end customer benefits and operations and servicing costs. These also benefit from economies of scale over time, maybe not to the same extent as the platform. And over time, we expect to have a cost structure, as you can see in the curve, that is very, very competitive on a unit cost basis. And we believe this is far lower than what it could be in the traditional model.

Of course, it's very early days and there's significant uncertainty ahead. We're very confident in our business plan and we are patient with our investments, but we are not stubborn. We will continuously learn from what we see in the business as it evolves every quarter, every year, and re-optimize and iterate and make the right choices. We also have several levers we can pull to maximize the value from the investments we've already made.

Having said all that, the progress to date is encouraging. Since the launch in the UK in September, we've acquired over 0.5 million customers, gathered over $10 billion dollars in deposits and processed over 20 million card and payment transactions. Even more importantly, the customer experience we're delivering is creating highly engaged customer audiences.

So, as you can see here, around 30% of our customers, we call them highly engaged. What do I mean by that? These are customers that are already demonstrating the leading indicators of behaviors that ultimately translate into the primary banking relationships that Jenn talked about early on. These are customers that are using our debit cards multiple times a day, making payments in and out multiple times a week, including bill payments in the form of direct debits. They're making regular credits into their accounts, including salary credits, and they're putting in substantial savings. These are all encouraging leading indicators.

I'm also pleased to see that we are serving customers across the country. It's a widely dispersed audience and across age groups. We have customers that are 18 years old, and we have 90-year-old customers as well. This shows that digital is here to stay.

We have a big roadmap – a product roadmap ahead of us, including lending products and investment products. And as we build this out, we want it to complement and accelerate our strategy. And to that end, we made an investment and we also made an acquisition. Let me touch on both of these, quickly walk you through the rationale and share some performance trends.

Nutmeg is a digital wealth manager that we acquired last year. It's a leading digital wealth manager in the UK. Has a mission of democratizing investments and delivering digital experiences to simplify investments. With this, they've been able to disrupt the direct investing market in the UK and grow market share by almost 50 basis points in two years from 2019 to 2021.

This trend continues since the acquisition. We are seeing healthy growth in clients in net new money and assets under management. And we're also seeing growing synergy with our Asset Management Solutions team. And the first successful demonstration of this was the launch of JPMorgan's Smart Alpha, just a managed portfolio that Nutmeg distributes in the UK. By bringing the Nutmeg experience and the Chase experience together, we're optimistic that we can deliver a seamless banking and investment experience to customers in the UK and beyond.

Moving to Brazil and C6 Bank, as you all know, Brazil is the third largest retail banking market in the world, and it's one of the most aggressively digitizing markets. As such, we believe there is a really attractive addressable revenue pool and digital banking. However, it is an emerging market with its own risks. And we don't start with a wealth of experience in consumer banking in Brazil. So, our strategy is to partner with a team that has years of experience in the local market. And that's exactly what we've done with C6 Bank. C6 Bank is a leading digital bank in Brazil. They're the third largest bank. It's led by a management team with decades of experience in the Brazilian consumer market.

And since their launch in August 2019, they've acquired over 16 million retail customers and they also enjoy very high activation rates and multi-product customer usage rates. So, we are keen to partner with them and we want to support this ongoing growth momentum and help them with deepening their customer relationships and build a sustainable business for the long term.

To wrap up, we're very optimistic about the prospects of international consumer expansion. We are very aware of all the risks and we are going about this build in a prudent manner. We're being very deliberate, focused and disciplined in how we're building and scaling the platform. We are not spreading ourselves too thin. We're continuously calibrating and learning from all the lessons from the US consumer franchise. And wherever possible, when we're building assets, we're building it in a strategic way such that all the businesses in the firm can leverage them.

They're off to a strong start and we are well-positioned to build a robust and sizable business that will generate significant shareholder value and franchise returns for the firm for decades to come. Thank you.

Operator: Please welcome to the stage Daniel Pinto, President and COO of JPMorgan Chase and Co. and CEO of the Corporate and Investment Bank.

Daniel E. Pinto

President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan

So, good morning, nice to see you all in-person. So, today I will be joined by three of my colleagues: Troy Rohrbaugh, so he will do it virtually, this is a reminder that COVID hasn't gone anywhere and probably will stay with us for a while. So, he's recovering from it; so, Marc Badrichani, the Head of Sales and Research; and Takis Georgakopoulos, the Head of payments.

I will give an overview of the Corporate & Investment Bank and I will brief on the four lines of business. And then, if you remember, last time we met, we did a deep dive in security services and banking. This time, we are going to address the other two businesses, markets and payments. So, going through the first page, so the CIB was put together 10 years ago, and the strategy was very clear to be global, complete, diversified and operate at scale as the only way that we thought it was possible to produce consistent, good returns.

We build – that strategy helped to build a very holistic dialogue with clients and deepen the relationship with them, and operate – and provide operating leverage and efficiency across the companies. And the numbers show that.

On the left side, revenues, in the last 10 years, grew 52% when the wallet available to these businesses grew 14%. But most important, the operating leverage that we generated increased net income from $8 to $21 billion dollars, 164%, and allowed us to maintain, absorb the increase in capital, a lot of that regulatory capital and produce very good returns overall.

And those increases in share apply to pretty much all the lines of business. Investment Banking revenues went up 128% and the wallet 90%. In markets – in payments, sorry, the overall payments went up by 45%, but Treasury Services, 57% in revenue increase with a wallet that shrunk [13%. In markets, 42% growth, with a wallet that only increased 5%. And in securities services, 23%, with a wallet that increased 12%.

So, according to Coalition, as they divide the business in 24 sub lines of business, and we are top 2 in 21 of those and 1 in 14 of those. So, what it tells you that is great. On the other hand, it tells you that there is a lot of work to do to keep improving from those numbers.

Moving to the next page and this is a picture of the last five years, where essentially we continue deepening our relationship with clients and acquiring new clients. We focus very much in managing our expenses discipline – with discipline while we were investing, and we deliver performance, and we increase our market share. Overall, the Global Corporate & Investment Bank grew market share by 180 basis points, and that is reflected across all regions and across all products. In the last five years, the CAGR of increasing revenues was 10%, expenses 6% and net income almost doubled, grew 94% and our overhead ratio went down from 57% to 49%.

In terms of return on equities, we have a really consistent performance year in and year out and well above the cost of capital and probably best in class. And is that shown across the both sides of the business, the transaction bank, TSS that have produced very consistent performance as the traditional and the heritage Investment Bank.

And most important, in the last couple of years, where we finally saw a substantial increase in wallet, we not only took advantage of that increase, we also increased our market share on top of it. And on the bottom of the page, so you have the performance of return on equity per lines of business that, as an average, every line of business in the last five years was well above the cost of capital. So, clearly, going forward, how do we manage our capital, how we optimize this, how do we manage our liquidity, and our expenses will be crucial to continue deliver returns.

The next page is about expenses. So, expenses from 19 to 21 grew by $3 billion dollars. At the same time, revenues grew from $39 billion dollars to $52 billion dollars of equivalent of $13 billion dollars increase. So, therefore, the marginal overhead ratio for that increase of $13 billion was 23%. And that includes all the expenses.

When we go to trying to understand where those expenses grew, $500 million dollars is technology, 80% of that is technology investments and data analytics, and the other 20% is mainly investments in talent across the franchise. Revenue related and volume related revenues, it has increased from 19 to 21 and is mainly driven by three components, is brokerage, is the stamp duty taxes in Asia for the prime businesses and is comp – compensation related to increase in performance. The structural expenses were relatively flat. So, we have a small increase at that point from wage inflation but it was compensated by, at that time, still a lower T&E across the CIB.

From 21 to 22, expenses are going to go up another $1.9 billion. So, $700 million dollars is technology, data and analytics, that's the bulk of it. There is a very, very small increase in talent investment across the franchise. The volume and revenue related, we don't think that it will be a big difference from last year, obviously it's market dependent, but so far it looks relatively flat. And then we did – we are feeling more and more the wage inflation filtering into the franchise and T&E is going back towards a more normalized level. Out of the $27 billion dollars that we have, that we spend, $3.8 billion dollars is investments, and of those $3.3 is technology. So, let's go to the next page.

So, technology investments has gone from $2 billion in 2017 to $3.3 billion in 2022. So, how do we explain that? So, we've been investing, we're investing all across the franchise. From a very slow – small ways in banking, we've been investing a bit more and it's related to work flow automation inside for clients to help the banker to serve them better and private capital.

The biggest area of increase is payments, is a key strategic initiative for us. You will hear a lot from Takis what are we doing with that investment. But the reason why we are investing is very simple is to drive current performance and future performance. We need to modernize, continue modernizing and develop great technology platform to have a great client experience at the same time to deliver efficiencies across the franchise and we are investing in new technologies to make sure that the franchise is prepared for the challenges ahead.

The next page is about operating leverage. Volumes in the last several years have gone up very, very substantially. And one way to think about the cost of processing those volumes is looking at direct operations expense and run the bank technology. That group of expenses has gone up from $4.2 billion to $5.2 billion. But then when you look at the different examples on the left, you see the massive increase in volumes and then the cost per transaction decreasing very, very substantially overall. So, this is a constant area of focus, where we need to, as time goes by, we will become more and more and more efficient.

So, the importance on having these four businesses together, as I said, it allows us to deliver very comprehensive and holistic solutions to our clients. And this is very important, clients don't want to consume individual products anymore. They have problems or they have challenges, and they want solutions for those challenges. On the right-hand side of the page, we have the top 200 biggest financial institution clients. They are clients of either three or four of the four lines of business, the same for corporations.

So, now going into the lines of business, starting with Investment Banking, these numbers are on Dealogic. So, our market share grew from 8.2% to 9.5% in 2021. And it was improvement all across the regions. The same for ECM, Equity – DCM, Equity Capital Markets and M&A, market share has grown since 2017, but there’s still a lot of work to do.

So, let's move to the next page and see the distribution on the left-hand side of the page. So, you see the distribution of the wallet across the different products. And we are in a very good position in the three of them. Still some work to do. And the number two but we are in a good position. And the most important point here is that in any conditions in the market, through the cycle of investment banks, if it is a growth cycle, where you see the equity and M&A or if a refi cycle when there is mainly debt capital markets, we are well positioned to have very stable performance across the cycle.

On the middle of the page, it shows the same distribution but by industry, where we have, over the last five years, performed quite well. But one should conclude that capital markets, it tells you that there is plenty of work to do in equity, in M&A across the industries and we will do that.

In terms of areas of focus, we are focusing in four things. We think that there is a great opportunity in middle markets and in partnership with Doug and the Commercial Bank, we are complementing the great regional model that is being run with more industry content. And we are focused directly to companies as we do with middle market sponsors.

Private capital, huge area of growth, both in low touch, so essentially what we are doing is that we are launching Capital Connect by JPMorgan that will allow us to connect at least these companies with potential investors in a very efficient way, but we will continue investing in the high touch business through private placements and other for the bigger companies within that segment.

Asia Pacific, we have improved and we have made a lot of progress there. But there are still areas to grow in the new economy, in healthcare, in Australia, China, Japan, India, we have areas where we could grow.

ESG, a great opportunity as all our clients transition into the new challenges of ESG and climate, so we need to be prepared to support them. We put together the Center for Carbon Transition and other green initiatives around the company to make sure that we are helping the clients and at the same time, we are taking advantage of the opportunities.

Moving into payments, as I said, big area of focus, you will hear more from Takis. But to have put together merchant services and TS allow us to deliver a very comprehensive solutions to our clients across products. And in a very challenging environment, the business has grown from $9 billion revenues to over $10 billion that in the last five years, but we have two big headwinds, rates and margin compression, and that was all compensated in excess by increasing growth in fees.

Our market share went up from 5.4% from 7.2%. And we – I think that we talked about this in the past. This is a very fragmented industry that is being consolidated towards the larger players, mainly for two reasons, ability to invest and innovate and great – and create great products that you need the size of JPMorgan to be able to do that, number one. And number two, the clients are more and more aware of their cyber risk, and they feel a lot better when you are dealing with a big company like us that invest a lot in cyber, and they feel more protected than it would have been otherwise.

So, I think that in this business, we will have the chance to continue growing. We think that our market share at the moment is 7.2%, will head towards 10% in the next few years. And we are extremely well positioned to take advantage of that.

Markets is clearly a business that has benefited from scale and investment and capital. Our revenues went up from $18.5 billion to $27.4 billion in 2021, and our market share from 10.6% to 12.2%. And similar story, these are very important businesses for our clients. They are businesses that are expensive to run, that require scale to be profitable. And we do have that scale. So, I do believe that the trend of consolidation in wallet that we're seeing, it will continue going forward. So, I wouldn't be surprised that in the next several years, we will find ourselves be probably 100, 200 basis points more market share than what we have today.

Securities Services is a very good story. Last year, record revenues, record assets under custody, clearly with the headwind of lower rates and with a headwind of very, very substantial margin compression. But overall, from 17, the business has grown revenues by 13%. But more important, fee revenue has grown by 24%. Market share went from 9.8% to 10.3%. And we maintain a very healthy, probably best-in-class operating margin, above 30%.

And in this business, we are focusing essentially in three things: a streamlined operating model and modernize our platforms to create a better and better client experience for our clients and make it easy to interact with us, and at the same time deliver operational efficiencies. We've been completing our product offerings, we build an full ETF servicing platform. We enhance our platform to serve alternative managers, more traditionals and private equities. And we have built and scale next – scalable next-generation platform for middle office.

And we're also thinking about the future. So, we are investing in creating services as digital assets grow in whatever form those will – that will happen to be prepared to serve our clients on that too. And we – I think that our next stage in building even a greater quality of services is about data.

Move to the next page. We launched Fusion. Fusion is the following: is about solving the data problem of our clients. So, that means ingesting data whatever that data is and standardize it in a way that we can – they can use it more effectively. And the idea is very simple, is to help them to generate investment alpha and operational alpha. We are at the beginning of the process. These are two, three, four-year process. But we are quite excited and think that this is – it has two components, it is a way that we do believe that it will generate revenue growth for sure. But at the same time, it will help us to protect our existing franchise.

So, now going into return on equity, in 2019, we have a return on equity of 14.5%. So, in the last couple of years, we have a massive increase in revenues due to the increase in wallet and the increase in market share. So, that increase in revenues minus the amount of capital that we deploy to that increase in revenues and the increase in expenses related give us a benefit for return on equity of 10 points – 10%. Rates was a headwind of 200 basis points, expenses that they are not included and they are not revenue related, they were not very – we talk about that, they are not very – a very relevant number. And clearly, last year we did release reserves and give us a return on equity of 24%.

Going forward, we are, as you know, we have to increase the capital. And that capital increase is mainly driven by two or three things. So, first is the lack of recalibration of GSIB, because economy is growing and GSIB is still as it was, and also the effect of monetary policy expansion into the GSIB factor, essentially more cash, more liquidity, more bigger deposits, it really ended up in a bank. So that creates GSIB points even if we the only thing we do is turn around and those deposits back at the Fed. And there are other forms of regulatory capital that they are increased and they are included in these numbers. And then there is some portion of the capital increase that is related to growth.

We do believe that we feel comfortable in maintaining our guidance of 16% return on equity, because we do believe that we will see revenue growth in securities services, revenue growth in payments. We think that the market wallet has now stabilized and probably start growing from here.

Banking the way that I think about it is a following. Last year was an outsize year. I think that we need to have as a base the wallet that we saw in 2020 and then growth from there with the exception of this year, that for market conditions, the performance of banking will be a little lower.

So on top of that, we will maintain the expense discipline. And we think that, as I mentioned, we have an opportunity to grow market share in many places.

So I will stop here. I will come back a bit later to wrap up and we will move to Marc. Marc is here, Troy virtual.

Marc Badrichani

Head of Global Sales & Research-Corporate & Investment Bank, JPMorgan Chase & Co.

Thank you, Daniel. So, as Daniel mentioned, we are the leading market franchise. Undeniable number one in fixed income, tied for one in equities, best-in-class research. And if you look at the top right, despite some normalization in 2021, our revenue grew by 48% to $27.4 billion and our market share went up by 160 basis points up to 12.2%. Now, we were able to do that with a modest increase of our structural costs, and Troy will cover that later on.

Our franchise today is as strong as it's ever been. Highly entrenched with our clients, in 60% of the cases they trade with four products or more with us. We do business in 100 countries with physical presence in 38 of them. We're number one in all three regions. And if you look at our business mix, it's roughly 50% in the Americas, 50% internationally. We trade across all channels. And we've seen growth in voice and electronic. But if you take a step back, the way we like to think about our business in pre-trade, trade and post-trade.

In pre-trade, we have all the pieces to be a leading player. We have best-in-class capital markets, high-touch sales, research. People come to us because they want primary paper, they want advice, they want market insight. It's trade. There our strategy is to be a channel agnostic. We want to meet clients where they want to be met. And then our objective is to optimize our hit ratio. Post-trade, we have very focused on workflow integration. And now proximity with security services, which offer middle, back office, all the way to custody, enable us to be highly integrated with our clients and more importantly, enable us to be one of the only ones to offer the front-to-back solution to our clients. Now, the reason it's so important, because the more integrated you are with your clients, the easier it is for them to do business with us, the easier for us is to grow with them.

So five years ago, we were already the leading markets franchise, we feel that our position today is much stronger as we have deepened the client relationship and we've closed some product gaps. If you start with the left of the page and as Daniel mentioned, the wallet has gone up. I think what's more interesting is the share of the wallet for the top five players has gone from 39% to 45%. Now it's easily explained. It's a trend we had identified in the past. It's a trend that, we believe, is going to continue. Clients are getting – have some expense pressure so and on the other hand, they need to face counterparties that can deal with their size and complexity. Now, amongst the top five, there have been some changes. One thing that hasn't changed is we remain number one and if anything, we slightly have increased our gap to number two.

If you move to the middle of the page and in trying to take a client lens and a product lens, institutional clients, we grew our share of wallet by close to 300 basis points. This is where we probably outperformed the rest of the market. Corporate clients traditionally more fragmented. We had a few product gaps, namely on corporate FX. So if you look at the right middle of the page, this is where working with Takis and his team, we improved our product offering and we grew our share of wallet by 120 basis points.

The other thing that is very important for us in corporates and you will see it and you saw it in Daniel's presentation, we have the luxury of having three major distribution channels with the Global Investment Bank, the Global Corporate Bank and the Commercial Bank. For us in markets, it gives us access to the full range of corporate clients around the world.

Let's look at it from a product point of view, this time. In equities bottom of the page, we were always best-in-class in future, and derivatives. We had more work to do in cash and prime. We did three things improved our E-trading offering, improved our block offering, and deployed more capital for our prime business. We grew our prime, of course, but as you can see top right of the page prime and cash equities go hand in hand. So we were able to move our cash equity business from number four position to a number two position, picking up 430 basis points along the way.

Now going on to fixed income, you will notice that our growth in market share is the same as in equities. Despite the fact that we were already a powerhouse five years ago. There we still get the dividends of having remained complete through the cycle. And two, we were able to hold on to most of our market share gains that we had in 2020. The million dollar question is what is going to be the wallet going forward? And it's very hard to predict in normal market conditions. But one thing that we know given our breadth and our diversity in normal market condition, our strategy, we believe, will give us some growth.

On the other hand, if we were to see or to face the same high volatility levels that we currently have in the market, we see this as an opportunity. Assuming we can demonstrate the same risk discipline that we had done in the past, because in this market, two things tend to happen. One bid offer widens. And two there is a flight to quality. And we get rewarded for our ability to deal with volumes and to offer liquidity to our clients.

So where is the growth going to come from? We like to think about it along two lines. The first one is deepening our client relationship and the second one is we believe we're uniquely positioned to capture some of the secular trends in the market. Let's start with the first one. Top of the page and from left to right, data at the end of the day, our business is delivering the right price, the right content to the right client, at the right time, in the right format. This is why, for example, in research, we embarked 18 months ago on a research transformation journey. We invested in some foundational tools. Our objective there is to give a much higher level of personalization to our clients.

In sales and trading, our business generates a ton of data, but data-rich is often information pool unless you invest in it, unless you use AI and machine learning to invest in that data. And this is what we're doing. Two examples in sales real-time market share alerts for our sales force, in trading hit rate optimization.

Innovative solutions, as the market structure evolves, not only do you want to adapt, but you also want to be a driver of this change. In order to do that, you need to invest in technology, but it's not enough. You need to have the right DNA and more importantly, probably you have the right setup. And Troy will give you a couple of examples as we go through the presentation.

Client facing technology, we still see an opportunity to getting more integrated with our clients and this is not only about workflow. As Daniel mentioned, we're doing a lot of work on data. This is our Fusion platform and in some cases even we are sharing some of our trading platforms with our clients.

So let me touch on two examples below; the first one and if you remember on the previous page, I show you how the wallet is concentrating towards the top five clients. Another thing that is happening in the market, and if you look at the overall wallet split between institutional clients and corporate, institutional clients represent the vast majority of the wallet and within, you double click, in this category, let's call them the large institutional clients, our focus list. They've seen their wallet grow at a CAGR of 2.5%, where the rest of the market has remained flat-to-slightly decline. Our business with them, our revenues have grown at a rate of 10.3% and along the way, we pay 370 basis points of share of wallet. This is our sweet spot.

And the way we like to think about it is even if our share of the wallet was to stabilize, given our proximity to them, given how integrated we are with them and our ability to deal with our volume and complexity, we will benefit from their growth.

Another example on the right and Daniel touched on it. Private/alternative assets, this asset class has seen the AUM grow at a rate close to double-digit and is projected to grow at the same rate for the next couple of years. Our asset manager clients are getting more organized. Our PE firm clients are getting larger. Some of them have some headwinds with rising interest rate, but we still believe that this asset class will perform very well.

We have all the pieces to be a leading player, origination with banking, ability to underwrite and structure and last but not least, ability to distribute and finance. But it's also an area where we're innovating. And you heard Daniel with Capital Connect. In essence, Capital Connect is an ecosystem between primary, secondary all the way to structured solutions.

With that, I will pass it on to Troy, who hopefully should appear on screen.

Troy Rohrbaugh
Head of Global Markets, JPMorgan Chase & Co.

Thank you, Marc. I'm going to cover capital, electronification and expenses. Starting with capital, we believe our balance sheet is a competitive advantage and we continuously optimize our resource footprint to balance growth with strong returns. We've been extremely disciplined and selective in how we deploy capital across clients and products adjusting for all market conditions. As Daniel said, capital is up meaningfully for the CIB as a whole and specifically for Markets. Some of this is methodology-related, but the majority is growth-oriented.

From 2017 to 2021, our capital growth has paid off extremely well, and I'll give you three examples. First, in equities, increasing prime balances helped us meaningfully close gaps in financing and in cash equities. As Marc referenced earlier, we are now tied for joint number one in the overall ecosystem. In commodities, we pursued investments in both physical gas and renewable energy, both of which saw sizable growth during this period. And finally, in SPG, where we were already a leader in the field, we increased loan originations and financing, which contributed meaningfully to higher returns and market share growth.

Our success also lies in dynamic decision making. We have a very nimble team of senior traders and salespeople who have the ability and authority to move capital across the business both in products and clients. We will continue to move with the opportunity set, while maintaining strong returns. As you can see on the top right chart, our total returns will remain above our cost of capital. Even as we start to normalize, our marginal returns in all businesses will remain above hurdle.

And finally, my favorite part of the slide, we ask ourselves, why do lower ROE products, why not just focus on the higher return on businesses. If you look at how clients trade, 9 out of 10 institutional client dollars are spent on a combination of low and high ROE businesses, making it critical to be complete in both segments. Our clients know this and reward us for it. This creates a meaningful halo effect for the rest of the markets franchise. On average with these clients we generate $1.6 dollars of higher ROE business for every dollar of lower ROE business.

Moving on to electronification, as you are all well aware, we've been investing in our e-trading capabilities for a very long time as market structure has continued to evolve rapidly. These investments are in four main areas.

First, infrastructure, this is about having common technology platforms, which improves our speed and elasticity, helping us scale faster than peers. Workflow automation, this improves client integration, enables us to do central risk management, focuses our people on value added parts of the market, and finally allows us to effectively cover more clients. Organizational agility, we greatly expanded the number of interdisciplinary teams of quants, traders and developers across all our products in an effort to break down silos and be even more nimble and competitive. Lastly, market structure, as Mark said, we are constantly innovating not just to adapt to changes but also to drive market structure evolution. We seek to give clients choice and distribute our products in a consistent way. We believe this creates opportunity not only for our clients, but also for our business model.

As the bottom part of the page shows these investments have paid off across our products in cash equities, which we spoke about extensively in 2019, low touch revenues have seen double digit growth. In FICC, there are a lot of metrics we track. One of these are rankings on key platforms. We have increased our top three rankings across all products. We are particularly pleased with the progress in commodities and rates.

Now, one might ask, where do we go when we're already in the top tier. The FX story indicates that despite being number one, there's real scope for upside. In FX, the size and scale of our e-trading franchise has allowed us to grow volumes and gain share. For instance, the percentage of CLS or our percentage of CLS has continued to trend higher despite our strong starting point. We plan to replicate this strategy of size and scale across the rest of FICC. In credit specifically, which is behind other asset classes on electronification journey but rapidly evolving. We see lots of opportunity. We are systematically investing in our capabilities not only to price individual bonds, but also entire portfolios in ETFs. We are committed to being a top tier player in this space.

Lastly on expenses, we manage our expenses with extreme discipline and also have significant operating leverage. For example, if you look at them on the left side of the page from 2017 to 2021, our revenues were up 9.3% while expenses were only up 3.6%. If you go one level below the headline, the fastest growing portion of our expense base was volume and revenue related. This includes performance related incentive compensation and volume related transactional costs. Even these expenses that are up 7.2% and are arguably the good kind of expenses, so clear positive operating leverage.

Our structural expenses, which include base wages and run the bank's technology spend, had a modest increase of only 1.4%. And finally, our investment spend has grown at 5.7%. These have been and remain critical to our success. We feel the areas we invested in will continue to pay off, such as Athena for central risk management, our migration to the cloud, all of our data AI and machine learning investments and the E-trading efforts which I covered previously. We constantly assess these investments by their impact to both the top and bottom line and adjust accordingly.

Going forward, as Daniel referenced, we expect to see increased pressure on structural costs from wage inflation and normalization of T&E. We will also continue to invest in technology as we identify business accretive opportunities. Nonetheless, Mark and I are committed to maintaining expense discipline while pursuing growth.

Finally, our strategy remains the same. It has one clear goal, to remain the leading markets franchise regardless of the macro environment. We achieve -- we plan to achieve this by doubling down on our already strong client relationships, capturing secular world, such as large clients getting larger, concentration in the wallet and investing in new asset classes such as private alternatives, continuing to dynamically allocate capital to effectively balance growth and returns, investing and innovating as market structure rapidly evolves. And lastly, remaining laser focus on expense discipline.

Now I know all of this is easier said than done, but Mark, myself and the management team have a strong track record on all these fronts. We remain completely committed to delivering results.

Thank you. And now on to Takis

Takis Georgakopoulos

Global Head of Payments- Corporate & Investment Bank, JPMorgan Chase & Co.

Okay. Hi, everyone. We're going to spend the next 20 minutes or so talking about JPMorgan Payments. And I hope by the time I'm done, you will all agree that this is one of the most exciting areas in growth opportunities for the bank. Let me start with a little bit of a level set on the business. As we typically reported partly in the CIB and partly in the Commercial Bank, everything I'm going to show is from a firmwide lens.

For the bank, JPMorgan Payments generated $10 billion dollars of revenue, with a roughly even split between NII and fees. We covered 29,000 clients in the CIB and the Commercial Bank and another more than 300,000 small businesses. We generated $800 billion of deposits and $3.4 billion in pre-tax income. In terms of client segments, 60% of the business is corporates and ecommerce, 35% financial institutions, and 4% acquiring for small businesses. In terms of product, the bulk of the business 84% treasury services, 12% net revenues in merchant services, and the remainder trade finance. And in terms of businesses, 60% of the revenues are generated by clients of the CIB and the remaining 40% with clients in the Commercial Bank.

In this business, we compete with both banks and fintechs. And by the way, both banks and fintechs are also some of our largest clients. Banks tend to have scale, access to local payment systems and tend to focus on treasury services and trade finance. FinTechs, on the other hand, tend to focus on merchant acquiring and tend to innovate, providing great customer experience and new products, but have to rely on banks and others for access to payment rates. We believe that JPMorgan Payments can combine the best of both and at the same time bring three unique advantages.

Number one, tremendous scale, which allows us to create efficiencies with on-us transactions, but also the ability to feed our AI and ML models with data that allows us to keep our customers safe and provide value added services, whether it is fraud or whether it's account validation, etc. Second, we are the only bank that combines acquiring and treasury services together, which we use as a starting point to build solutions and ecosystems for our clients. And then third, we are part of JPMorgan, which means that all of our clients are also working with the largest investment bank in the world, the largest markets business in the world, the largest retail bank in the US, and one of the largest commercial banks in the US.

Daniel already mentioned that our revenues went from $9 billion in 2017 to $10 billion in 2021. But that hides three very different stories. First, there is a big success story of treasury services where we grew our revenues adjusted for rates by $3.5 billion, which is a more than 40% revenue increase off of the back of 80% higher balances. And the market share that went from 5.4% to 7.2%, creating a gap between us and our largest competitor of $1 billion dollars. Merchant Services is the second story and it was flat. We grew our volume and you can see our US merchant acquiring volume. We grew our volume on the right, we grew our volume a lot, but that volume growth was offset by margin compression.

We maintained our e-commerce market share, we didn't grow revenues. That's because of three things. One, low – sorry, two things. One, low penetration in some of the more profitable and fast-growing segments of the market. Small businesses, fast growing tech. Second, we don't have the same breadth of value-added services as some of our fintech competitors, and changing that picture is a big story behind our investments.

I also want to highlight two more pictures on the right – two more – sorry figures on the right. First, our Net Promoter Score among our largest clients, which at 57 is far above any one of our competitors and much higher than we historically had. Also, trade finance. We've said before that in trade we don't aspire to be number one because of the challenging returns in that business. But we do like structured trade and we've been investing in that. And you can see the result on that page, doubling our market share in supply chain finance to 10%. The expense side of the story is the following, between 2019 and this year, we grew our expenses at an average pace of 8% per year, or about $1.5 billion dollars overall.

Less than half of that expense growth is structural volume driven, the majority is investments in new products, new platforms and modernization. We have today 2,000 more engineers than we did in 2019. But importantly, because of our modernization work that Laurie mentioned, each engineer today is 20% more efficient than they were in 2019. And going forward, we expect our expense growth to significantly moderate to the low single digits, not because we will be investing less. We will continue our investments, but because our new platform development, which has been going on for a number of years now, is nearing completion and speak for most of our investments and because the modernization work, while it will continue, is fully staffed and at scale.

Before I talk about our platforms, let me just give a quick snapshot of how we are thinking about our technology. We have a very clear point of view of how our technology infrastructure needs to look like and how the components fit together. At the top is our client interaction layer, our single API and our digital channels. Underneath is an orchestration layer that configures the products or the microservices that we deliver, either built in house or through the more than 60 fintech partnerships that we have. Behind that are our core processing engines that are at scale and at various stages of migration to the cloud that connect us to all of the payment systems around the world. And then at the bottom, trust and safety are scale and operational excellence that provides validation, fraud, sanctions, KYC, et cetera services to keep our bank and our customers safe, but increasingly also being offered as a service, as a product to our clients.

Let's talk about our platform investments. We have four major platforms investments in that business. The first three are in Treasury Services and the last one in Merchant Services – Helix. As you can see, we started the journey in Treasury Services in 2017 and our platforms are now well advanced. The Merchant Services platform is coming a couple of years behind. As you can see in all of them we are either at the pace of investment that we need or the investment will start coming down. There are two ways to think about return on investment in our platforms. The first is based on the cost benefit and scale benefits that you get in a cloud native environment once you've decommissioned the legacy and as you can see we are still a couple of years away from being able to see that. But the second way to look at return on investment is based on new growth and new opportunities that these platforms enable. And we have two examples on the right from the two platforms that are nearest to completion. On the top, Graphite Express, our global real-time payments platform, our cumulative investment from 2019 including this year is $90 million dollars. We are live in every major market around the world and this year we will generate close to $40 million dollars of revenues with an exit rate, exit growth rate of about 50%, and that's on the back of a 75% market share in the US which is a testament to the importance of investing early and building a first mover advantage.

At the bottom is Glass our new liquidity platform with a cumulative investment since '19 of $115 million or since inception about $150 million. That platform allows us to compete more effectively for liquidity deals. I give an example here of 2021. In 2021 we competed in a little bit north of 200 competitive bids or RFPs for liquidity around the world. More than half of them were with companies that were not payments clients. We won 177 out of them or 85%. That's an incredible win ratio when you think about how competitive this industry is. And that includes 61 out of 71 that included a virtual account management component. The cumulative value of just those deals annually once ramped up is $150 million equal to the cumulative investment over six years on Glass.

Let's talk now more broadly about going forward. We see opportunities in all of our customer segments. In FIG we are the leader but we want to continue to extend our gap and our leadership to the competition by bringing more innovation and more efficiency to the corresponding market as the largest correspondent bank in the world. We also want to continue our trajectory with corporates growing further our treasury services FX, and supply chain finance market share with larger and smaller corporates. And we still have a gap outside the US to best in class of $1 billion. There are two other ways to approach the market. The first is thinking about industry vertical solutions.

The second is focusing on e-commerce and delivering end to end solutions about e-commerce. And I'm going to talk about both of those, too, a little bit more. But when you think about e-commerce, there are two clients. There is the Marketplaces operator, which is typically a CIB or CB client. And then there are the small businesses that operate in that marketplace. And as we built a value proposition for those small businesses, we don't just think about e-commerce. We also think about brick and mortar. Jen mentioned our analytics and data that we provide to small businesses to understand their clients while we bring together, issuing and acquiring data so that we can provide real granular and real insightful information to our small businesses.

We are also launching our smart terminals and we are working to launch a tap on phone on both Android and iOS before the end of this year. But the opportunity is nowhere bigger than the $3.5 million business banking customers that bank with Chase today. And that's why we work very closely with CCB to deliver that value proposition to our clients. When it comes to industrialized solutions, we are thinking about that for all industries from energy to gaming. But here I'm going to focus on two use cases, healthcare and connected cars, because these are the areas where we've made acquisitions recently. In healthcare, Instamed digitizes the interaction between payer, provider and patient, covers today almost 60% of all US healthcare providers.

And since the acquisition, we've grown our revenues by 90%. We see similar opportunities, but at an earlier stage with mobility. This is, of course, a fast-evolving space, which impacts not just the auto industry, but also energy, utilities and commerce. We think that in the future, cars are going to be smart payments devices and commerce platforms. And we believe that VW Pay, which we acquired for a very modest investment, together with our partnership with the VW Group and other automakers will help us shape that future. E-commerce as I said is one of the biggest areas of opportunity, but also of investment for us. Marketplaces need if you look on the left side of the page, we think of kind of seven services that Marketplaces are looking – marketplaces are looking for.

One, the ability to accept payments, not just cards, but also wallets, BNPL, et cetera. Second, the ability to set up a compelling checkout experience easily. Third, the ability to provide financing to buyers and sellers. Fourth, the ability to manage the liquidity across multiple currencies that comes in. Fifth, the ability to split those payments into wallets either virtual or actual accounts by seller and then pay out those to the country, the currency and the method of payment that the sellers want. And then finally adding more value to their ecosystem by providing ancillary services. Banks typically focus on liquidity and payouts, and they've ceded the rest of the space to fintechs. We are the only bank that can address all seven of those needs, and we have a very compelling value proposition and a very concrete roadmap to deliver over the next couple of years. There are a lot of bullet points on this page because there are a lot of things that we do. But I thought it's better to actually show you a video with what we tell our clients and then what our clients are telling us.

My favorite part of this video is all of these orange dots, which is all of the business momentum that we've had over the last few years, but also all of the white dots, which is still the opportunity that's in front of us. And that list that you saw was the 25 largest tech, fintech and commerce companies in the world. An example of what gives us confidence that we can deliver against our roadmap, but also a great example of where treasury services and merchant services come together is embedded banking. Embedded banking offers the ability to sellers for sellers in the Marketplaces to get paid, and settle those payments instantly in a bank account, but in a way that's integrated, co-branded and embedded in the marketplace in which they do business.

It also allows the Marketplaces operators to not have to stay in the fund flow and all of the regulatory complexity that comes with that, while at the same time add value to the marketplace and deepen seller relationships, because that product was about reconfiguring existing micro services in TS and MS, we were able to go from idea to MVP in a matter of months and we are now getting ready to go live with FreshBooks whose our first development partner.

We see similar opportunities in Europe with the additional complexity of the national idiosyncrasies of every country in the European Union, different payment rules, different KYC requirements, different local banking rules, et cetera. And that's what we like about Viva Wallet. They offer localized issuing acquiring and banking in every country of the European Union plus the UK and Eastern Europe. They have strong both e-commerce and point of sale capabilities, including tap on phone. And they have a great mobile app, customer experience and instant onboarding. And importantly, when we think about our clients whether it is marketplaces or retailers, they often operate on both sides of the Atlantic. And we also feel very comfortable with the structure and the multiple at which we made that investment even in today's environment. We will have more to say about Viva, for now we are focused on getting the right regulatory approval so that we can close the transaction before the end of the year.

To sum it all up, we see a $5 billion opportunity in front of us. The first component of that is rate normalization. You saw in the first waterfall the minus $2.8 billion in rates. We expect that to largely reverse even as we anticipate some modest deposit attrition in the short term, especially from non-operating deposits that may be more price sensitive offset by continued organic growth. More importantly, if you look at the fee side, which are the next three bars, we expect to see over time double digit fee growth in each and every one of our products representing and north of $500 million revenue increase per year in fees.

And that comes with a high operating leverage. As we discussed our expenses will moderate. That translates into a more than 10% annual revenue growth and a more than 20% annual pre-tax income growth. Obviously when you project far out into the future, a lot of things can happen and you see some of the tailwinds and headwinds on the right side of the page that may skew the numbers higher or lower. So this is the future and the plan as we see it now. But we also recognize that the future may look very different. We need to be prepared for a world in which CBDCs, digital currencies, blockchain technology, et cetera may change the way in which payments and information are made and that's why we created Onyx, which is a business unit within JPMorgan Payments, that supports these activities across the whole bank.

I have yet another video which is my last, I promise, where we are going to talk about Onyx. But before I play that, just a reminder that everything that we do in our business is for real use cases with institutional clients, and you can see some of them at the bottom of the page, with the controls and the scalability, the same way as with everything else that we do. So let's look at Onyx.

[Video Presentation]
In case you didn't recognize me, that was my avatar in the Metaverse. So, in conclusion, double-digit growth with high operating leverage, consistent market share gains, we've seen them in TS in the past, we will continue in the future, but we will also see the same in Merchant Services. Proven ability to execute complex technology transformation, unique e-commerce solutions with additional roadmap and best-in-class capabilities coming in the next couple of years and future proof with Onyx.

And with that, I'm going to turn it over to Daniel. Thank you.

Daniel E. Pinto

President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan

So, before we wrap up, I want to give you a bit of color about the second quarter and how is it going. Clearly started when banking you saw that is a very, very challenging environment for banking with a substantial reduction of market share of wallet. So we think that this quarter, banking fees year-on-year will be down around 45%. A very different story for Markets. We saw a very good momentum in the first quarter and that momentum continue into the second quarter. So, normally, we see a deceleration of market activity towards the end of the quarter after the Memorial Day all included, we think that Markets will be up between in the range of 15% to 20% year-on-year as compared with the second quarter of last year.

And then in wrapping up, so clearly the business has been doing and is doing very well. So we are in a very– in a very challenging environment. So the macro environment is uncertain. We are navigating things that we haven't seen in a long, long time as inflation rate and geopolitics. The structures of the markets are changed in ESG, how digital is taking place and we are seeing competition very, very strong. We do believe that a strategy of being global, complete, diversified and at scale that plays out very well will continue to play in the future. We are very focused in maintaining our day-to-day discipline of how we run our business in terms of managing the market risk and credit risk and how we manage our expenses, while investing, we have plenty to do in optimizing what we are doing today. There are when you go down the big number ones, there is plenty of areas of improvement and close and to close certain addressable gaps and we need to make sure that we invest for the future. That is about modernizing our platform, is about investing in new technologies. So with all of that, how with the discipline management of expenses of investments, making sure that the organization doesn't become complacent and bureaucratic, making sure that we essentially leverage all our partners across the company to deliver more and more to our clients. We feel very confident that a 16% return on equity over the cycle is achievable, even with an increase in capital.

So thank you and I will pass it to the Doug Petno.

Operator: Please welcome to the stage, Doug Petno, CEO of Commercial Banking

Douglas B. Petno

Chief Executive Officer-Commercial Banking, JPMorgan Chase & Co.

Good morning, I just want to add all my thanks to all of you for joining us today. It's great to see everybody in person. And I'm thrilled to have the opportunity to update you on commercial banking. And since our last Investor Day, we've continued to execute against our strategic priorities. And we've made fantastic progress with investing in the franchise, keeping our focus on acquiring great clients and building deep, enduring relationships. We've hired more bankers and we've moved into more high potential markets. We're actively calling on over 47,000 prospective clients. Last year, we added over 2,500 new clients. That's twice as many as we added just three years ago.

So the business continues to perform extremely well in a complex, competitive environment. And in 2021 commercial banking generated record revenue of $10 billion, net income of $5.2 billion, and a return on equity of 21%. As this year unfolds, we're fully engaged with our clients. We're seeing momentum across our entire business. Our credit portfolio remains resilient in the face of a volatile market, and we're staying disciplined and we're ready for whatever economic scenario develops.

As all of you know, we don't measure our success in quarterly or even annual increments. We take a long-term through the cycle view. So if you look back over the last 10 years, you can clearly see the outcome of our strategy. We have gained share across our business. We've delivered high-quality loan and core operating deposit growth. We've seen steady growth in payments revenues, tremendous results in investment banking, revenue is up over three times, net income has more than doubled over this timeframe. And importantly, we did all of that while maintaining our risk discipline and client selection.

As proud as we are of this performance we're taking none of it for granted. And we're completely focused on the enormous opportunities we have ahead as well as the potential threats to our franchise in the coming 10 years. Our strategy is anchored on being the most important financial partner to our clients. And as a part of JPMorgan Chase, we have real competitive advantages. Throughout today I hope you can see the strong points of connectivity between our four lines of business. We face our clients as one institution with unmatched capabilities to serve them. And we have real economies of scale and we benefit from shared strategies and investments.

Knit tightly together as one company and delivered locally, we're working every day with the investment bank and the private bank to best cover both businesses and business owners. Our middle market team is marching right behind our consumer branch expansion, benefiting from their tremendous small business franchise and their powerful community presence. And another great example of the power of our partnership is our ability to deliver the world's leading investment bank to commercial banking clients.

JPMorgan's global investment bank is a key differentiator for us. It deepens the strategic relationships that we have with our clients. And last year's results highlight the incredible value and the absolute potential of this partnership. Investment Banking revenues for us have grown every single year since the time of the Bank One merger in 2004 and in 2021, we set a new record with $5.1 billion in revenues, up 52% year-over-year. Our 2,200 commercial bankers in over 170 local markets give our investment bankers tremendous reach. It is a powerful combination, and we aren't standing still. And as you heard from Daniel, we're expanding our regional coverage, we're putting more bankers in front of middle market clients, and we're allocating more resources to high potential sectors like the green economy and private capital.

Another key competitive advantage is our unique set of payments solutions. So, the investments and the innovation that Takis just spoke to allow us to deliver an unmatched suite of capabilities to our clients, including integrated payments, liquidity management, commercial card, merchant services and cross-border solutions. So when you knit those together seamlessly these capabilities help our clients improve their working capital, streamline their payments channels, reduce their operating costs and safeguard their business. They also allow us to build deep enduring relationships and they're the foundation for us to gather and retain core, stable, long term operating deposits. And while elevated market liquidity has been a factor in our deposit growth over the last two years, we have at the very same time seen meaningful growth come from the organic expansion of our client franchise. And as the overwhelming majority of our deposits are tied to these core operating accounts, we expect substantial revenue upside as interest rates continue to increase.

So let's turn to loan growth. So we saw a meaningful increase in loans during 2020 related to the pandemic, related to PPP and other factors. And all of that started to normalize as we headed into 2021. And with the economy stabilizing throughout last year, we saw steady loan growth throughout the year. And as you saw in our first quarter, loans were up 5% year over year excluding PPP with significantly higher revolver utilization.

In C&I right now we are seeing very healthy loan growth. Clients have become much more active. They're beginning to build inventory in part because of supply chain disruption but in large part because of higher economic activity. They're also putting more capital back into their businesses. In commercial real estate, core purchase activity remained strong, but we have seen reduced refinancing activity just given what's happened with interest rates. As always credit discipline for us remains core to our culture and core to our strategy and it starts with picking the best clients in industries we know and understand.

Our credit portfolio overall remains strong, our C&Cs are only about 3.8% of the portfolio. And as you saw in our first quarter, our net charge-offs were just 1 basis point. And while our credit metrics are stable, we continuously challenge ourselves to identify any emerging risks. So with this in mind, we regularly stress the portfolio for impacts from risks from things like rising rates, inflation, supply chain, recession and stagflation. And our stress analysis confirms the strength of our portfolio, and it supports our growth strategy across C&I and commercial real estate. If you look at C&I, notwithstanding the broader market uncertainty, we feel very good about our current exposure. It's well diversified across geography and industry, high quality and granular and well structured, 87% of our non-investment grade risk is secured.

Likewise in commercial real estate, we remain confident in the quality of our underwriting and our portfolio. So remember, we intentionally target lending against lower volatility asset classes in the most cycle-resistant markets. And as you can see, the majority of our portfolio is in our commercial term lending business where the overall apartment market fundamentals are very, very strong. It's about 70% in multifamily with high quality developers and investors. Our loans are secured by stabilized properties with low leverage and it's quite a granular portfolio where the average loan size is about $2 million.

So outside multifamily right now we're most focused on office and retail exposure, especially in certain urban dense markets. And this is just given the obvious supply and demand uncertainties coming through the pandemic. But for us, here, we are lending against newer Class A buildings with strong underlying cash flow, low leverage, and they're supported by the best developers and investors in the market. Overall, across both portfolios, we remain disciplined and very well reserved to manage a full range of economic scenarios.

As the franchise grows, we apply the same focus and discipline to our operating efficiency and investment governance. That's why, as you know, our overhead ratio is consistently one of the best among our peers. And you've just heard my partners detail the work they're doing across technology and payments. So leveraging these global capabilities allows us to make significant investments in our franchise while maintaining strong margins and strong returns.

If you look at the volume and revenue-related and structural costs for the business, they're continuing to grow in line with the expansion of our business and the strong momentum we have across our franchise. The biggest year-over-year increase in our expenses relates to investments we're making across five strategic initiatives. So the strong results I referenced earlier were driven by the sustained investments we've made over the last decade. In the very same way, the investments we're currently making will defend our franchise and best position us to capture the enormous opportunities we have ahead. Across each of these initiatives, we're diligently tracking our progress and we're measuring tangible outcomes.

Now, let me walk you through each of the five starting with client coverage. So banker hiring is among the best investments we can make with break evens for us typically occurring in less than two years. Since 2011 we've added over 1,000 bankers. These bankers are helping to deliver our entire firm, covering more and more great companies and building deep enduring relationships. If you look at our national middle-market franchise you can see the tremendous potential we have across this business and why we are so confident in the investments we're making to expand client coverage. So nationally, we're in 75 of the top 100 MSAs and we're calling on over 44,000 prospective clients.

Over half of these clients sit in our expansion markets where we've been executing a data-driven organic growth strategy. Since 2008, we've moved into 50 new high potential MSAs, adding locations in 22 new states, essentially doubling our footprint across the country. This investment has given us bankers in front of 28,000 new prospective clients. Since 2016, we've doubled banker head count, revenue has tripled, and we now have 6,300 clients, over $19 billion in loans and almost $35 billion in deposits, all grown organically.

When we started this expansion effort, we set an ambitious $1 billion revenue target. We hit that target this past year with $1.2 billion in revenue and it feels like we're just getting started. This year we'll enter seven new markets and we'll hire more great bankers. Momentum is building and given this potential we're increasing our revenue target to $2 billion for these expansion markets. And it's important to note when we enter these new markets, we become deeply active in our communities and we invest for the long-term. And so, the foundational investments for these newer markets are largely in place. So over time as we grow we'll achieve significant operating leverage.

Following the same data-driven approach, we've also been investing to build an international commercial bank. This is a very significant long-term market opportunity supported by strong macro fundamentals. There's $5 trillion in foreign direct investment in the United States, about $150 trillion in wholesale cross-border payments annually and we estimate that the total wholesale payments wallet outside of the United States is approximately $800 billion per year. For us, this is an opportunity to fill in market share gaps in foreign exchange, payments and investment banking in some very important geographies and it is simply a natural extension of what we're already doing across the United States and it builds upon our existing in-country capabilities and JPMorgan Chase's global platform.

We are being highly selective. We're focused on large and mid-corporate companies with global needs that match our competitive strengths. For some of these companies, we've had a relationship with the US operating subsidiary for decades and now have the opportunity to support their headquarters overseas.

Since our launch in 2019, we've added over 100 bankers. We're already doing business in 20 countries. The early results are exciting. Momentum is building, and this is another great example of identifying a market opportunity, investing in dedicated coverage, and taking a long-term approach.

So, in addition to being local, clients expect us to deeply understand their business and their industry. That is why over the last several years, we've established 18 specialized banking teams focused on important sectors like technology, healthcare and government. Almost 60% of our clients are covered by these specialized bankers, and these teams are delivering industry-specific expertise as well as customized Treasury solutions.

Today, I want to highlight two high potential sectors in particular. The first is the innovation economy, where we've markedly increased our focus on serving clients in the life sciences, technology and disruptive commerce sectors. We've significantly expanded coverage. We're investing in new digital solutions and tools, specifically for our startup clients, we have dedicated bankers covering select venture capital firms, and we're working hand in hand with the investment bank and private bank to best cover the entire venture capital ecosystem.

From a standing start in 2015, revenues from this team passed $500 million last year. And we're mindful that this can be a boom-and-bust type of market, but we think there's much, much more value that we can bring to this important part of the economy. In addition, we launched our newest industry vertical in 2021 to cover clients in the green economy. This is a strategically important initiative for us, given our focus on climate change and energy transition. We've invested in dedicated bankers and underwriters covering renewable energy, energy efficiency, sustainable finance and food and ag technology. We are incredibly excited about this new team, just given the absolute potential and need for capital and advice in the coming years.

Another market opportunity and perhaps one of the biggest forces impacting our business is private equity. There continues to be an absolute explosion in private equity activity. Right now, there is $1.3 trillion of dry powder globally with a massive secular shift of private equity acquiring middle-market businesses. So in lockstep with the CIB, we're investing to become even more strategic to our clients and their sponsor owners. We are expanding our dedicated coverage for private equity firms and we've also added banking and markets teams to deliver unitranche lending solutions. So this lets us now provide a complete, comprehensive set of funding alternatives, and we're focused on doing this in a highly selective, disciplined manner.

Private equity is a substantial and growing market opportunity, and we believe the steps we're taking will position us to be the complete provider for capital and best-in-class commercial banking and investment banking solutions.

So, beyond expanding our client coverage, we've also been investing in significant resources in design, data, digital and payments. And these teams are focused on four key strategic initiatives; first is empowering and enabling our bankers; the second is building a truly data-driven business; third, innovating to deliver even more value and capabilities to our clients; and lastly, optimizing the client experience across their entire journey with us.

Let's go through each. So simply having more bankers and more locations isn't our only objective. We have a clear strategic priority to cover our clients in a highly differentiated manner. To do that, we're working to ensure that our team is comprehensively trained across the full range of solutions, that they're CRM and data-enabled, and equipped with high impact digital tools. Our bankers are delivering a growing range of solutions and solving complex, technical problems for clients. They are interfacing with CIOs and CTOs as often as they are CEOs and CFOs.

So to execute against all of this, we have dedicated sales enablement, data and training teams to empower and enable what we expect will be the best bankers in the industry. This focus and investment is paying off. We're seeing real productivity gains with smaller client teams, shorter sales cycles, and much higher banker productivity. In middle market, for instance, our productivity for our bankers has increased by a third since 2019.

None of this would be possible without the incredible data assets we have across our company. So over the past few years, we've been investing to build a modern cloud-based data platform, and we've made a tremendous amount of progress. We've combined our existing data together with multiple third-party data sources into a single scalable data resource. This capability is powering our business with advanced client-centric analytics, and we now have dedicated teams working to use this data to give value back to our clients through unique insights, predictive analytics, cash flow forecasting and benchmarking.

We're enabling our bankers with market and pricing analytics. We're enhancing our risk decisioning and dynamically managing our portfolios and increasing speed and automation to optimize our operations. This is an exciting capability and we're only just beginning to capture the potential value from this investment and these incredible data assets.

As we consider our value proposition, there are always new competitors, always new technologies and constantly evolving client expectations. So to best compete over the long-term we are making significant investments to drive real research and development and product innovation, to create better solutions, to deliver even more value, and to innovate to add new capabilities and revenue opportunities across our enormous incumbent client franchise.

Our work in commercial real estate is an excellent example of taking a design-led approach and using our advanced data capabilities to drive client value with new innovative solutions. While we have a market-leading real estate franchise, including being the number one multifamily lender with almost 30,000 clients, this has essentially been a loan-only business for us. So over the last several years, we've been investing to build comprehensive payments and rent solutions capabilities specifically for our multifamily clients. These capabilities let us solve real pain points for clients and allow us to build even deeper, even more valuable relationships. Rent, while being one of the largest consumer payments, is among the least digitized. Our plan is to change that and we hope to capture a significant portion of the almost $0.5 trillion annual consumer rental volume.

In doing this, we hope to create an entirely new and substantial revenue opportunity for our business. And importantly, the effort also lets us acquire incredibly valuable data that will enhance our lending activities, as well as open the door for us to deliver value back to our clients through value-added services and incremental analytics.

So another area of significant focus and investment is our work to optimize our clients' journey with us across every touchpoint. Some of our legacy processes can create our biggest vulnerabilities, especially to certain fintech alternatives. So we are challenging our existing operating models to drive more innovative, simple, streamlined and digital experiences across KYC, onboarding, service, billing, pricing, as well as credit delivery.

And beyond a meaningful improvement in client experience, our work is creating measurable benefits across these critical operating functions. For example, since 2020 within middle market, we have cut client onboarding time down by half. We've reduced the cost of a service inquiry by 20%, and the cost to perform KYC for a new middle market client has come down by 75%.

So looking forward and benefiting from these investments, we continue to make steady progress against our financial targets. For investment banking given last year's exceptional level of activity, for the first time ever, we expect our investment banking revenues to be down in 2022, but much more in line with prior years more like 2019 and 2020. This is after being up 52% last year. So, therefore, we're going to keep our $4 billion investment banking – $4 billion revenue target for investment banking.

Highlighting the diverse mix of our revenue base we are adding a new payments fee revenue target of $3 billion. This implies over 60% upside from our 2021 results, and our target is based on the accelerating growth in our client franchise as well as the investments we're making in our capabilities. For our middle market expansion as I mentioned, we're increasing our revenue target to $2 billion. And given the trends we are seeing in these markets, we expect to hit this second billion much much faster than it took us to hit the first.

Our international platform remains a key differentiator for our business and we continue to work towards our $1 billion revenue target. Remember this target includes our US headquartered clients' international payments activities, as well as the revenues related to the international expansion efforts that I spoke to a moment ago.

And finally, for the Commercial Bank overall, and as you've heard today, even while we're increasing our investments, we're maintaining our overhead ratio target of 40%, and we will continue to target an 18% return on equity through the cycle. So to wrap up, I hope you can tell why we're incredibly proud of our business and excited about the opportunities we have ahead.

Commercial Banking is an outstanding and growing client franchise with incredible capabilities to support our clients. We have a real competitive advantage by being a part of JPMorgan Chase. We have actionable growth opportunities across every part of our business. And as you can tell from our new financial targets, we have tremendous runway. But what is perhaps most exciting and one of the biggest takeaways for you is that we're absolutely not standing still. We are making the strategic investments you would want us to make to ensure that we're doing everything we need to, to best serve our clients and compete in the future. So, thank you again for being here and we look forward to catching up over lunch.

Thank you all.

Operator: Please welcome to the stage Mary Callahan Erdoes, CEO of Asset and Wealth Management.

Mary Callahan Erdoes

Chief Executive Officer-Asset & Wealth Management, JPMorgan Chase & Co.

Welcome back, everybody. Thank you all for staying this afternoon and it was a nice and enjoyable lunch upstairs, I really appreciate it. For those of you who I don't know, I'm Mary Erdoes, I'm CEO of the Asset and Wealth Management business and the best part about this business is it's near and dear to everyone in this room's heart, because most of you are in that business as analysts or portfolio managers yourself.

So we may not be the biggest line of business that's going to drive your models and your forecasting, but I think this presentation is going to do two things that hopefully you will find helpful. One, I think just the fact that a $4 trillion asset and wealth management business is not one of the biggest in this company and is sort of tucked inside of this firm, gives you a perspective of the size and the scope and the power of what you've just heard all morning long. And the second is that in many ways the Asset & Wealth Management business is really a microcosm of this whole firm. And so, we're going to walk through how we continuously invest, but also how we continuously drive out the inefficiencies at the same time, and we remain a consistent, high margin, high ROE business. So let's go through the first page.

Who are we? We oversee a $4 trillion client business. It's split pretty much evenly between a global asset management business and a very special global private banking business. We're proud stewards of wealth over the past 100-plus years, and we also have track records that are that long. What are the key drivers of a business like this?

First and foremost is delivering alpha. It is our North Star every single day, all day long. Second, we never stop investing. Yesterday's mutual funds are tomorrow's personalized SMAs, and we're leaning heavily into that. Third, we are always investing in our people and the technology to empower them. And we're doing that at the same time that we're disrupting the things that aren't going to work in the future. And with that consistency, just like Jenn said in her presentation, we're really hard to replicate. 95% of our top talent isn't leaving. They've stayed, and they're very proud to have their career here.

In fact, it might surprise you with this statistic I'm going to tell you, 60% of the $2 trillion that we manage on the asset management business is managed by diverse managers. That means we had to have started that process long before other people thought that that might be an important thing to do. And we're also known for our gold standard, a collection of clients that we have. During the pandemic, we actually saw more $100-million-plus clients consolidate their assets here at J.P. Morgan than ever before.

And finally, with this global franchise and everything that you've heard from this morning, to be part of it is really just priceless. And so, I'm going to walk you through the ingredients as to why I think this asset and wealth management business continues to grow so consistently. The long-term results really speak for themselves, the number $17 billion at the end there for revenues growing at about a 6% CAGR over the past decade, and very importantly, on the far-right side, 73% of those revenues are recurring revenues. $6.3 billion in pre-tax compounding at a 9% rate shows good operating leverage and a healthy margin and ROE last year, 37% and 33% respectively.

And AUS which is also growing at about a 9% CAGR through positive investment performance and flows equally across both bars, asset management and wealth management. And the reason that this last set of bars, the assets under supervision, are – is an important metric is it should be a preview of coming attractions for what's going to happen on revenues and pre-tax in the ensuing years. And by the way, remember, this asset under supervision line also includes banking. And the Private Bank, as a reminder, is also a bank. And so our NII is about 25% of our business and will be a contributor to the numbers that Jeremy went through earlier this morning. And the remarkable thing about all three of those measures is really just how consistent they are and they're that consistent because they come from such a diversified set of sources of our KPIs, which I want to walk you through on the next page.

These are the same measures that we've shown you at all the past investor days, and it's important that we repeat them for consistency sake to see how we fared. So, I want to just pick a few because there's so many. On the top left is our active equity platform. That's the platform run by Paul Quinsee, who I saw earlier in the back of the room. Paul's been a partner of mine for 25 years. Paul has this way about him which he has this incredibly calm and stable sense of how to manage his portfolio managers and analysts through good times and through bad and if you look at those numbers, that's the reason that these equity performance numbers have just shown through these highly volatile times from $438 billion in assets under management to over 700 up 50% in the past two years, and he's still receiving inflows year to date.

All of these asset classes have grown because of their strong performance but also because of the relentless sales management. I saw Andrea Lisher here earlier. She's responsible for all of the distribution across the Americas and you can see her success in that line that says the global active long term market share and she continues to gain market share. And if you look at the right-hand side, the Global Private Banking business has exactly the same sets of measures.

Look at loans for just one second, we had a lot of conversation last two years ago and at Investor Day and also at our lunch just moments ago where they were asking, could you keep growing our loan book without sacrificing the risk profile that you have. And these last two years have actually been quite a painful reminder to clients not at J.P. Morgan why you don't want lending to be a transactional commodity. You don't want to find yourself in March 2020 or in May of 2022 just like you did in 2008, where you have a relationship where it's one way out.

Both the bank and the client should want a balance sheet relationship where no one is reliant on just one way out. And that's what we do. And that's why our net charge-off ratios on the prior page have run at such a low rate. And Vince La Padula, who I see in the back, and Gregg Gunselman and Ashley Bacon, for those of you who haven't met, who runs our global risk team, always keep on the forefront of their mind the fortress balance sheet. And that's how we grow this business. It's really remarkable about both sets of numbers here on this page is that volumes are up, hiring is up, and the technological advancements in all of that caused those two bottom line numbers to also be up. Productivity continues to increase even with all those numbers.

So let's see how we're going to keep that growth going in the future. At Investor Day in 2020, I laid out these same five drivers that I thought was going to drive future growth for the next decade. And the good news is, two years later, they haven't changed. And we're delivering on each of the five. If you look at the first two columns, the growth is coming from having more advisors in the wealth management space, who can bring in more clients and have the technology to empower them. And Dave Frame, who's here, and Martin Marron, who run our US and international private banking business, they've grown a world-class team of advisors to have this massive opportunity that they can attack in the $50 trillion wealth management business.

Their partner, Mike Camacho, who is also right up here, he oversees the investment engine that powers this very high-end private bank. And what he does is he takes all of those solutions that we provide for the ultra-high net worth client, he curates them and he packages them for Kristin Lemkau's wealth management business. And that's where we can provide to the person first walking into one of the 4,200 – or 4,800 I think she said earlier, Chase branches their first investment. And that's a really, really exciting thing for us and I'm particularly proud that we're the investment engine that is powering all of that.

If you look in the middle, scale is more important than ever before in asset management and many of you have been writing about that. We are now the third largest manager by active AUM and the sixth largest manager overall. George Gatch, who is also here, who's CEO of our asset management business, he's been responsible for both the investments and the distribution engines and pulling them together to be able to capture the increase in flows across the industry. We are number three in active long-term fund flows and we're number one in active long-term ETF flows. And in such a fragmented $100 trillion market space, we should be able to have much, much more room to grow.

Alternatives everyone has spoken about today. They're of equal focus as our investors have been shifting into these markets in the past and – and since the past Investor Day, by the way, we have grown that asset class by around $100 trillion – $100 billion, excuse me. And that's really put us on the map as being one of the top providers in the alternative space. But perhaps the most exciting is the fifth column there. We've been really busy. I told you in 2020 you should expect our increased focus on M&A. I told you this intentionally, so if you had any great ideas that you would call, and that happened. And we had the opportunity to lean into the areas of focus for us, personalization at scale, ESG and adjacent capabilities.

And Ben Hesse and his team have been very successful and negotiated four different transactions, which I'm going to double click on in a minute. But before I do, if you just look across all five of those areas, those are exactly what you would expect us to be investing in, in a business like this. And I'm happy to say that it's working, but now you want to see where that money is going. Let's look into the expense walk that you've seen from the other lines of business. My partners have all gone through how they invest in good times and in bad. And I want to take you through a couple points. Ground yourself first at that $9.7 billion expense line for 2019, that number generated $13.6 billion in revenues and a 28% margin that are not on the page.

Since 2019, we've continued to invest in the areas that are highlighted on the far-right side of the page that I had just walked through. I'm going to go through each of those five areas in just a minute here. But I want you to know two things about these expenses. The first thing and you've heard this consistently throughout the whole day. Every single dollar of investment spend is tracked religiously in this place. It's against very specific breakevens and ROI hurdles and today in our business, many of them are actually hurdling much faster than we had originally planned. And that's helping our strong momentum in this business.

You should expect those investment expenses basically to grow in line with revenues of the Asset & Wealth Management business. The volume-related and the structural improvement expenses that you see on the page those really grow as our assets and our volumes increase, and together these two buckets they should generally grow typically less than revenue growth as we continue to deliver the efficiencies and the operating leverage that I had pointed out.

And before I leave this page, I just want to note that the structural number that has a little uptick there, I think of those as numbers that are growth that you want to see. That's when our advisors, after their first three years, become highly productive and their increase in compensation moves into the structural bucket from the investments bucket. So let's double click on the first one, which is advisor growth. It's our biggest investment across Asset & Wealth Management. We've had a step function in the way that we've increased hiring on the front line. Marianne had referred to those investments earlier as offense investments.

Why have we doubled the hiring? Because we have a very fine-tuned proven model where we recruit, we hire, we retain our talent. We train them constantly. And very importantly, we talked about this at lunch. This isn't the brokerage business model that you know of in some of the outside competitors and wirehouses. This is really an apprenticeship model business. This is where we don't buy books of business. We seed books of business. And then, we put them on teams where we hope that they can thrive.

Actually, nearly half of our new advisors are homegrown. Jeremy Geller and his team have run a really special program in conjunction with Robin Leopold, who runs a great HR Group, and Lauren Tyler across all the training that we do. J.P. Morgan is quite famous for its analyst and associate training. We are now extending that to all of our mid-career hires where we "J.P. Morganize" them, which we think is a very important thing in order to continue to run a first-class business in a first-class way, in the way that all of us have grown up. And the results you can see people are becoming productive faster and in fact, their productivity doubles after they've been here for a year. And even though that hiring is at twice the rate, our breakevens are still in year three or earlier and our paybacks are in year five. So it's a really fine-tuned machine and it keeps us on a steady course for being able to double our advisors over the next five years.

If you go to the asset management business, you also, as I noted, said that asset managers need to scale two years ago. We talked about income as one of those places. And so these first three examples here, they are examples of what we've done in the income space. We were ready and able to complete the full spectrum of asset gathering. The first one is JPST, it was $10 billion pre-COVID at the end of 2019. It's now $18 billion. It's one of the top five long-term ETFs by flows in the marketplace. Our income mutual fund, run by Bob Michele, who's here with us today, who has a leading fixed income franchise run for us, it was $5 billion with 100 basis points of alpha back before COVID. And today it's double the size and it's got 200 basis points of alpha, it's top three in its category of flows. JEPI, is an options overlay ETF that we launched out of the equities group and it surprisingly has a yield that is higher than 95% of all mutual funds or ETFs in existence in the United States of America.

I'm really proud to say that those first three are representative of our entire income platform, and that grew $140 billion since we last saw you at Investor Day 2 years ago, 2.5 years ago. And it's not just about income. The last one is an example of clients who have really trusted us on the emerging markets side. China A-Shares, we are the number one in inflows there. And actually just this morning, George called me and said that we received the Z-Ben rating, which is the rating as the number one foreign asset manager in China, which we're very proud of. And a lot of clients are still giving us sizable investments for that.

So these are just some of the strategies we have. Actually, in the past two years, we launched 637 new strategies, while at the same time we closed over 100 strategies that we didn't think were going to have the alpha that we needed to deliver over the coming years. You should think about a new launch, generally speaking, as having a payback of about four years, although some of them recently have had an increasingly fast payback of under two years.

Alternatives is the third of the five areas Marc Badrichani talked about it, Doug Petno talked about it. Everyone talked about alternatives being a place that's growing very fast across equities and fixed income. The growth on the left-hand side shows about $100 billion worth of new flows over the past two years, causing us to be one of these leading alternative franchises. They're going into very highly scalable areas. The middle there is our Asset Management Infrastructure Fund, one of the many funds and they do have huge size and scope run by Anton Pil, who runs our Global Alternatives franchise. It's now $20 billion at the end of the year. It's actually $24 billion I checked last night, so it continues to gather assets at a pretty quick clip.

And on the private banking side, it's a little bit of a different model. We have formed a series of strategic partnerships with some of the world's best managers. And despite COVID, we've had some fundraises that I was talking about at lunch that have been both the fastest and the largest ever in our history during those months of lockdown, they may be the fastest in the industry. So while I am super proud of all of those investment teams, I am equally proud of all the things that get done behind the scenes to drive efficiencies, which many of you have been asking about and all of us have been talking about.

So I just wanted to bring a little bit of this to life here. Again, this is like a microcosm of a lot of the things that were said today. Lori went through exactly how we spend money on technology. So our technology is $1 billion in total spend and grows but it is continuously decreasing as a percentage of revenue as we continue to be more efficient.

But this page is really about how tech and ops Mike Urciuoli and Julie Harris who is also with us today, have come together. These stats are just since the last Investor Day, okay. The first chart on the upper left-hand corner is what Lori talked about. We're pretty advanced in our modernization journey in asset and wealth management and we've been very fast. We have 80% and more above that in the cloud. And that actually helps us to run everything agile, not just tech. So that's why technology agility is really important. We run these fully agile triads and that means that you have to have product management, scrum teams that can work in an agile way along with the front lines. I actually see Rohan and Ms. Beer sitting up here. They were really instrumental in helping the whole firm think about how to get this product management all through what we do. And you can see that that just causes a doubling of the rate of how fast we can give solutions to the front line to get rid of the gunk that is manual in nature.

Account opening is actually a great example of that. Doug had one of those in his presentation. We had to come together when so many people were consolidating accounts, as we went into lockdown and COVID with J.P. Morgan, that our account opening was sort of overwhelmed. And we all sat and we totally rewired the whole place. Stacey Friedman, who runs one of the best legal and compliance franchises around. Her whole team sat and just relentlessly went through what are the things that we don't need to do in the sequence that we're doing which is causing it to be so painful for people to onboard. And in fact that was a reduction of 70% of the time that it took us through these agile innovations.

Mortgage refinancing, we talked a lot about that. That had a whole re-engineering. But one of the things that you may not know is because of that re-engineering and because of the increased volume that we've been able to do with refis but also with mortgage originations, is that the private bank unto itself is now the number one originator of jumbo mortgages $3 million and up for wealthy clients in the country. So very, very impressive. And when you add that to the home lending stats that Jenn and Marianne went through it's just the power of the firm and the learnings are so powerful here.

And the last chart I want to make a different point here. Okay. This isn't about what we've done inside. This is a really important part of the work that Lori and team do to protect this firm with cyber. That knowledge is invaluable to our clients. Our clients now turn to us to help them when they have problems. And you can see here that the fraud attempts on our clients, while a whole bunch of bad actors had a lot of extra time on their hands, went up 3.5 fold, okay, during this time period. And they don't know how to solve it. They turn to us. We learn from bad actors all the time, and we've helped them to recover or thwart 97% of those attempts that are increasingly sophisticated.

So these are just examples of all the great things that we do to work together. All of that drops straight right to the bottom line. But really importantly, it sets us up for the last two points, which is that inorganic growth, we can't handle inorganic growth until you have the volumes ready to be able to absorb with organic growth. And that's what this has set us up to do, which is takes us to this M&A page. We were able to do lots of things during the last two years. And Ben Hesse and his team have been working around the clock to uncover these opportunities.

And thanks to Daniel's investment banking teams that helped us close these four transactions, we were able to do it in the areas that we care most about – personalization at scale, ESG and then other adjacencies. The first two are helping us to create what I think is going to be the industry's leading personalized investment engine. We took two companies, 55ip and OpenInvest. We work with Mike Camacho and then also Jed Laskowitz (they both run the two solutions sides of our business). And we said, how do we get two fintechs and attach them to what we do in SMAs that we already have and make it a killer app? And we did.

And we've just launched J.P. Morgan Custom Invest. What does J.P. Morgan Custom Invest do? It allows any individual to toggle things you care about, things that are personal to you from a tax standpoint, all of your preferences, all of your values, all of your causes, you can have your own SMA and all of your preferences will be there for you to steer as you go forward. Also on the ESG front, Ben and Anton worked on buying Campbell Global, it's a leader in forest investing, just as the interest in this asset class has skyrocketed. And then the most recent announcement is Global Shares.

So you can see there that's a really exciting deal that we did across the Investment Bank and Asset and Wealth Management. Carlos Hernandez and I did that together across the firm, so that it also can help the Commercial Bank and CCB, it gives us adjacent capabilities. All four of these together, we spent a little over $1 billion on. Our cumulative payback is estimated at seven years, although the early read of what's happening this year is it looks like that's also going to be much sooner than we had anticipated.

Now let's just spend an extra minute on this last one, because I think it's worth it. Just a quick look on what it means for the firm. Global Shares is an Ireland-based fintech. It's both a share plan administrator for established companies, and it's a cap table manager for emerging companies. When we combine that technology with our distribution around the world, with our four lines of business, we think we can grow our Global Shares really dramatically. But equally important, we think Global Shares can grow us.

And so when you look at their value proposition and everything that they handle from a private company to a public company, you don't have to leave our ecosystem once you're in Global Shares. That's not the same as all cap table managers out there that we compete with. There is just a gold mine of information. You see that there's 650,000 plan participants somewhere on that page, and they are all individual prospects, their prospects for Sanoke's business. When you talked about Nutmeg, C6 and the like, all the way to Kristin's business and then to the global private banking business; and that is not even to mention all the opportunities from a capital raising standpoint from the commercial bank and the investment bank. So it's going to be a really exciting opportunity for us, and it's a great example of how we work together, which is why it ties into this page next that you saw a similar version of this when Doug went through it earlier before lunch.

So there's a lot of numbers on this page. Asset & Wealth Management alone, I think, it had 3,000 referrals last year. Those 3,000 referrals to and from the different lines of business, for what we track, that alone caused an extra $500 million in revenues that we probably wouldn't have already had. And all lines of business get – I mean, all these different firms, they get up here and they show you this cross line of business synergies and they tell you all these great things. But I got to tell you, like the truth is, there's no one investment banker in the world that wants to introduce a private banker to the middle of a transaction that they're trying to close. It just doesn't happen. It doesn't happen, because you might goof it up for me, okay? That's the reality of what we live in.

What I need to explain to you is that is not how it works at J.P. Morgan today. It is how it used to work at J.P. Morgan many, many years ago. Today, I think it may just be the fact that all of us have been working together for so long. Most of the people you've seen up here on stage and everybody that I'm looking out in the field we've all worked together for at least a decade, maybe two. And we are all incented to deliver to you, the shareholders, the right thing for J.P. Morgan, not for a particular line of business. And in fact, when we go through all of these referrals back and forth from one another, one of the first things Jamie did when he came in the company, he said, if I ever see bean counting of credits going from one line of business to another on a particular client, we're going to end up having accounting departments inside just counting those beans. We cannot have it. And in fact we don't.

And so you get these things that are just very natural. This weekend I was talking to Larry Feinsmith, who works for Lori. And there is this company we've been working on since last summer. And this is like the ecosystem of the firm. He's responsible for onboarding vendors that we use in the technology space. There's a high tech company, very small, and we had onboarded it and onboarded it and that's a pretty painful process if you want to be a vendor of J.P. Morgan. And once they made it through, Daniel's group went and made a seed investment in the company because we were so excited about what we saw.

And after he did that, Doug Petno's team, Carlos Hernandez's team and my team, all started to get to know the CEO and the CFO for whatever might come about. Because when you go through that rigor and we know what you're like as a company, you have great opportunities to succeed in the future, we think. And so with that we actually did a raise that Asset & Wealth Management clients invested in a round that this company did at the end of the fall. But the reason I was talking to Larry this weekend is now it looks like that they're having a liquidity event.

And so naturally, Doug's team, my team, Carlos' team were all going to do a joint pitch. But they asked if we could bring the Chase wealth management team because they have a really broad management team that needs all of these services to think about basic cash management. How do I do my first investment all the way through to the pre-IPO planning? And it just like encapsulates everything we do in one example. And never once was there a conversation about who gets the credit. And I think that's the most important sort of fabric of this firm.

So with the power of all that – imagine, by the way, when we add Global Shares to that equation of the prospects that come through this company. So it's super exciting. So let's bring it all together here in these last couple of slides.

These are the four ingredients that I personally believe are the most critical to grow any Asset & Wealth Management company. The first thing is you have to be focused on alpha generation. If you don't have alpha, your clients won't stay with you. If you have alpha, you can do lots of great things. But if you have alpha alone, you need a distribution unit that is going to hustle for you in good times and in bad. And that's exactly what we've created across the private bank and all that George Gatch has created in the asset management world.

And the combination of the alpha generators and the distribution will bring you new clients. And when you bring in new clients and they experience what we do in J.P. Morgan, they will eventually bring you new flows if you're doing all of those right things. And that's what you continue to see here in this equation, and that's why we have had positive net inflows into this business every single year that we can track going back, every single year. And so let's just wrap up on these last two pages. You can see that that comes because we're highly diversified. It doesn't come from any one region, one product. We're not singularly focused on anything. But that diversification is landing us as one of the best in the industry from flows.

We've been outperforming most of our peers from a public standpoint. But we're never complacent with those. And the reason we're never complacent is if you just look at the bottom right-hand corner of those charts there, this is such a fragmented market. Look at that teeny, little market share that we have on these two sides of the business with all that I just went through with those huge flows and those massive opportunities, it's still so much room to grow. And that's why Jamie is always challenging us like never, never stop investing in this business, but make sure you're getting those efficiencies to be able to do it.

And so that's my last page here is that I am just reaffirming the targets that I have laid out for you. I'm super proud of the fact that we laid out the targets for long-term asset flows, revenue growth, pre-tax margin and ROE and in the last two years since we've been gone, we have delivered on each and every one of those. And that's why one of you in this room wrote a really special research report that called us a special gem inside of this company and we wholeheartedly concur with you.

So we thank you for the time that you gave to this nice little business tucked inside of the firm. And with that, I'm going to bring Jamie up and we're going to do Q&A.

Operator: Please welcome back to the stage, Jamie Dimon, Chairman and CEO of JPMorgan Chase & Co.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

We could do this again tomorrow. You don't have to keep on changing these into the same bottle over and over. Save a few bucks, okay.

QUESTION AND ANSWER SECTION

Mikael Grubb
Head of Investor Relations, JPMorgan Chase & Co.

Before we get going here, just a few rules. We do have mic handlers spread out across the room. So if you do want to ask a question, please put your hand up and we will find you. When you do ask the question, please make sure you speak clearly into the mic so that everybody on the webcast can hear you as well and before you ask a question, please state your name and your firm. All right, Glenn.

Glenn Schorr
Analyst, Evercore ISI

Q

Thank you. All right. That's great. Appreciate it. Hello. It's Glenn Schorr, Evercore ISI. How are you? So a few years ago, I think we all felt JPMorgan had lots of excess capital along with a bunch of your peers now. You had a lot of success. You gained a lot of share, your G-SIB buffers moved up, rates come and they bring in AOCI hit, I know it's just accounting, don't get started. So here we are and you have less excess than you had before. So the question is, would you let the G-SIB hang out here grow, how do you view that from the capital charge when there might be an opportunity that this is the one point in time where nobody has excess capital and it might be the one time where you actually have pricing power to grow. So how do you balance that capital position?

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

A

I'm not exactly sure what your question is. First of all, G-SIFI is supposed to be adjusted for size of the economy, for size of banking economy, and it hasn't been. And so we're not relying on it. We're not complaining about it, we're just planning for it to go to 4%, 4.5%. We can manage the hell out of risk weighted assets over time. I mean, much more than people think, even though it's not as easy as people think. But – and we have the wherewithal to do what we need and we have to retain capital for the next year or two to build up the buffer a little bit. But I don't know what your real question was.

Glenn Schorr
Analyst, Evercore ISI

Q

Do you feel like you have enough excess capital to grow? And are you willing to let the buffer run higher if that's what you got to do to service clients?

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

A

Yes. Are you picking the people? Or do you want me to pick them?

Mikael Grubb
Head of Investor Relations, JPMorgan Chase & Co.

I'll.

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

A

All right, do it quickly then, okay.

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

Q

Matt O'Connor, Deutsche Bank. So lots of detail on expenses, which I think we all appreciate. But the bottom line is you're still spending a lot of money this year. I think your comments suggest mid-single digit expense growth next year. So I guess the question is, are you kind of doing too much all at once? There's a lot of investments you kind of walked through. Is it just so much opportunity now that it makes sense? You got the net interest income to spend? Or is there such a need to or why so much all at once?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

God, we just spent the whole day trying to answer that question. So – I am literally not going to answer it. I mean, we showed you the opportunity. We think we have huge opportunities, and we try to grasp them, which is what we think you want us to do.

Mikael Grubb

Head of Investor Relations, JPMorgan Chase & Co.

Mike Mayo down there.

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

It's Mike Mayo, Wells Fargo Securities. Maybe this is for you, Jamie, and maybe for the Heads of the four business lines and Lori. But with this huge increase in tech spending, why didn't you spend this earlier? Is it just cleaning up some legacy technical debt later than you should have? Or are there just such great new opportunities that you feel need to spend a lot more now? I know you went through this, but highlight one thing – that you're cleaning up and one thing that you see as a new opportunity and what's changed? Thanks.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

So, you are talking about tech spending alone?

Mike Mayo

Analyst, Wells Fargo Securities LLC

Q

Yes, tech spending specifically, but investment spending overall.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

So, you know some of that you saw is steady – branches, bankers, managers. marketing – that could turn up and down almost at will. So that's almost a separate decision. The tech thing is a whole bunch of different stuff. And sometimes it comes in waves and sometimes you could have done it earlier. Sometimes you could have done it later. I want to get the modernization done. It's a lot of work. Some of it you don't see the benefit immediately. If I could do more of it quicker, we probably would. But then a lot of the innovation you see today probably couldn't happen because the same people are working on problems, stuff like that.

So I think Lori pointed out some of those expenses. I always hate talking about bubble expenses in technology because you almost never see tech go down. Remember Y2K? They didn't go down and people isolate all the expenses that were unique to Y2K. My view there will be a $1.5 billion of savings. It'll probably be redeployed for good reason. If not, it will go to the bottom line. The data centers, that eventually there'll be a $2 or $300 million run off of expenses as the old datacenters run-off. That's a couple of years out, but there’s no reason to talk about that specifically.

Betsy L. Graseck

Analyst, Morgan Stanley & Co. LLC

Q

Jamie. Can you hear me?

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

Yeah.

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

Okay. Hi. Betsy Graseck, Morgan Stanley. Just a couple of questions. One on loans and one on deposits, so, kind of drilling into the banking side of this.

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

Okay.

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

On the loan side, the question is, how do you think about the opportunity in home equity? I know it kind of reminds us maybe of a little bit of a prior decade, but there's so much home equity out there?

Marianne Lake
Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.
A

Yes. So okay, and Mark is over there. I can see him over there so he can add some comments. He runs our mortgage company. So during the beginning of the pandemic, we pulled back and actually shut down our home equity offering given that we were concentrating on cash out refi with our existing customers. And so we haven't opened that back out yet. It is obviously a product that is gaining appeal right now, and so we're working on that. But remember that home equity was also a huge piece of the problem in the last crisis and generated a significant amount of our losses. And so, we just worked through all of that. So we're working on it, it's definitely appealing in this rate environment and we do not have it on offer yet.

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

At the beginning you mentioned Jamie, that you that the Fed has this challenge of inflation and QT. Could you help us understand how you're thinking about how this circle's are going to get squared? Because I don't understand how we're going to do QT successfully and effectively when we got inflation driving up demand for loans. How are you going to work through that?

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

It's not me working through it, it's the Fed working through it. It's an issue, they have – my view is they want to raise rates and do QT to slow down the strength of this economy and start driving inflation down. So they have to meet this thing head on. I don't know how they're going to do it. They're going to raise rates and they can do QT, we don't know if they're going to do $3 trillion in QT eventually. They may have to start it and stop it and start it and stop it if they see too much volatility in the marketplace. We don't know what's going to come out of deposits or RRP or wholesale deposits, my guess is it will come out of deposits first. But they almost have to do it. This is not like it was last time. They almost have to do it. There's too much liquidity out there. The RRP facility is now $1.9 trillion. And so this could be a volatile market and I don't know exactly how to do it - that's their job.

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

A part of it is getting executed through the banking system, which includes you, right? So I'm sure you've done the bottoms up work around how much deposits you think will flow out of JP. I don't know if you could share that thoughts?

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

A

Yeah, it's– it was embedded in everything that folks said today. So you can go through business-by-business. But our folks in – we look at a lot of different things we think that for us, there's probably a $400 billion swing depending how it comes out. Also, remember when they did QE the first time, it showed up in wholesale deposits the first time, but it leaked into consumer over time. So it may do the opposite here may start in one place and leak into another place over a couple of years. It is one of the reasons we have so much liquidity, by the way. Just being a little cautious about that, a little careful.

Gerard Cassidy
Analyst, RBC Capital Markets LLC

Q

Gerard Cassidy at the RBC Capital Markets. Jamie, you gave us great detail on the CET1 ratio, Jeremy did in his opening remarks. Can you give us some color on the supplementary leverage ratio, how you guys are approaching it, what is the binding constraint for you folks? And what do you think the outlook might be with the new regulators coming in about maybe modifying the SLR program?

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

A

Yeah. So I think it's like 5.2% today. It's not binding. We're completely fine. We didn't put it up there. It's not really an issue. My own view is there's a very good chance that they will take central bank reserves out of the calculation. And if they took all the Central Bank reserves out, it might be something like 75 basis points to 100 basis points. If they took out just US Central Bank Reserves. I think we have $400 billion today at the Central Bank. It would probably be 40 basis points to 50 basis points.

On the other hand, they may change what they want you to hold, and we just don't know. When they came up with the temporary solution, I don't think those work. I mean, it's very hard to say to someone, you can use this temporarily, but it ends on a cliff date in March. And so I do think they should change it, whether they do or not, I don't know. Either way, we're prepared as a company.

Brent Erensel
Analyst, Portales Partners

Q

Hi. Brent Erensel from Portales Partners. To follow up on Gerard's question. What do you think is the temperature of the regulatory environment? Is it getting better or worse? We're getting conflicting signals. I would just hope to hear your point of view?

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

A

Listen, we work very hard with the regulators. They – we work hard with them for the last 20 years. And we're going to continue to do that, I think what you saw us put up today, we're not assuming there is going to be relief in G-SIFI. We're not assuming that there is going to be relief in SLR. Jeremy put up the number that the SCB could get worse. I don't think it should, but it could get worse. And we still have basically Basel IV, there are a lot of other adjustments coming. Whatever they are, we will navigate that ourselves and we work with the regulators. His slide and my first statement was our number one job is to protect the company for technology, risk and controls and all the regulatory things. That is our number one job. All other things are secondary after that, even though we exist for consumers.

Chris Kotowski
Analyst, Oppenheimer & Co., Inc.

Q

Chris Kotowski from Oppenheimer. Just wondering on your ambitions on the Global International Consumer Bank and Growth Initiatives. And what we saw today seemed mainly aimed at the deposit side.

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

A

Yeah.

Chris Kotowski
Analyst, Oppenheimer & Co., Inc.

Q

And I guess I'm curious kind of both near-term plans to what do you do with those– how do you deploy that on the asset side and what are the long-term ambitions to deploy on the asset side for international?

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

A

So this came up at my lunch too. So we had said clearly we weren't going to do retail and we were talking about physical and that there's no chance at JPMorgan to put 100 branches in Mumbai or Hong Kong or London or anywhere and actually compete. Because remember here we built 100 branches. We have just the four-wall costs, which I think average about $2 million. We don't add risk, legal, compliance, products, services, data centers or anything. If we did it overseas, we'd have to add all of that. We'd have to effectively build a headquarters. We'd probably have to buy outside services like Fiserv or something like that. Our brand wouldn't be well known. And there's no reason for people to change their account from where they have it to where we are because the other people would be improving their services, while we are just building ours.

I think digital made it very, very different and we can always add, you know I've always said to Sanoke - I don't know if he's here - we could always add a branch or two if he wanted to somewhere to have a flagship or something like that. Digital makes it different and I think my – our own view and I am not going to say all our secrets, we will over time add countries and products. JPMorgan Chase, if you put Sanoke over here for a second, we have all the asset management products in the world. We have international private banking. We're hooked into every exchange there is. So we can do investments. Nutmeg is a beginning. We can add small business products, we can add credit card. We can add whatever we want. He's got plans and he's going to roll them out slowly over time. And I think we have real staying power, too. This is going to be a battle, but I think JPMorgan Chase is a good reason to win this one.

John E. McDonald
Analyst, Autonomous Research

Q

Hi. John McDonald from Autonomous Research. I wanted to ask Jeremy if you could just follow-up on the comment about the buyback capacity that the street has. You mentioned, the acquisitions that you are doing might need to eat into some of that. Could you clarify that?

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

A

You – just given him the numbers. You have $5 billion of buyback this year. He's got to use some of that to do the cash acquisitions. So it was roughly accurate, but we have to do some cash acquisitions that we can manage – we make or manage RWA otherwise. But that's what it was.

John E. McDonald
Analyst, Autonomous Research

Q

Okay. So that's a good measure of capacity, but you can use some of it for acquisitions?

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

A

That's correct.

John E. McDonald
Analyst, Autonomous Research

Q

Okay. I could follow-up with Daniel...

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

A

Cash acquisitions. And you could have done stock acquisitions.

John E. McDonald
Analyst, Autonomous Research

Q

Okay. Is there any more color you can give on what you're seeing this quarter? It sounds like you're having some good volatility. Is there any comment you can give on FICC versus equities and what's driving some of the strength that you talked about?

Daniel E. Pinto
President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan

A

Well, I think that is – it is all across. I think that the market's operation in an environment of functioning markets at high volatility, it is a sweet spot for us and everyone else. So from that point of view, that's why I'm quite confident that what we saw that we had the excess revenues in 2020 and 2021. So the market looks to be normalizing at a, by far higher level than I thought it was normalizing. So fixed income has normalized the bulk of it, equities still elevated. And I think that with this level of volatility and opportunity we'll continue to do so.

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

A

Chris. Go ahead.

Chris Kotowski
Analyst, Oppenheimer & Co., Inc.

Q

Hey, Jamie. At lunch today, we talked about two different areas of risk that I'd love your thoughts on. And one was the growth of asset managers, ETFs, but all sorts of asset managers, relative to the constriction of the liquidity providers and market makers, the ability to deploy capital, how you think that sort of unfolds? And then, unrelated, but just thinking about commercial real estate generally and the idea of whether as leases roll over, whether you could get something that's sort of nationwide rather than regional in terms of office space capacity and generally commercial real estate. And whether there were some seeds of credit issues that could be spread out there in unexpected ways.

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

A

All right. So you have seen in several times the last couple of years, kind of market dislocations driven by different things for different reasons, stuff like that. In my view, there's no question that ETFs, the size of the funds, the chance of people selling things creates more of that and is hurt by the fact that banks can't intermediate like they used to. And so when we talk about the regulators possibly changing SLR that can help a little bit. But all these other things hurt too they create all these little cliff effects. Once you get up close to LCR, you can have, $800 billion of liquid assets, you cannot use to intermediate, even though it can be done very safely, fully margin and whether we'll ever recalibrate that, I don't know. But I think you should count on it happening one day.

There will be volatility and there will be moments like that that will make people nervous. And I think the best way to look at real estate first of all it's regional, regional, regional. And I think it's always a mistake to just lump it all together, except when we had the mortgage crisis in 2008, that was $1 trillion of losses that were embedded in the system. When people found out they were embedded in the system, there was panic because this is everywhere, it's in insurance companies, it's in banks and it was in broker dealers, it was in mortgage brokers, et cetera. This one, I think if you look at certain cities, they will have an issue because you look at vacancies and as, we call the shadow vacancies. These are renewals that won't take place or they'll be 50%, and that probably doubles the vacancies in New York.

So I think you'll see cities like New York, Chicago, San Francisco, Portland, Seattle have problems, but other cities are booming. And it's hard to imagine that in Austin, Nashville, Orlando, Tampa, Houston, Dallas, you can have the same kind of issues. They may be there a little bit, but they won't be the same. I should point out almost all of our commercial real estate office buildings is A., they're not B, C, D type of properties. And for the first time, I think like in 10 years, we saw someone hand back a building to their bank. A building right down here, I think on Broadway, yeah.

Mike Mayo
Analyst, Wells Fargo Securities LLC

Q

It's Mike Mayo. It's either for you or for Lori. I think, your CEO Letter said you have 5,000 apps and today you said 6,400 apps. But my general question is, it's hard for us from the outside to know – you're building kind of Star Wars or Lamborghini in terms of technology, but it's hard for us to tell how much of your back office is in the Stone Age. So we look at the apps, we look at the data centers. And so if you could just review once again what you're doing with the apps, is that a fair measure for how much...

Jamie Dimon **A**

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

So the apps, I think, there are apps which are not ours and then there are apps which are ours. So that's one difference. Yeah, go ahead.

Lori A. Beer **A**

Global Chief Information Officer, JPMorgan Chase & Co.

Yeah. So the difference on that one is just vendor-based apps, where we don't build and develop the software, Mike, but they're part of our critical business processes. And the other measures, I think the way to look at maturity are a couple of things I've talked to. The ability for us to get unit cost leverage at the infrastructure level shows the modernization and the journey from things like – when things ran on independent infrastructure to virtual servers, now into the cloud, that's one measure. And so we're trying to show you a little bit of that journey and speed of delivery. Speed of delivery doesn't matter on everything, though, so you have to be careful. We have regulated vendor type applications that get refreshed once a year. On the digital channels we refresh frequently and Athena, we refresh daily. So we're watching that speed of delivery where it matters and the unit cost and the maturing into the modern infrastructure. Those are some of the ways of maturing.

Jamie Dimon **A**

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

I think what you're also referring to is that some companies they are so busy building the front end that they leave the middle office and the back office in bad shape, we don't do that.

Lori A. Beer **A**

Global Chief Information Officer, JPMorgan Chase & Co.

Yeah.

Jamie Dimon **A**

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

We simply look at those things, that's what Jeremy spoke about topside decisions. So Athena is basically back office, the derivatives, risk calculator, stuff like that. I think a lot of the stuff people show up here was back office and you showed – kind of mentioned wholesale loan services, our service levels, things like that, those are middle office, back office type things because I think you're right, if you don't do those, you'll end up with an antiquated, very antiquated system.

Lori A. Beer **A**

Global Chief Information Officer, JPMorgan Chase & Co.

Which is why we pointed that out too, Mike, because some people, when they talk about their modernization and items on cloud, they don't put their core banking in that equation. We count all of it.

Jamie Dimon **A**

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

There's someone right behind you whose hand is up.

Steven Chubak **Q**

Analyst, Wolfe Research LLC

All right. Thanks. Steve Chubak, Wolfe Research. Maybe a question for Daniel. I was hoping to get some perspective on how to think about the IB fee pool trajectory, as well as the markets fee pool trajectory. A lot of folks have been thinking that we could see a reversion to 2019 or pre-pandemic levels in terms of people. And based on your comments, it suggested that we should potentially see a step function higher relative to pre-pandemic. I was hoping to get some perspective on how we should think about the fee pool trajectory from here.

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

You got that? Fee pool – investment banking fee pool and then trading fee pool.

Daniel E. Pinto
President, Chief Operating Officer & Chief Executive Officer-Corporate & Investment Bank, JPMorgan, JPMorgan Chase & Co. **A**

Trajectory meaning? I don't understand.

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

I think you said obviously 2021 was not the norm. And you said, look at 2020...

Steven Chubak
Analyst, Wolfe Research LLC **Q**

No. I was talking about wallet.

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

Wallet, I think...

Steven Chubak
Analyst, Wolfe Research LLC **Q**

Yeah, the overall industry fee pool wallet, most people seem to be benchmarking growth versus 2019 or pre-pandemic.

Daniel E. Pinto
President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan **A**

Yeah.

Steven Chubak
Analyst, Wolfe Research LLC **Q**

Your tone was much more constructive and wanted to get a sense as to how we should think about the right jumping off point, because your comment suggested it should be a step function higher from here relative to what we were seeing pre-pandemic?

Daniel E. Pinto
President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan **A**

Yeah, I do believe that 2020 is the place to anchor growth from the future, excluding this year. I think that once the situation normalize and market reprices and normalizes again, I think that the economic activity and growth and all that would justify that level of wallet for Investment Banking. So, the way that we're thinking about is recalibrating the business toward that wallet and not the one that we have seen last year.

And then for Markets, I think that, as I said, that we have pretty much, in my view, normalized. I think that in the next couple of years, two things will happen. The level of volatility will remain high. That is good news for Markets. The other good news is that though it is true that Jamie was talking about the liquidity in the market and the gap between risky assets being accumulated and capital available to facilitate intermediation is a big gap that closes with volatility.

And the last two big market correction, we have a very substantial Central Bank intervention to allow markets to function. The good news in my view now is that the correction is taking place over time with the market functioning properly. So, it may be some level of volatility. That is really bad news. But overall, I feel better from that. So, I see that in the next couple of years, this level of volatility can justify the current level of revenues in banking.

The other issue is that in – when markets become more complex and more volatile, normally the big players, including us, we tend to increase our market share because the marginal players tend to withdraw. So, that's why I think overall to consider the current levels of markets as the kind of the more normalized level and over time will grow. I think there is a reasonable assumption clearly market dependent.

Ken Usdin

Analyst, Jefferies & Company

Q

Hi. It's Ken Usdin from Jefferies. Just regards to the M&A strategy, obviously, since we were here in 2020, company's done a lot of acquisitions and all talked about in their respective line of businesses. And just wondering if you could just talk us through top down, what do you see out there? What is most important for the company to continue to do? And then how do you compare ROI on the deals you've done, the deals you look at versus the obvious many organic opportunities that you've laid out today.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

So, first of all, I think number one, discipline is organic. Organic growth is hard. A lot of companies don't do very well at it. It's often hard because salespeople don't like it. Management teams don't like it. It's hard to do. It's hard to get going to open branches. It's not you just open a branch. You need people to sign leases and build out the space and things like that. So, organic… M&A should never be an excuse for not doing organic. And I think you saw every single person up here talking about things to do to grow organically.

Years ago, we said we want to make sure we're thinking about inorganic, capital-light kind of but inorganic. So, we really just wanted people to open their eyes. And for every deal we did, we probably looked at 5 or 10. In just doing that, you get smarter and smarter and smarter about what you can do. And we didn't mention a lot here. We probably made, in the last 10 years, partial investments in 100 different companies, companies we're either partnering with or in some cases you just love them, we just thought they were excellent or something like that. It also helped Mary build a whole another asset management business – a whole another asset management fintech and healthcare and something like that. So, it had a lot of spin-offs, just getting smarter and faster. So, we don't have a hard and fast rule. We want people to tee it up. The whole operating committee tends to look at them and talk about it and things like that, and we're still open to them.

Should I point out the one where global shares came from? So, global shares, I think we were at an analyst call. I mentioned not all the good ideas – and our Investment Bank has done a great job for us. But I did say that not all of the best ideas come only from Investment Bank, so when someone else brings a good idea, we'll obviously think about that and they should get paid for it. And Mary, you brought the check personally? She brought a check personally over to Lazard because Lazard, they, not the banker, it was a finder's fee, called us up and said if you really mean it, we have an idea for you, Global Shares. And so that came from somebody else. So, if you have any great ideas, give us a call.

Betsy L. Graseck

Analyst, Morgan Stanley & Co. LLC

Q

Hi. Just bringing back to credit again a little bit, obviously things are great right now, but maybe if you could give us a sense as to how you're thinking, how nimble you can be when you start to see credit deterioration pick up. And is it any different between either different parts of consumer, commercial real estate, how you're flexing your risk appetite?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Yeah. So, I think I started by saying the first thing you do is, and Doug said it, we've all said it, it's all who you bring in as clients, like make sure you got to do it right up front, so our Card business is prime, mortgage is super prime. That protects you right from the start.

Our real estate business is well underwritten. It's Class A buildings. It's no spec buildings. Doug mentioned several things in there, which are a little competitive to how we look at underwriting, commercial term lending, commercial multifamily and things like that. So, every single – I mentioned early on that the bridge book half what it was, right, something like half what it was just a mere two months ago. And we are very conscious. And we can turn some on very quick. The marketing for card, if we thought we're going to recession, she can turn it off on right away.

And then we also we analyze these investments. We also analyze investments as if the cycle got worse, too, sometimes. So, we want to make investments in Card, where even if cycle goes bad, that super prime book of business will still be good. Whereas, more subprime piece of business won't be good. So, we can turn some on, turn some off and you can see we did very well through the cycles. We expect to do better than most during the next cycle too. I would say it's a very, very risk conscious company. And actually, if you look at our SCB, while we are a big company, it actually performs quite well because of the diversification of risk and the margins we have.

Pablo Canavati
Analyst, CQX Global.

Q

Hello. Pablo Canavati from CQX Global. I think we're all excited to be here. Have you thought about maybe eliminating the quarterly calls and guidance, I don't want to panic anybody here but maybe focusing that time and effort which I know was a lot in growing the business and maybe even cater to longer-term shareholders?

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

A

Okay. The only one who really suffers on the quarterly stuff is Jeremy and no one else spends that much time and effort on it as the folks in Investor Relations and Jeremy does. One of the great things about doing Investor Day, it actually makes the quarterly ones much easier because it’s just updates. And I think one of the mistakes we made is we did nine quarterly calls through very serious events, lots of mergers, lots of things going on, big credit cycles and didn't really give people the big picture of the things we're doing.

So, we're going to do the quarterlies. I think it's a good discipline for us too – basically very efficient. I think people would be upset if we didn't do it. But we don't run the company for that. We've never run the company to try to meet quarterly objectives or earnings or expenses, et cetera.

Mike Mayo
Analyst, Wells Fargo Securities LLC

Q

We have 25 more minutes here. I'm setting you up with this question because either way, it's not a good answer. But have you tightened underwriting standards? And if you say you haven't, then the bears are going to say, aha, you’re going to go into recession and lose a lot of money and if you say you have tightened underwriting standards, they're going to say, aha, the recession is coming. So, have you tightened underwriting standards?

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

A

A little bit. I mentioned the bridge book already. That would probably be one of the most sensitive out there. I don't think we really done it in credit card. But again, we can do some of these things right away.

Daniel E. Pinto
President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan

A

But just to clarify leverage lending, at the beginning of last year, January, we have in our books out of the whole amount that it was underwritten by banks...in leverage lending 21%. So, now we have 6%. So, clearly, and we only do deals that they are in line with what we believe, the market environment is, nothing to do with recession, but clearly the market is adjusting. So, it's a matter of discipline, how you do it, we need to learn the lessons from 2008 and not repeat it.

Marianne Lake
Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

A

Jamie?

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

A

Yeah.

Marianne Lake
Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

A

Can I make a comment?

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

A

Yeah.

Marianne Lake
Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

A

So, we didn't loosen our underwriting reflecting the extraordinary credit performance over the last couple of years. So, our buy box is informed by pre-pandemic measures. And we look at all of our credit strategies under stress in the first place. So, it's not necessary for us to tighten at this point. But we constantly look at stress outcomes, both at the point of origination of loans and then post that, too. And then, Betsy, to your point, I think 2020 was an example of how nimble we can be.

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

A

Great.

Jeffery J. Harte
Analyst, Piper Sandler & Co.

Q

We can't let you get off a half hour early. Jeff Harte, Piper Sandler. Expenses, so a lot of attention has been paid to the big ramp up this year, but you've been investing a lot more than most for a long time. If we look out, we hear a little bit about maybe moderation of the growth rate next year, looking out even further than that, how should we think of it? I'm kind of looking at a big chunk of the spending now is to payments, which is something JPMorgan's really uniquely ahead of the curve. I mean, we're just looking at a higher level of investments because of your diversification or kind of on a longer-term basis.

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

A

Yeah. Again, we don't do it top down. I mean, some of these things are top down like data centers and things like that where we decide we're going to do is good for the company and it has these ongoing ramifications. It’s mostly the businesses bottoms up too. What are the opportunities they have, banker's, branches, those really haven't changed very much. Marketing hasn't changed very much. Tech modernization is probably a little bit more. And I think the opportunities will be just as big in the future. I think we should come in front of you and say here are the opportunities, which is why we're doing this. If we didn't have them, we wouldn't do it. If we stood up here, if the management team stood and looked at this $77 billion like we shouldn't be doing it, we’d get rid of it. You don't have to do it. We're doing it because we think it's the right thing to do.

And then you mentioned a number, which we'd asked about the tech spend as a percent of revenues is 10% roughly, but obviously it bounces around. And I think that's probably a pretty good number for you to think about. AI, digital, cloud, cyber, they are unbelievably powerful and they must be done. And a little bit of that is a race. You know, if you don't do your risk and fraud better, then someone else – then you'll be worse off than the other person. So, we're moving very quickly to do some of the things, we're very comfortable with what we’re doing and some of it we want to do faster. I don't know if that answers your question, but...

You know, we're investing in research, too, by the way that should make you feel good. And where is, is Takis still here, he did a very good job. Yeah. We're investing a lot of money in Payments, Takis and we had told Takis to search – Takis is Greek, I don't know if you know that, like I am too. And we asked Takis to search the whole world to look at the best tech companies and he found Viva in Greece. Which he and I visited together as... Yeah.

Mikael Grubb

Head of Investor Relations, JPMorgan Chase & Co.

Q

All right. So, we – this is a question from the people listening on the webcast. It relates to the US Wealth Management strategy. Well, it's a two-part question. The first one is what gives you so much confidence given all the competition out there, including wire houses, boutiques and others that you will be able to be successful in the strategy? And the second part of the question is when will all the tools that I saw in the video be available as a customer?

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

So, the tools can you answer that question or?

Jennifer A. Piepszak

Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

A

Yes. So, Wealth Plan, Kristin, keep me honest. Third quarter, fourth quarter? How about third quarter? Fourth quarter for Wealth Plan and Personal Advisors also fourth quarter.

Jamie Dimon

Chairman & Chief Executive Officer, JPMorgan Chase & Co.

A

Yeah. So, if you look at our wealth strategy, first of all we have the best private bank in the United States. It has been growing year after year after year. People need private banking services. People need to have people help their financials, et cetera. And one of our greatest opportunities we have obviously a 10% share roughly in ultra-high net worth in the US. But if you look at high net worth, it's like 2%. If you go from $100,000 to $5 million, it's like 2%. I think we can have 10%. We are going to go for 10%. It is a necessary business. People have to do it. It is quite profitable. And I'm going to take this opportunity to mention – we mentioned a lot of time the 4,700 Chase Wealth managers in the branches. We're going to go to 6,000. If you look at these branches, they're much more advice based, small business, wealth management, mortgage loan officers, et cetera, much less operational. But we also rolled out a new strategy, so listen closely to this one – J.P. Morgan advisors. So, we have the highest compensation in the street, we're targeting people who basically do $1.5 million and more production. They're going to have the best research, the best equity, the best banking, the best fixed income. We're going to treat them unbelievably well. We're giving them concierge services. So, in every branch there's a concierge now to help them with their credit card, their mortgages, if they open banking accounts, et cetera. If we don't really have a lot of their bank accounts, we're going to treat them better than they've ever been treated in the street and we're aiming for a thousand of just the top notch. And there will be two types. There'll be the ones already very successful who will have all those services, including they can bring in middle market clients, they can bring in investment banking clients, et cetera, and they will also be getting leads from the rest of JPMorgan Chase. And then, we call the rising stars. The people we have very high comfort are going to be among the best out there. So, watch out and that business will be very good there, too.

Jennifer A. Piepszak

Co-Chief Executive Officer-Consumer & Community Banking, JPMorgan Chase & Co.

A

And if I could, Jamie, the only thing I would just add and then Kristin you go ahead, is that we already have relationships with half the affluent households in the US between our Banking and Card business. So, we already have some.

Kristin Lemkau,

CEO of US Wealth Management, JPMorgan Chase & Co.

A

I was just going to answer the first part of that question of why we have confidence in the Full-Service business, which is because the branch-based full-service model has a couple of advantages. One, Jenn mentioned half of the advisors come from the banker system, which is a great organic growth strategy and they onboard 30 clients per year per advisor, and they're getting more productive year-over-year because of the banker referral model.

Gerard Cassidy

Analyst, RBC Capital Markets LLC

Q

Question on C&I banking maybe for Mr. Petno. To what extent is this C&I banking energized? It's pretty visible now. How much of that is inventory building, bottleneck resolution, bread-and-butter, stick to your ribs, C&I lending? And how much is late cycle distressed borrowing?

Douglas B. Petno
Chief Executive Officer-Commercial Banking, JPMorgan Chase & Co.

A

Not much of the latter. Yet. And it's all of the above. I mean, we hit an all-time high in revolver utilization right after the pandemic started in April and it rapidly fell to an all-time low in June of last year. And it's been working its way back up to long-term average level. So, we've had like a 20 basis point increase in revolver utilization. That's a nice tailwind in C&I fundings. For us, we're also acquiring a lot of new clients and with that comes smart loans and then you're seeing just good redeployment. Lot of the inventory build is related to supply chain and sort of near shoring and having more stuff on hand because you can't go just in time when the Port of LA has backlog like it is. So – and then there's just been up until in the last several weeks, strong economic activity driving a lot of inventory build and a lot of pent-up CapEx, it didn't happen during the pandemic, a lot of deferred maintenance, money had to put back into the business. In C&I, we have like pretty good medium-term visibility. We're not seeing a lot of stress. We are seeing some idiosyncratic downgrades related to not being able to fully pass on your costs or higher labor costs. But it's certainly not systemic and so far, so good in C&I. Hopefully that answers your question.

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

A

And can I also mention just two other things, he had mentioned unitranche lending. So, direct lenders have become very big competitors, particularly in as it relates to leverage lending, middle market size companies. For the quantum of risk in unitranche, you actually get paid more than if a bank does it traditionally split between the A piece, the B piece and subordinated piece. So, I like the fact of being paid more. But in our case, you can not only you can get paid more for the total amount of risk, and then we can participate out or keep it as we see fit. But for the average loan, for every dollar of NII, we're usually earning another dollar of another subscription revenue type thing like cash management. And so, one of the differences in this crisis – when we have a crisis again, a lot of those unitranche lenders won't be there, we will. And one other point I would make out about a recession, recessions are opportunities too and very often you can do some of your best stuff when things are down. I remember coming out of many recessions I've been in - the marketing money is worth three times as much coming out of it as it was going into it. And you might get to buy some companies or their software extremely cheap. So, there will be issues. But hopefully we will be able to take advantage for our shareholders.

Anonymous
Analyst, Firm

Q

I'm thinking about how do you, thinking about risk factors and talk about how you think of the risk factor of rising rates in particular and that if rates rise a whole bunch more than expected. How do you stress test your own balance sheet? Where do you think and what point and what kinds of vulnerabilities to come in? Is it the corporates' ability to pay? Is it that there are funds out there that get upside down with leverage and cause counterparty risk?

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

A

Yeah.

Anonymous
Analyst, Firm

Q

What do you see as the key vulnerabilities from greater than expected run rate?

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

A

Yeah. So, when we look at risk and when I think about risk, I'm not worried about 10-year bond being at 3.75 or 4% or about 5, 6, 7 or 8%. And the fat tail risk for a bank and it's different for every company, all companies have different input and output, pricing and stuff like that. The fat tail risk for bank is stagflation. It's high rates and little growth or a recession. So, right now if we have high rates and good growth like the benign environment – you have higher NII, more volume, low charge-offs, that's not Goldilocks, that's a home run. If you have stagflation, you have the benefit of NII, but you have the offset of lower volumes and higher credit losses. I think we showed you the credit loss. I mentioned the CECL build-up in the first two quarters of 2020 was $15 billion. The actual losses were zero. Okay? We showed you something about the predictability of CECL. I think we mentioned a bunch of stress losses up there. Right now, we're losing like $3 billion in charge-offs, a normalization would be $6 billion or $7 billion. A recession could be as high as $12 billion. And I've gone back and looked at prior recession like that. And that's how you see it. This company would perform, we're earning $50 billion PPNR. So we can handle an awful lot of loss and things like that. And what we really want to do is serve the clients through the downturn and we manage the risk pretty extensively. Whether it is loans coming in and we turned off a lot of stuff in March and April of 2020, we've already cut back on the bridge book, we're highly cognizant of commodity risk, we do it country-by-country-by-country.

Our exposure to Russia, we were safe – so far safe people are managing. So but we know you might have a recession one day or stagflation. And that obviously is the bad one.

And I think Bloomberg had a thing there I told you about the storm clouds are going to mitigate. I think are quite clear there are storm clouds and we hope they mitigate. These things that we are seeing are serious as you may see in your lifetime. They may mitigate. As opposed to - it's a tsunami, which is not going to mitigate. That was what happened in 2008 that had to work its way through. We knew it was there and it was just going to have to work its way through the system.

Another risk I should point out and you heard just about everyone here mention it - is cyber. Well, we are among the best-in-class in that. That is a risk that we are just totally conscious of particularly because the war in Russia and Ukraine.

Mike Mayo
Analyst, Wells Fargo Securities LLC

Q

Mike Mayo. Europe seems to be in a tough situation. You're expanding Consumer there, you're expanding Commercial there. And you have more European exposure than almost all of your peers, except for one. And then you have the war in Russia. So what's your exposure as it relates to that region?

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

A

Yeah. Well, we figure we've been gaining share in Europe year after year after year in just about everything. Most of the stuff that Doug is doing in the Commercial Bank is very high quality, so you shouldn't worry about it at all. It's very well underwritten when we do it. I think Russia, I mean, Europe, the war in Ukraine could easily push Europe into recession. We understand that. We've been through recessions there, but I think I would put our credit quality as very high and things like the UK Chase Branch, we don't make that decision based upon guessing whether there'll be a recession or not, that's a 10- or 20-year thing.

The Commercial Banking there, I'm not going through the names, they're names you would know. They are quality names, whether they are public or private, they're very high-quality credits. It's not like we're going – we're digging down into bad credits in Europe.

Douglas B. Petno
Chief Executive Officer-Commercial Banking, JPMorgan Chase & Co.

A

And Mike, it's not – it's not set up as a loan production office. We really haven't lent a material amount of money. It's more payments, foreign exchange, investment banking. The loans we've done as Jamie indicated have been really high-quality companies.

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

A

I think most of the investment banking is very high-quality companies in Europe.

Daniel E. Pinto
President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan

A

Yes, it is. And then going into Russia, in 2014, we had $8 billion exposure to the country. When the war happened, that number was $1 billion and now it's few hundred million dollars, – left with roughly no losses at all.

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

A

Yeah. I think we rushed it. We told you last time we put up $300 million of reserves that was taken down to $200 million and we still have exposure there of probably like $500 million give or take.

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

Q

Jamie, so our next Investor Day, is that going to be in the new building going up across the street?

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

A

No. That – that won't be done until August of 2025, but this company is in fabulous shape. I mean that building will be great, the data centers are great, the technology is great, the people are great and – and we will do more Investor Days. We've enjoyed it so much that we're going to...

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

Q

Can we get an immersive video of what life will be like in the building across the street?

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

A

Yeah. You saw a little teeny bit in that. What do they call, a sizzle reel? Sizzle reel. But we have a video of it. We can post. Now that it's now it is public we can post online. It's going to have 40 foot ceilings when you walk in, you can go see Park Avenue to Madison. The building is electric. It's a 100% green building. It's better air, better light. I think there'll be eight trading floors, all of which cover the full city block. You're going to be able to go to the top floor, the 62nd floor and walk 360 at a view which is higher than the Empire State Building, the World Financial Center, so there will be some of the best entertainment space there. It is built to withstand terror attacks. You can get out of the building two or three times… four times as fast as people could have gotten out of The World Financial Center. It is in the best place and if you work for JPMorgan Chase and you take the Long Island Railroad or the Grand Central, all you have to do is step outside for like literally 10 feet. You can walk all the way from there to in almost into the building. So it's going to be fabulous. If you want to work in that building let me know and...

Mikael Grubb
Head of Investor Relations, JPMorgan Chase & Co.

Q

And we'll take one more from the podcast – the webcast. Sorry. So this one is for the CIB. The question is, you're already number one in IB and markets and you have outlined plans to grow even more. Is there a ceiling that you might bump up on when then you can't grow more?

Daniel E. Pinto
President & Chief Operating Officer, JPMorgan Chase & Co.& Chief Executive Officer of Corporate & Investment Bank, JPMorgan

A

No, not really. Clearly, the recalibration of G-SIB and other regulatory constraints will be helpful and hopefully at some point it will happen. But even without that, I think that the amount of balance sheet that we deploy today, there is more leverage to have on the execution side. I think that in banking there is still areas, as I mentioned, Asia, some sectors that there is space for growth. So clearly in banking, at some point you have a bit of a glass ceiling that is driven by conflicts and companies have to reward their providers for their revolving credit. But I think that there is still probably in banking another 50 to 150 basis points – 100 points to grow.

In markets there is a trend of consolidation into the bigger players driven by the ability to invest and quality of services. I think that that trend is intact. So I do see for us and for the top players in the market further, further consolidation. It's been very clear the trend in the last 10 years and I don't see it. It did do a bit of pause in the last two because of the increasing wallet that gave like a bit of hope to some of the marginal players. But as soon as we go back to more normalized volatile environment and stabilization of the wallet, probably they will – people will realize that to make this business profitable, you may have to have a scale that you are not going to achieve. So therefore, most likely a business in some institutions will get once again get disinvested.

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

A

I should point out for all of our businesses the financial assets of the world I think are something like $350 trillion in 25 years going to be $700 trillion in 50 years, it could be $1,200 trillion. That feeds every business we're in, every single one. So the raw underlying stuff that fuels a company like this is going up constantly and margins come down a little bit my whole life.

Mikael Grubb
Head-Investor Relations, JPMorgan Chase & Co.

Q

We will take one more from the webcast. This one is relating to payments. So you outlined basically going from 0% revenue growth to a 15% CAGR in merchant services. Can you elaborate on the drivers?

Takis Georgakopoulos
Global Head of Payments- Corporate & Investment Bank, JPMorgan Chase & Co.

A

Yes. So the drivers are twofold. The first one is e-commerce. The second one is small business. On the e-commerce side, as we mentioned, there is a unique value proposition that we offer between Treasury services and merchant services. And we already saw in 2021 the growth coming from that. The second one is SMB working both together with Chase and as part of our marketplace offering. Already in 2022, we see a growth which is in the double-digit and that will be the second area of growth.

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

Okay. We can end early. So I'm going to just end real quickly. Tell a quick little story by way of thanking some people. So I'm sitting in this room and doing a town hall and most of us have been back to work for the better part of last two years and traveling the world and all of that, and seeing clients. I was in the town hall for our own people and someone asked me a question I've never been asked before.

And they said, Jamie, how do you show gratitude to the operating – your Operating Committee members? And there are two or three Operating Committee members in the room and they both burst out laughing, meaning I don't. And I had to confess I wasn't particularly good at it. And but I've been watching Ted Lasso like the rest of you. I love the show. And if you go to the 41st floor, we have a believe sign, which I put up there. I do believe, I do believe in gratitude. It wasn't always my specialty, but I did answer the question by saying that they know. And you saw them all and not all of them, but they know how much I appreciate them, trust them, respect them, rely on them, get help from them, adore them and which I really do.

So I just – so I want to end by saying and not just the Operating Committee members alone, but all the people sitting here and I would almost want to go name-by-name-by-name I feel the same that all of them they're exceptional. They work their – they break their backs for you, they talk to each other all the time, they're collaborating all the time, sometimes you over collaborate and which is another form of bureaucracy, but they really are exceptional. And going through Investor Day, a lot of the heavy lifting wasn't only done by the operating committee members it was done by tons of their folks in this room. And it was a great exercise for us. And so I want to just thank our own people on behalf of everybody you did a great job you've done thank you very much. Thank you for coming. Yes, we are going to do Investor Days again. I do think because it's a very valuable thing for us. We really appreciate. We love to see you all in-person. If you have additional questions, send them in we'd be happy to answer them and we'll see you at Investor Day next year. Thank you.